

# SALT PRODUCERS' PERCEPTION AND SATISFACTION TOWARDS SALT INDUSTRY IN THOOTHUKUDI DISTRICT

B.Geetha Maheswari,  
Assistant Professor,  
Department of Commerce,  
St.Mary's college (Autonomous),  
Thoothukudi-628 001.  
India.

**Abstract :** Salt is one of the basic necessities of human beings. It is also one of the older commodities that was produced, exchanged and later traded. Of the food items produced and exported from India, Salt plays a major role in contributing to the foreign exchange. As one of the most important mineral sources of the country, its export value is equivalent to that of seafood and keeps on increasing every year. India is the third largest Salt producing country in the World after China and USA with Global annual production being about 230 million tonnes. The study area is very important in the sense that the Asia's best salt is produced and about eighty percent of the salt produced in Tamil Nadu comes from Thoothukudi District. Salt industry is the main backbone of economic development of the study area. Hence, a comprehensive study that delves into various interrelated aspects of salt production and trading will throw deep insight into the strengths and weaknesses of the present setup. Besides suggesting improvements for better functionality and threats, the industry is facing and put forward possible measures to encounter them in the future. The present study is an attempt to understand the contemporary structure of Salt Production and Distribution in Thoothukudi district.

This study has been undertaken to investigate the determinants influencing the satisfaction level of Salt Producers in the study area using Rotated Factor Matrix Analysis. To test the reliability of factor analysis, the Cronbach's Alpha score was calculated and the Kaiser – Meyer – Olkin (KMO) measures of sampling adequacy is used to examine the appropriateness of factor analysis.

**Index Terms:** Production and marketing, Salt, Salt industry, Salt producers, satisfaction.

## 1.1 INTRODUCTION

The Salt industry is the cluster group of industry of Thoothukudi district and was extended in an area of 15,700 Acres with production of 17.12 Lakhs M.T. The Salt Industry has the turnover of ₹.300 crores. It is the second largest production area of salt after Gujarat and it faces a meltdown owing to increase in power and labour costs. The district administration's recent decision to take back a portion of government-owned land that has for decades been used for Salt farming. Hundreds of Salt units have already closed since they are unable to operate owing to escalation in the cost of production which was not compensated by the retail price of the product. It is estimated that around 1,500 tonnes of salt production has come to a halt due to cost pressures. On one side the production cost has been mounting up and on the other side, the price of the product has fallen drastically which leads this Industry to struggle for its survival. In fact, the next generation has already started moving to other industries.

## 1.2 REVIEW OF LITERATURE

J. Jeyaranjan (2011) in his article titled, "Salt Production and Trading in South India" has analyzed the synoptic view of salt production of Tamil Nadu. A sample of 250 respondents consisting of 150 salt producers and 100 salt traders was selected for the study. The primary data were collected through questionnaire method of data collection. The secondary data were collected from both published and unpublished records of the salt department. In the study, percentage analysis has been used to analyze various aspects such as distribution chain of salt trading, various types of producers and traders, types of salt traded, transportation system and the like were analyzed in a detailed manner. The study concluded that the small producers of Tamil Nadu confined their activity to just produce the basic salt and every other additional processing and packing are undertaken by the layers of traders who take salt to the ultimate consumers.

R. Banumathi. and S Natarajan (2015) in their research article with the caption, "Marketing Strategies and Practices with Reference to Salt Industries in Tamil Nadu, India" have conducted a survey in Salt Industry of Tamil Nadu to identify the marketing strategy adopted in the state. The study gathered primary data from 100 employees in the salt factories of Tamil Nadu by non-random sampling method. The aim of the study was to explore and discuss the marketing strategies and practices adopted within India by Salt Industry and to understand the salt industry with respect to the various players who are dominant in the salt market. It was found that the same marketing strategies which were adopted for India as a whole were adopted in the state as well and the strategies of competitive pricing of iodized salt was found to be working well with companies like Tata salt and Annapurna bagging the maximum market shares. Further, it was also found that different brands use different promotion strategies to promote their products. The study found variations in the marketing strategies adopted by salt manufacturing companies in Tamil Nadu.

### 1.3 IMPORTANCE OF THE STUDY

The study is confined to Salt producers who are associated with salt production and marketing activities in Thoothukudi District, Tamil Nadu. The salt producers selected for the study are large scale producers, Small scale producers and medium scale producers. The study includes the demographic characteristics of the salt producers, their pattern of trade, the factors that affect the salt production and the like. The study is of macro in nature and covers the satisfactory opinion of the Salt producers regarding the production and marketing of salt. The opinions of the salt producers regarding their satisfaction level are studied using primary data collected, specifically for the purpose.

### 1.4 STATEMENT OF THE PROBLEM

Salt is rather an important secondary food than a food additive. It is next in importance only to the primary food of sunlight, air and rainwater. Like the availability of primary food, salt too is naturally abundant and hence its importance and utilities have been taken for granted by humans. Yet, its preciousness, that could outweigh that of gold, shall be noted only when it goes scarce. Such an important natural resource is abundantly available in India. Especially Tamil Nadu which is bestowed with about one thousand kilometers of coastline has vast potential for salt production and the same potential has rightly been utilized at Thoothukudi, which contributes about eighty percent of Tamil Nadu's salt.

Like agriculture, Salt production needs deep human intervention to get quality output. Since the future is uncertain one, salt production is seriously affected by the natural constraints such as heavy rainfall, natural calamities, air pollution and economic constraints such as slackness of demand, inadequate supply, shortage of labour, competition from Gujarat, heavy competition prevailing in the local salt market, increased input cost, fluctuations in price and the like. Hence, the income from the salt market is largely volatile in nature. The risk bearing capacity of the Salt producer is a function of personal, economical, environmental and chronological based on situational factors such as age, education, occupation, income, family size, nature of management of salt production and the like. Salt production in Thoothukudi has come down drastically in the recent years owing to various factors. The trend in the market was fluctuating as both domestic and international markets were not enterprising. Shrinking manpower has also affected the industry, as the younger generation is not keen on working in salt pans. Even area under salt pans is decreasing year by year. The chosen area for the study is Thoothukudi of Tamil Nadu which produces the substantial quantities of edible salt for consumption basically in the Southern India. Hence, there is a need to study the salt producers' attitude and perception towards the problems faced by them in Thoothukudi Salt industry and their level of satisfaction, the topic has been undertaken for the study.

### 1.5 OBJECTIVES

- To elucidate the profile of Salt Industry.
- To narrate the problems faced by the Salt Producers in the study area.
- To document the satisfaction level of the Salt producers regarding the production and marketing of salt in Thoothukudi District.
- To offer suggestions based on the findings of the study.

### 1.6 RESEARCH METHODOLOGY

The study is both descriptive and analytical in nature. The study is based on Survey method and is dependent both on primary and secondary data. Possessing and not possessing attributes are discussed from the primary data collected through the interview method of data collection. The study focuses on certain aspects or dimensions of the identified problems and the satisfaction level of the Salt producers. The study is administered on a macro approach and the various attributes are discussed from the primary data collected through the interview schedule method of data collection which has been prepared after the pilot study conducted in the study area on micro level.

### 1.7 LIMITATIONS

- Due to non-availability of the list of the population, the study was conducted on the basis of samples accumulated through convenience method of sampling which is inadequate to the size of the population. Hence, the study may subject to fluctuations of sampling.
- The respondents hesitated to answer the questions related to income and profit. Therefore there is the possibility of respondent bias.

### 1.8 GENERAL PROFILE OF THE SALT PRODUCERS

The salt producers should have a sound knowledge about the present salt market situation and the seasonal fluctuations in pricing of salt. In addition to that, they will have to face other practical problems such as financial problems, natural constraints, economic problems, production problems, labour problems, middlemen problem, political problems and the like. Generally, their decision attitude is determined by the social class to which they belong to or which they rather aspire than by their income.

Table – 1.1

## General Profile of salt Producers

			Category of Salt Producer		Total
			Organized	Unorganized	
Nature of Management	Proprietorship	No.of Respondents	2	126	128
		Percentage(%)	1.6%	98.4%	100.0%
	Partnership	No.of Respondents	14	150	164
		Percentage(%)	8.5%	91.5%	100.0%
	Company owned	No.of Respondents	13	0	13
		Percentage(%)	100.0%	0.0%	100.0%
	Co-operative	No.of Respondents	25	0	25
		Percentage(%)	100.0%	0.0%	100.0%
Total			54	276	330
			16.4%	83.6%	100.0%

Source: Primary Data

Table 1.1 shows that among 128 salt producers running their salt business as sole tradership concern, majority of the respondents(98.4%) are Unorganized salt producers and the remaining (1.6%) of them have got registered their salt business properly. Among 164 salt producers running their salt business as partnership concern, majority of the respondents (92.5%) are Unorganized and the remaining are Organized salt producers. 100 percent of the Salt Producers having their own company and Co-operative Salt Producers have got properly registered their salt business properly in the study area.

### 1.9 SATISFACTION OF SALT PRODUCERS TOWARDS SALT INDUSTRY

The term satisfaction varies from person to person depending upon their expectation. When the expectation is less, the satisfaction will be more and vice versa. Regarding the Salt Industry, some producers may treat this salt business as their important investment avenue. They want return like a salary which is drawn every month. However, most of the salt producers treat this investment not only as investment in salt business but also the investment in wealth of ancestors which is otherwise their inherited property. When the return is equal to their expected income, then they will be satisfied. Some others, with the intention of earning an abnormal profit might have entered into the Salt production. When they got normal profit due to the unexpected economic, natural and other hurdles, they will not be satisfied. In addition to that, satisfaction may not be for profit alone, other factors which include perseverance of inherited property, tax benefit, attitude of industrial and edible users and less effort put in capital appreciation may also influence the satisfaction of the salt producers. Thus, the opinions related to various factors which influence the satisfaction level of the salt producers are collected.

In order to test the reliability for the opinion and the level of satisfaction of the salt producers towards the salt production and marketing in Thoothukudi, Cronbach's Alpha Test has been applied and the result has been shown in Table 1.2

TABLE 1.2

#### Reliability Statistics for the Opinion and the Level of Satisfaction of the Producers towards Production and Marketing of Salt in Thoothukudi District

Particulars	Cronbach's Alpha Score
Opinion and the Level of Satisfaction of the Salt Producers towards production and marketing of salt in Thoothukudi District	0.782

Source: Computed Primary Data.

Table 1.2 shows that the calculated value of Cronbach's Alpha score for the opinion and the level of satisfaction of the salt producers towards production and marketing of salt in Thoothukudi District is more than 0.7. Hence, it is concluded that opinion and the level of satisfaction of the salt producers towards salt production and marketing in Thoothukudi District could be relied upon.

### 1.10 KAISER – MEYER – OLKIN (KMO) AND BARLETT'S TEST

Many problems are identified by the researcher during the period of collection of data for the research and are given in Table 1.4. The salt producers' satisfaction has its own impacts. These are correlated with one another. In order to group the related variables, the researcher has decided to use Factor Analysis. Moreover, for grouping the variables, the normality has to be ascertained. Hence, for ascertaining the normality, the KMO test has been used.

The Kaiser – Meyer – Olkin (KMO) measures of sampling adequacy is an index used to examine the appropriateness of factor analysis. The value between 0.5 and 1.0 indicates that the factor analysis is appropriate. The values below 0.5 imply that factor analysis may not be appropriate. If the KMO values lie between 0.7 to 0.8 then it is meritorious for factoring. Bartlett's Sphericity is a statistic test used to examine the shape of a normal distribution and also to verify the smoothness of the curve. Table – 1.3 portrays two tests and they are Kaiser – Meyer – Olkin measures of sampling adequacy and Bartlett's test of sphericity. They give the statistic of KMO Bartlett's sampling adequacy and chi-square analysis of association, degrees of freedom and probability.

**TABLE 1.3**  
**Opinion and the Level of Satisfaction of Salt Producers towards Production and Marketing of Salt Industries in Thoothukudi District- KMO and Bartlett's Test**

<i>KMO and Bartlett's Test</i>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.836
Bartlett's Test of Sphericity	Approx. Chi-Square	792.566
	d.f.	136
	Significant.	0.000

Source: Computed Primary Data.

Table 1.3 shows that the KMO is 0.836 which indicates that the degrees of common variance among the variables are quite high and therefore factor analysis can be conducted.

### 1.11 APPLICATION OF FACTOR ANALYSIS FOR THE OPINION AND THE LEVEL OF SATISFACTION OF PRODUCERS TOWARDS PRODUCTION AND MARKETING OF SALT IN THOOTHUKUDI DISTRICT

A technique is adopted to identify the important factors influencing the opinion and level of satisfaction of the Salt producers towards the production and marketing of Salt in Thoothukudi District. Factor analysis is a multivariate statistical technique in which there is no distinction between dependent and independent variables. In factor analysis, all variables under investigation are analyzed together to extract the underlined factors. Factor analysis is a data reduction method. It is a very useful method to reduce a large number of variables resulting in data complexity to a few manageable factors. These factors explain most part of the original set of data.

Factor analysis could be used to develop concise multiple item scales for measuring various constructs. Factor analysis can reduce the set of statements that adequately represent the critical aspects of the constructs being measured.

#### 1.11.1 Results of the Opinion and Level of Satisfaction of Producers towards Production and Marketing of Salt in Thoothukudi District – Factor Analysis

The rotated factor matrix for the variables relating to the opinion and level of satisfaction of the salt producers towards the production and marketing of salt in Thoothukudi District are presented in Table 7.15 and it shows the loading received by the factors under F<sub>1</sub>, F<sub>2</sub>, F<sub>3</sub>, F<sub>4</sub>, and F<sub>5</sub>.

**TABLE 1.4**

### Opinion and the Level of Satisfaction of Producers towards Production and Marketing of Salt in Thoothukudi District ROTATED FACTOR MATRIX WITH COMMUNALITIES

<i>Opinion and the Level of Satisfaction of Producers towards Production and Marketing of Salt Industry</i>	<i>Factor-1</i>	<i>Factor-2</i>	<i>Factor-3</i>	<i>Factor-4</i>	<i>Factor-5</i>	<i>Communalities</i>
Easy availability of Labour	<b>0.680</b>	-0.062	0.193	0.091	0.174	0.542
Easy to carry on business	<b>0.653</b>	0.006	0.203	0.109	0.220	0.528
Product is easily marketable	<b>0.567</b>	0.226	0.121	0.053	-0.174	0.531
Serves as a link to other Industries	<b>0.509</b>	0.447	0.064	0.225	-0.135	0.420
Capital appreciation is good	<b>0.447</b>	0.269	0.254	0.169	0.165	0.393
No special technical knowledge is required	0.063	<b>0.719</b>	0.043	-0.033	0.262	0.592
High recognition and status in Society	0.055	<b>0.657</b>	0.120	0.196	-0.048	0.456
Manageable competition	0.197	<b>0.510</b>	0.423	-0.226	-0.132	0.490
Manageable risk is involved	0.215	<b>0.329</b>	0.058	0.287	0.282	0.320
Tolerable fluctuating Weather condition	0.040	0.113	<b>0.700</b>	0.158	-0.036	0.530
Govt. assistance can be availed easily	0.053	0.059	<b>0.592</b>	0.203	0.297	0.487
Previous experience in Salt Industry helps a lot	0.344	0.146	<b>0.381</b>	-0.055	0.128	0.304
Acceptable favourable tax benefits	0.132	-0.080	0.283	<b>0.796</b>	0.001	0.737
Easy access to enter into Foreign trade	0.116	0.398	-0.123	<b>0.554</b>	0.208	0.537
Turnover is high	0.246	0.346	0.227	<b>0.401</b>	-0.071	0.397
Profit margin is enough	0.094	0.114	-0.046	0.056	<b>0.708</b>	0.592
Better future and development in Industry is possible	0.056	-0.056	0.369	0.002	<b>0.670</b>	0.528

Extraction Method: Principal Component Analysis, Rotation Method: Varimax with Kaiser Normalization.

Source: Computed Primary Data.

Factor analysis has been applied through SPSS Package. Table 1.4 represents the matrix of common factor co-efficient or factor loadings. The number of factors extracted was five. The ratios which have the highest loadings in each factor are grouped, that is the ratios which are more closely related to a particular group are boxed. The last column in the table is communality ( $h^2$ ) that is the variance explained by the factor. The group-wise analysis is shown in the individual tables. The rotated factor loadings for twenty statements have been extracted into five factors.

### 1.11.2 Results of Opinion and the Level of Satisfaction of Salt Producers towards Production and Marketing of Salt in Thoothukudi District – Factor Analysis

The factors with identified new names like “Basic Necessities”, “Favourable Industrial Environment”, “Supporting Environment”, “Salt Trade Promotion” and “Better Future Prospects” which influence the opinion and the level of satisfaction of the salt producers towards production and marketing of Salt in Thoothukudi District and they are discussed and presented in the following Tables.

**TABLE 1.5**

**Variables with the Highest Factor Loadings for the Factors Identified to Analyse the Level of Satisfaction of the Producers towards Production and Marketing of Salt Industry in Tuticorin District**

<i>Factor</i>	<i>Name of Newly Extracted Dimensions</i>	<i>Selected Statement (Variable)</i>	<i>Factor Loadings</i>
F <sub>1</sub>	Basic Necessities	Easy availability of Labour	0.680
F <sub>2</sub>	Favourable Industrial Environment	No special technical knowledge is required	0.719
F <sub>3</sub>	Supporting Environment	Tolerable fluctuating Weather condition	0.700
F <sub>4</sub>	Salt Trade Promotion	Acceptable favourable tax benefits	0.796
F <sub>5</sub>	Better Future Prospects	Profit margin is enough	0.708

Source: Computed Data.

It is inferred from the Table 1.5 that the statement, “Labour is available easily” (0.680), “No Special Technical Knowledge is required” (0.719), “Tolerable Fluctuating Weather Condition” (0.700), “Acceptable Favourable Tax Benefits” (0.796) and “Profit Margin is enough” (0.708) are the statements with the highest factor loadings under the dimensions namely Basic Necessities (F<sub>1</sub>), Favourable Industrial Environment (F<sub>2</sub>), Supporting Environment (F<sub>3</sub>), Salt Trade Promotion (F<sub>4</sub>) and Better Future Prospects (F<sub>5</sub>) respectively. Hence, these are the identified dimensions (factors), which influence the opinion and the level of satisfaction of salt producers towards production and marketing of salt in Thoothukudi District.

### 1.12 FINDINGS

- ❖ Cronbach’s Alpha Score concluded that the opinion of the Salt producers regarding their satisfaction in the Salt industry could be relied upon.
- ❖ KMO Test indicates that the degrees of common variance among the variables are quite high and therefore Factor analysis can be conducted.
- ❖ Factor Analysis showed the variables with the highest factor loadings for the factors identified to analyze the level of satisfaction of the Salt producers.
- ❖ In the first factor, the variable “Easy availability of labour” has the highest factor loading under the dimension “Basic necessities”.
- ❖ In the second factor, the variable “No special technical knowledge is required” has got the highest loading under the dimensions “Favourable Industrial environment”.
- ❖ In the third factor, the variable “Tolerable fluctuating weather condition” has the highest significant positive loadings under the dimension “Supporting Environment”.
- ❖ In the fourth factor, the variable “Acceptable Favourable Tax benefits” has the significant loadings under the dimension “Salt Trade Promotion”.
- ❖ In the fifth factor, the variable “Profit margin is enough” has the highest factor loadings under the dimension “Better Future Prospects”.

### 1.13 SUGGESTIONS

- The Thoothukudi Salt industry is facing tough competition with Gujarat Salt industry, since the production cost is much less in Gujarat due to incentives provided to the industry by the Government such as subsidized power, lowest production cost and so on.
- On the other hand, Thoothukudi industry is facing power shortage and tariff rate is also very high. Hence, efforts shall be taken to improve the continued power supply and subsidized power tariff.
- The salt producers of Gujarat use the modern technology for the production of salt. But, most of the salt producers in Thoothukudi are small scale producers and the salt units are purely labour intensive units. Hence, cost of labour is high. Therefore, knowledge and encouragement may be provided to the salt producers about modern methods of production.
- The market price is highly volatile. The salt producers very rarely earn abnormal profit and that may be once in four or five years. In all the other years, they earn minimum profit or incur loss. Hence, to save the industry being defunct, the government should fix a minimum support price.
- The study suggests that in order to improve the functioning of Salt Industry in the interest of producers, workers and other players of Salt Industry a closer and stronger expansion and regulation of the market is indispensable.

- The registration procedure for Unorganized sector of Salt Industry is lengthy and monotonous and required more documents. Hence, effort shall be taken to reduce and simplify the same.
- Salt producers treat the investment in the Salt Industry as a risky investment since the return is highly volatile in nature. Therefore, efforts shall be taken to remove the fear of risk among the producers by educating them.
- Most of the salt pan owners retain their saltpan treating it only as their ancestral property. The owners of salt pan must involve themselves in the salt production and other allied activities and must motivate their younger generation to do this salt business with new modern technologies as followed by Gujarat Salt producers.
- The younger generation of salt pan owners should take initiatives to pierce their young blood in the old and traditional business of our nation which makes them self dependent instead of searching better jobs.

#### 1.14 CONCLUSION

Salt is a mineral which is an important secondary food. Thoothukudi District is the largest producer of salt in Tamil Nadu. But, the manufacturers of salt struggle with several problems which include high competition from Gujarat, unfavourable weather conditions, rain, labour problems and the like. Since the cost of production is high when compared to Gujarat, their profit margin is less and also fluctuating. Irrespective of the above, the salt producers have been doing their production work even generations together and hence they have experience which helps them to predict the future demand and price. That is why they are able to earn high profit once in three to four years and a normal profit in all the other years. Hence, they are having satisfaction in the production and marketing of salt in Thoothukudi District.

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