CHAPTER III

RESEARCH DESIGN

3.1 Introduction

The present study encompasses the significance of the study, statement of the problem, objectives of the study, methodology, period of the study, scope of the study, limitations of the study and chapter scheme. This research is made for experiential indication on the implementation of the problems and prospects of sago industrial units in Namakkal and Salem districts in Tamilnadu, one among large industrial states. Drawing from a contingency theory, the research posits that findings of functional management components and its different angle of problems are probed under the empirical method of research. The problems and prospects have identified through pilot study in respective area of the research under direct interview with the proposed respondents and authorities of Sagoserve in Salem. The primary data for this study have been collected through structured schedule with the 90 sago industrial units’ owners in the study area.

3.2 Review of Literature

The researcher has reviewed 57 relevant literary publications focusing problems on functional management of sago industrial units in Tamilnadu, India and abroad, many national and few international journal
articles based on which, the manner of the objectives was set for a comprehensive analysis.

3.3 Significance of the Study

In the sago industry there are many problems pooled as inherent of its nature of business operation. It has been proved that from the number of units decreased from 800 (approx.) to 364. It excluded on the infrastructure development of the nation by means of road development due to that few industrial units were removed and arranged in another place is also the reason for decrease the number of units in the study area. Thus the demand of Sago and Starch products and its price fluctuations also have been increased. Hence the researcher has undergone to conduct the research on problems encompassed in sago industrial units in the study area. The most significant of the study is to strengthen the sago industry and economy of the nation from the increment of GDP on the production and export of Sago and Starch products and its utilization by general public. The sago industrial owners have acknowledged with the results of the study to wipe out the problems associated in their industrial units.

3.4 Statement of the Problem

Prior to the formation of the Sagoserve, the manufacturers of Sago and Starch in Salem district faced a lot of problems pertaining to credit and marketing of tapioca products. Merchants used to offer low prices for their goods and middlemen exploited this situation in the absence of organized
marketing and warehousing facilities. To overcome these problems the Sago and Starch manufacturers formed Salem Starch and Sago Manufacturers Service Industrial Co-operative Society Limited. The problems are in the following aspects:

(i). Raw Materials

The sago factory’s basic raw material is tapioca. Tapioca is available to the industry only for a very short period. Therefore concentrated efforts are needed to introduce new short term varieties suitable for multiple seasons so as to stretch the availability of the raw material supply.


b. Indifferent and non-uniform quality of raw materials available.

c. Absence of any reliable quick indicator to access the quality of roots supplied.

d. Price fluctuations and high cost of procurement.

e. Highly perishable nature of tapioca.

f. Absence of any incentive to Tamilnadu farmers in adopting tapioca for large scale cultivation.

(ii). Marketing Problems

a. To remove the problems of price fluctuations and subjectivity in the marketing of Sago and Starch finished products, it was decided to adopt a new marketing device to sell members goods, called the “Daily Tender System”.
b. It is now proved beyond doubt that formation of marketing Co-operatives like Sagoserve in the small-scale sector can play a pivotal role in stabilizing the price structure of agro-products, besides serving as an instrument against exploitative tendencies in the trade.

c. The traders of Sago usually have to make payment through immediate cash or within a reasonable period to the Sago factory owners. However, in their turn they have to sell the produce to the wholesale dealers at credit. Non-realisation of money in time poses a major problem for these traders.

d. The major problem faced by the owners of Sago units is the highly fluctuating prices of Sago and Starch and sometimes even the mismatching of the purchase price of the tubers. Also the lack of awareness amongst of the factory owners about quality standards affects the market.

e. Some manufacturers also feel that despite their undertaking of hand peeling operations, their product does not get an adequate price to compensate the additional expenses they have incurred or the quality they maintain.

f. Poor quality of Sago and Starch because of the use of chemicals posses a major problem in marketing. The Sago and Starch producers have no knowledge about the correct and appropriate
use of edible grade chemicals to improve the quality. No scientific information on use of chemicals from the concerned institutions concerned has reached these producers.

(iii) Financial Problems

Tapioca being seasonal and perishable in nature and it is required huge capital in the form of working capital. It has been procured at the moment as short term credit. It is to create high cost of capital against of capitalization. Many units are unable to plan their production schedule properly on account of uncertain financial circumstances due to non-availability of institutional finance.

Almost all the Sago factories are family owned and most of them are farmer turned entrepreneurs. These owners get their equity from the surplus fund that they generate from agricultural income. Many of the Sago factory owners were also previously brokers doing business as raw material suppliers to the industry. They all usually maintain a current account in a commercial bank or a co-operative bank to encash the cheques received from SAGOSERVE or traders. Only 50 per cent of them are availing credit from commercial or co-operative banks, while the rest of them manage with their own funds or borrowed money from relatives or money lenders for short period. The Sago factory owners situated at semi-urban and urban centres are able to obtain credit from the banks easily than those situated in the rural areas.
(iv) Labour Problems

The need of the labour welfare arises from the nature of the Sago industrial system, which is characterized by two basis factors; one, the conditions under which work is carried on are not congenial for health and second when a labour joins in the Sago industry, they have to work in an entirely strange atmosphere, which creates problems of adjustment. The working environment will adversely affect the labourers’ health by means of heat, cold, noise, odours, fumes, dust, lack of sanitation and lack of breathing pure air, head ache, eye irritation, vomit sensations and heart attack.

Almost all the labourers are daily workers and incidental workers. For that, the numbers present are always varying day-by-day. The working time is not fixed. It depends on the raw material stock, the largest number of workers are required at the time of processing the Sago and Starch. The other problems are warehouse, power cut and effluent.

The manufacturers of Starch and Sago industry in Tamilnadu are facing a lot of problems such as lack of financial assistance, warehousing and marketing facilities for tapioca products. The merchants used to offer low prices for their goods and exploit the manufacturers due to an absence of organised marketing and warehousing facilities.
The future prospects of sago industry in Tamilnadu should be modernising their factories to face local and global competition. Therefore, undertake adequate marketing efforts to expand the market for Sago and Starch to increase their profitability. New modern technological equipments should be used for the industry in future.

The Tapioca farmers said that the factory owners were not paying them remunerative prices for their produce. The difference in the starch-point assessment from factory to factory caused them loss. The middlemen were controlling the trade. They demanded that a separate board for tapioca to be formed.

3.5 Objectives of the Study

The following are the main objectives of the study:

1. To study general views of Sago industry in Salem and Namakkal districts of Tamilnadu.

2. To analyse the problems of marketing, finance, and labour force in sago industry.

3. To study the practical problems in the procurement of raw materials, arrangement of warehouse, and other problems.

4. To identify the future prospects of sago industry in the study area.

5. To summarise findings and conclude the outcome of the study.
3.6 Hypotheses (H₀)

1. There is no significant difference between marketing problems in sago industrial units selected for the study.

2. There is no significant difference between finance problems in sago industrial units selected for the study.

3. There is no significant difference between labour force problems in sago industrial units selected for the study.

4. There is no significant difference between procurement of raw materials and practical problems in sago industrial units selected for the study.

5. There is no significant difference between arrangements of warehouse and other problems in sago industrial units selected for the study.

3.7 Methodology

It is generally supposed that the socio-economic character of the industrial owners invariably influence their opinion about their unit, and its problems and prospects of the Sago and starch industrial units of the Salem and Namakkal Districts. Therefore, it is thought appropriate to test this proposition and to infer whether these characteristics had influenced the opinion towards the problems and prospects of the Sago and Starch industrial units, or not. With this object in view, the socio-economic characteristics of the samples’ opinion towards the problems and prospects
of the Sago and Starch industrial units were highlighted. The nature and relationship between such personal characteristics and the level of opinions were thoroughly examined with the help of statistical measures such as arithmetic mean, percentages and others results of the analysis were also tested with the help of Principal Component Analysis Chi-Square Test and ANOVA.

3.8 Sampling

The Sago industries in Namakkal and Salem have been segregated into three according to its production nature. The industries related to the products producing in the selected units are considered to be as samples of the research.

**Chart – 3.1**

![Diagram showing the distribution of Sago industrial units registered with Sagoserve across Tamil Nadu.](image)

Source: Sagoserve, Salem.
3.8.1 Categories of the Sago Industry

<table>
<thead>
<tr>
<th>Category of Sago Industry</th>
<th>Number of Sample</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Salem</td>
<td>Namakkal</td>
</tr>
<tr>
<td>Sago</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(18)</td>
<td>(5)</td>
</tr>
<tr>
<td>Starch</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>(24)</td>
<td>(47.5)</td>
</tr>
<tr>
<td>Sago and Starch</td>
<td>29</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>(58)</td>
<td>(47.5)</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>(100)</td>
<td>(100)</td>
</tr>
</tbody>
</table>

Source: primary data.

The random sampling method has been adopted for the study. There are about 325 sago units and other ancillary units which are un-countable. The number of samples are taken on the basis of thirty per cent of the total units of the Sago industries in Namakkal and Salem during the period of the study. Out of the total units thirty per cent (97) alone have taken for the study, but the researcher has met 100 units among all the units, but only 90 alone responded. The sample was constituted by 11 Sago, 31 Starch, 48 Sago and Starch, the percentages of sago industrial categories being 12.2 per cent, 34.4 per cent, and 53.4 per cent respectively have identified and selected for the study.

3.9 Data Collection

In order to fulfil the objective stated, a sample study had been undertaken by using a well-framed schedule for sago industrial owners.
After pre-testing, necessary modifications were made in the schedule to suit the present study. In order to know the problems and prospects, several rounds of discussions had been apprehended with knowledgeable persons and Sagoserve authorities. The primary data were collected from the respondents with varying backgrounds based on age, education, and year of establishment of the sago unit. The secondary data were collected from the records of the Sagoserve, District Industrial Centre at Salem and Namakkal districts, published literature of the books, journals, magazines, newspapers’ reports, publications and Tamilnadu Government Website.

3.10 Framework of Analysis

In order to study the problems and prospects of the Sago industries in Salem and Namakkal districts, the 5 point rating scale has been adopted to find out the scale of problems from the respondents. “Highly Problematic” denotes 1 points, “Problematic” indicates 2 points, “Neutral” indicates 3 points, “No Problematic” denotes 4 points and “Highly No Problematic” indicates 5 point. The problems of sago industries were studied with the help of mean score value. The collected data were classified and tabulated with the help of computer programming. The dependent variables include marketing, finance, labour, raw materials, warehousing, power-cut and effluent problems. In order to test the association between independent variables and dependent variables, Principal Component Analysis, Chi-
Square Test were applied. ANOVA was applied to find out the variation within samples and between samples.

3.11 Period of the Study

Secondary data were collected for a period of ten years from 2001-2002 to 2010-11 to find out the growth of sago and starch production, and market price fluctuations. Further, the primary data were also collected from September 2010 to August 2011.

3.12 Scope of the Study

The study highlights the problems of marketing, finance, labour, raw materials, warehousing, power-cut and effluent prevailed in the present scenario of sago industry in Tamilnadu. The problems selected on the basis of highly frequent hazards met by the industrial owners have segregated and classified in to groups in respective factor of problems. The identified problems were scaled on the aspect of “highly problematic” to “highly no problematic”. After finding the results, it would be useful to the industrial owners to know their problems and prospects in their industries and also to the Sagoserve and the Government of Tamilnadu.
3.13 Limitations of the Study

1. The study is based on the opinion provided by the Sago industrial units owners, managers, labourers and authorities of Sagoserve and District Industries Centre.

2. The Sagoserve could not provide much data relating to the Sago industries in Salem.

3. Most of the industrial owners did not allow the researcher inside the unit for discussion and data collection. Only 90 owners alone permitted, thus the results have limited its scope.

4. Due to time and cost constraint the survey has not fulfilled with the entire area of the study area.

5. The results may not applicable to other area or districts of Tamilnadu.

6. Opinion may vary from person to person and all possible efforts were taken to avoid ambiguity.

3.14 Chapterisation

This study consists of the following six chapters:

1. The first chapter deals with the introduction of Sago industries in Tamilnadu.

2. The second chapter reviews previous researches on Sago and Starch industries.

3. Third chapter deals with the significance of the study, statement of the problem, objectives of the study, methodology, period of the
study, scope of the study, limitations of the study and chapters scheme.

4. The fourth chapter portraits the profile of Salem and Namakkal districts and general problems of Sago industry - An overview.

5. The fifth chapter deals with the problems faced by Sago industrial units and perception of owners of Salem and Namakkal districts of Tamilnadu - An analysis.

6. The sixth chapter recapitulates the key findings to provide suitable suggestions and conclusion.