District an analyzing the problem the researcher has formulated null hypothesis, which has been tested with help of KS test.

CHAPTER-VI

SUMMARY OF FINDINGS, SUGGESTIONS AND CONCLUSION

6.1 INTRODUCTION

Brief summary of previous chapters have been presented in this chapter.

The demand for bricks has been increasing with the ever increasing activities in the construction sector. In the last 10 years the demand for bricks has increased specially in the major towns and cities. As a result numbers of new brick industries are set up around these cities, they cater to the local demands and as such there is a huge market potential for bricks.

The various problems faced by the brick industries and the perception of the brick workers on the issues of brick industries regarding the production and marketing of bricks in Namakkal district were studied in this research.

In the Namakkal district there are 61 brick industries registered with different agencies according to the Government report. The researcher has taken all 61 brick industries under census method to analyse the production and marketing practices. There are about 6000 workers employed in various process of production of bricks. The
researcher has selected 5 percent of labourers viz 300 brick workers by giving equal representation for both genders based on convenient simple random sampling method to collect the requisite data for the study.

6.2. SUMMARY OF FINDINGS

The present study is designed into six chapters. The first chapter portrays the introduction and design of the study. The history of bricks and production process, type of bricks and kilns, profile of the study area and the profile of brick industry in Namakkal district is explained in the second chapter. Third chapter summarizes the production and marketing practices of brick manufacturers which include the 4ps of marketing mix such as production, price, distribution channels and promotion methods. The socio economic status of workers and their perception on the production and marketing practices are also presented in the fourth chapter. The perception of manufacturers on the problems of production and marketing of bricks has been analysed in the fifth chapter and finally in the last chapter the summary of findings, suggestions and conclusion are given.

6.2.1 Production and Marketing of Bricks – Perception of Producers

On the sex of brick producers, 96.74 per cent of the owners belonged to male and the remaining belonged to female category.
Regarding the age, 29.51 percent of the brick manufacturers belonged to the age group between 31 and 40 years whereas 47.54 percent of the brick manufacturers belonged to the age group between 41 and 50 years under study.

About the education, 32.78 percent of the brick manufacturers completed higher secondary whereas 14.74 percent of them completed under graduate level.

With regard to the experience, 6.56 percent of the brick manufacturers had 5 years of experience, whereas 39.34 percent of the brick manufacturers have an experience of 16 – 20 years in the production and marketing of bricks.

About the motivational factors influencing the establishment of brick industry, majority of the respondents had taken up this industry as hereditary occupation and it is ranked first according the Garret ranking technique. This is followed by profitable business, own idea and personal interest which ranked second and third respectively

On the forms of organization of brick units, 36.07 percent of the brick manufacturers belonged to the category of sole proprietorship whereas 63.93 percent of the brick manufacturers belonged to partnership firms under study.

About the local factors influencing establishment of brick units in a particular place, majority of brick manufacturers have opined that availability of suitable soil is the major factor to select the location of brick industry. This is followed by availability of
transport facility, existing family business, and availability of cheap labour which ranked second, third and fourth respectively.

Regarding the land holding of the brick owners, 36.07 percent of the owners had own land for their units, 29.51 percent of the owners had leased land whereas 21.31 percent of the owners had mortgage land for the establishment of brick industry.

About the sources of finance for brick units, 16.39 percent of the owner’s source of finance was commercial banks whereas 22.95 percent of the brick owners have established their business by their own funds.

Regarding the investment of brick owners, 13.11 percent of brick manufacturers have invested the capital ranging from Rs.10,00,000 to Rs.15,00,000 whereas 31.15 percent of the brick manufacturers have invested from Rs 20,00,000 to Rs.25,00,000 for the establishment of brick industry. Further the researcher has estimated that the brick units averagely invest about Rs.22,58,150 but this investment may vary up to Rs.597000 with 26.43 percent of variation by calculating the mean, standard deviation and coefficient of variation.

With regard to the sources of procurement of clay and sand, 24.59 percent of the brick owners collect the clay and sand from factory precincts, 21.31 percent of the owners collect the clay and sand away from the unit, 18.03 percent of the owners procure from the nearest ponds.
On the quantum of bricks produced, 73.77 percent of the owners have made an average production of above 12500 to 20000 units of bricks per day whereas 26.23 percent of the brick owners produce the bricks ranging from 7500 units to 12500 units per day. It is estimated that the brick manufacturers produce averagely 14405 per day and this production of bricks may vary up to 2860 units of bricks per day with 19.85 percent of variation.

Regarding the competing products of bricks, 16.39 percent of the brick owners opined that fly ash would be the competing products in the future, 24.59 percent of them opined as hollow block bricks whereas 27.87 percent of the brick owners opined that country bricks would be competing product of bricks.

On the reason for stopping to production, 37.70 percent of the brick owners have opined that they stop their production due to shortage of labour and raw material whereas 24.59 and 16.39 percent of the brick owners have opined that they stop production of brick due to marketing fluctuation and shortage of finance.

About the method of production, 40.98 percent of the brick owners opined that they produce the brick under modern methods whereas 36.07 percent of the brick owners opined that they produce the bricks under traditional methods.

With regard to type of fuel used for firing bricks, 22.95 percent of the brick owners have opined that they use wood as firing material, 24.59 percent of the owners
opined that they use coal, 27.87 percent of the brick owners opined that they use leathers and wood.

On the sources of water for production of bricks, 27.87 percent of the brick owners have their own well to supply the water for brick production, 52.46 percent of the brick owners have opined the they use water from own bore well and river well.

About the safeguard measures taken against pollution, 60.66 percent of the owners use chimneys for avoiding the pollution problems and 19.67 percent of them have established brick industry very far away from residence area.

Regarding the sale of broken bricks, 32.79 percent of the owners sell the broken bricks at a lower price whereas 24.59 percent of the owners reuse the broken bricks as raw material.

About the reasons for broken bricks, 26.23 percent of the owners have opined that improper molding is the major reason for breakage of bricks followed by 24.59 percent of them have opined that they were careless while production, 18.03 percent of the owners have opined that improper firing is another reason for breakage of bricks.

On the labour in the brick industry, 21.31 percent of the owners have used labourers for their industry from nearby villages and 63.93 percent of the owners engage labourers from other districts.
About the payment of wages to brick workers, 27.87 percent of the owners pay wages daily and 37.70 percent of the owners give wages weekly.

Regarding the basis for wage, 21.31 percent of the owners have opined that they determine the wage on the basis of time rate whereas 36.07 percent of the owners determine the wages by daily wage system. 28.87 percent of the owners pay on the basis of piece rate.

On the child labour engaged in the brick industry, 83.61 percent of the owners have opined that they engage child labourers for production of bricks and remaining 16.39 percent of the owners have opined that they do not engage child labourers in the brick industry.

About the type of work carried out by child workers in the brick industry, 25.49 percent of the owners have opined that they engage the child labour for helping moulders, 27.45 percent of the owners have opined that they engage child labour for helping to stackers.

Regarding the type of work carried by women in brick industry, 34.43 percent of the brick units have engaged women for mixing clay, 18.03 percent of the brick units have engaged women for layer work, and 19.67 percent of the brick units have engaged women in loading and unloading work.
About the factors determining the price of brick works, 29.51 percent of the brick units fix the price on the basis of demand, 26.23 percent of them on the basis of competition whereas 13.11 percent of the brick manufacturer fix the price on the basis of cost and margin.

On the cost and margin estimated net profit of the selected brick units was Rs.13,870 and 37,44,900. It is observed that the profitability position of brick unit was 33.88 and 33.88 percent. The break even sales estimated as 4073 and 1099764 unit of bricks and it provides 6.92% and 180.47 of return on capital employed per year and net profit ratio of 30.82 per cent.

About the channel of bricks marketing, there are four channels by which the bricks are marketed which includes selling bricks directly to the final consumers by the brick units themselves, selling bricks to building owners through building contractors, direct selling to building workers and selling to building contractors and in turns to building owners. The bricks are also marked by brick manufacturers directly to brokers who in turn make sales to building contractors and then to building owner.

About the various sources of marketing channels, 31.15 percent of the brick manufacturers have opined that building owners is the major source of marketing, 22.95 percent of the brick manufactures opined that building contractors is another source for marketing of bricks whereas 14.75 percent of the brick manufactures opined that workers are one of the major marketing sources for bricks.
On the possession of brand name for bricks, 91.80 percent of the brick owners have brand names for their bricks whereas 8.20 of the units do not have any brand names.

Regarding the area of sale of bricks, 29.51 percent of owners have opined that they sell the bricks in the nearby districts followed by 27.87 percent of them sell in the nearby taluk, and 24.59 percent of them have opined that they sell in the nearby villages.

With regard to sale of bricks, 24.59 percent of brick manufacturers have opined that they sell bricks a minimum of 200000 to maximum of 4,00,000 piece of bricks in a year whereas 26.23 percent of the brick manufacturers sell minimum bricks of 600000 and maximum of 800000 bricks in a year and 19.67 percent of the brick manufacturers sell minimum of 800000 piece of bricks and a maximum of 1000000 piece of bricks. Further, it is estimated that the brick manufacturers sell averagely 670491 units of bricks per year and this sales may vary up to 234800 units of bricks with 34.90 percent of variation.

On the quantum of sale of broken bricks, 31.15 percent of brick manufacturers have opined that they sell the broken bricks to the true of 10000 to of 15000 bricks in a year whereas 26.23 percent of the brick manufacturers sell the broken bricks to the true of 15000 to 20000 units of bricks and 21.1 percent of the brick manufacturers sell a minimum of 5000 piece of broken bricks and a maximum of 10000 piece of bricks. It is
estimated that the brick manufacturers sell averagely 15287 units of broken bricks per
day and this sales of bricks may vary up to 5970 units of bricks per day with 39.05
percent of variation.

About the mode of advertisement, 32.79 percent of the owners have opined
that, they do advertisement by wall writing for marketing of bricks and 21.31 percent of
the owners have preferred electronic media to advertise the bricks whereas 11.48
percent of the owners have made advertisement by wall posters.

Regarding the sales promotion techniques adopted by brick units, 50.82 the brick
owners opined that they offer price reduction in order to increase the sale of bricks and
29.51 percent of the brick owners have opined that they sell the bricks for credit in
order to increase the sales.

On the storage facility of brick units, 65.57 percent of the owners have opined
that they have own storage facilities and the remaining 34.43 percent of the owners do
not have any storage facilities.

About the method of brick units, 45.00 percent of the owners have own shed for
storage of bricks, 22.50 percent of the owners have rented storage for storing bricks
whereas 32.50 of the owners have leased storage for storing bricks.

About the competition between brick units, 45.90 percent of the manufactures
have opined that there is high level competition among brick industries for production
and marketing, 27.87 percent of the brick manufacturers have opined that there is medium level competition.

On the mode of transportation, 19.67 percent of the brick manufacturers have opined that they use lorry for transportation of bricks, 29.51 percent of the manufacturers have opined that they use tractors for transportation of bricks, 34.43 percent of the brick manufactures use the mini lorry for transportation of bricks.

Regarding the arrangement of transport, 40.98 percent of the brick owners have arranged the transport themselves, 31.15 percent of the brick owners have arranged the transports through broker office whereas 27.87 percent of the brick owners ask customers to arrange themselves.

On the fixing of tariff for transport, 26.23 percent of brick manufacturers fix transport charges on kilometer basis, 31.15 percent of them have fixed on load basis.

A SWOT analysis of the industry was made from the point of view of manufacturers, majority of the manufacturers have opined that brick industry occupies prominent status in the construction industry hence it is one of the strength factors which stands first in rank, followed by other factors such as labour intensive industry, regular revolving of funds, facilitating growth for ancillary industries and assure for economy and rural development. Similarly on the weakness factors, majority of the manufacturers have opined that brick industry follows traditional method of brick
production hence it is one of the weakness factors which stands first in rank followed by other factors such as limited availability of raw materials, unfavourable weather conditions, availability of unskilled labourers and limited support from dependent.

Further regarding the opportunity factors, majority of the brick units have opined that brick industry ensure employment to agricultural worker during non agricultural time hence it is one of the opportunity factors which stands first in rank followed by other factors such as facilitate the indirect employment for ancillary construction work, increasing population facilitate high demand for brick products, enhance regular income for industry and workers and healthy competition facilitate the new arrival of various brick products.

About the threat factors, majority of the brick units have opined that the major threat to brick industry would be due to changing natural environment conditions hence it is one of the threat factors which stands first in rank according to the opinion of brick units, followed by development of ready mix concrete bricks, development of innovation and new technology in construction industry, strict govt rules and regulation towards establishment and depletion of natural resources.

6.2.2 Socio Economic Status of Brick Workers - Perception of Brick Workers

On the gender of brick workers, 56.3 percent of brick workers belonged to male and the remaining 43.7 percent of the brick workers belonged to female category.
Similarly on the age of the brick workers, 27.67 percent of the brick workers were in the age group of 31-35 years whereas 26 percent of the brick workers belong to the age group of above 40 years. About the marital status of brick workers, 60.67 percent of the brick workers were married whereas only 31.67 percent of brick workers were unmarried.

Similarly on the nature of brick workers, 41.33 per cent of the brick workers belonged to skilled category whereas 27.67 per cent of the brick workers belonged to semi skilled category.

About the type of work, 34.33 percent of the respondents have been engaged in the process of moulding, 20.67 percent of the respondents are engaged in the work of stacking, and 17.33 percent of the respondents are engaged in the work of firing by the study.

Regarding the experience of brick workers, 34 per cent of them have an experience of 3-6 years whereas 25.34 percent of brick workers have an experience of above 9 years in the brick industry.

About the education of the brick workers, 30.66 percent of them belong to the category of illiterate, followed by 28.33 percent of the brick workers were in the category of primary education and only 3.67 percent of the brick workers were in the category of degree level education.
Regarding the income of the brick workers, 28.33 percent of the worker have opined that they earn an average income of Rs. 3000 – 4000 in a month from brick works, 20.33 percent of them earn an average income of Rs. 4000 – 5000 per month whereas 20 percent of the workers earn an average income of Rs. 6000 – 7000 in a month from brick works. Further it is estimated that the average income of the brick workers in the brick industry is about Rs.5368 but this income may vary up to Rs.1340 with 24.96 percent of variation.

In order to analyse the relationship between two variables i.e., demographic variable of the brick workers and their opinion on working conditions in the brick industry, the researcher has framed null hypotheses which is analyzed with the help of Chi-square test and its results is that since the calculated chi-square value is less than the tabulated value, which is highly insignificant hence the researcher has rejected all the null hypothesis framed thus, it is concluded that there is no significant relationship between age, sex, experience, education, marital status nature of the brick workers and income from brick works.

On the nativity of brick workers, 27.00 percent of the brick workers are taken from outside the village, 22.33 percent of the brick workers are taken from local village and other taluks nearby.

About the reasons for selection of brick works, majority of the brick workers have opined that they are involved in this industry due to unemployment which it ranked first
followed by other factors such as attractive wage rate and limited hours of work, hereditary and continuous employment, and advance from owners respectively.

With regard to involvement of family members in brick works, 36.3 percent of the workers have stated that up to 2 members in a family are working in the brick industry, 30.7 percent of the workers have stated that 2 to 4 members are working in the brick works.

On the saving habits of brick workers, 56.67 percent of the brick workers have opined that they have savings and the remaining 43.33 percent of workers said that they do not have the habit of savings.

About the mode of savings, 14.71 percent of the workers have invested their savings in bank, 20 percent of the respondents have saved in the post office and self help groups whereas 27.64 of them insurance sector.

Regarding the habits of insurance of brick workers, 26 percent brick workers have the habits of insurance in which 12.82 percent of the brick workers have taken accident related insurance policy, 42.31 percent of the brick workers have taken the whole life insurance policies, 26.92 percent of the workers have taken money back related insurance policies.

With regard to various forms of motivation to brick workers, majority of the respondents have opined that giving accommodation is the motivational factor for brick
workers to continue in this work hence it is ranked first followed by other factors such as providing weekly holidays, giving festival advance, giving bonus and medical expenses, offering education expenses for workers children and transport facilities for bringing the labour for brick industry in the study.

On the various facilities offered to brick workers, majority of the respondents have opined that giving drinking water facilities are excellent hence it is ranked first followed by other factors such as lighting and bathing, washing and drying facilities offered to the workers, offering quarters for workers and crèches facilities for labourers in the brick industry.

About the relationship between owners and workers in the brick industry, 29.33 percent of the respondents have opined that there is a friendly relationship exists between owners and workers in the brick industry whereas 12.33 percent of the respondents have opined that there is only earning and learning relationship between owners and workers.

On the reasons for problems in the brick industry, majority of the respondents have opined that there was no job security, low wage rate, long distance, long working hours and work burden.

Regarding the various supports expected from the government, majority of the brick workers have opined that they wants loan facilities from the government
supporting the family higher education to their children and insurance and accident benefit. Similarly, majority of them have opined that they want recognized association for brick workers and brick workers co-operative society in the study area.

### 6.2.3 Problems in the Brick Industry – Perception of Brick Owners

The researcher has made an attempt to know the opinion of brick manufacturers on the problems of brick production and marketing in Namakkal district. For the purpose of analyzing the responses of the brick industry on the problem faced by them, the fifteen null hypotheses have been formulated which is tested with KS test. The results of the analysis are

As far as the first statement “Inadequate availability of raw material affects brick production” is concerned, out of 61 respondents, 48 (78.68%) have given positive opinion, while 9 (14.75%) have given negative opinion, keeping the statement at 3rd position. The intensity value is +66. Thus the majority of the respondents feel that inadequate availability of raw material affects brick production.

Considering the second statement “Frequent labour turnover affects brick production” Out of 61 respondents 47 (77.04%) have given positive opinion, while 10 (16.39%) have a negative attitude. The intensity value is +56. Thus majority of the respondents feel that frequent labour turnover affects brick production. The statement is ranked seventh.
With regard to the third statement, “Lack of technical knowhow affects brick production” out of 61 respondents, 51 (83.60 %) have positive outlook towards the statement while 7 (11.47 %) have a negative outlook over the statement. Thus majority of respondents opined that lack of technical knowhow affects brick production. The intensity value of this statement is +71. This statement is ranked second.

As regards the fourth statement, “Strict government rules affects brick production” out of 61 respondents, 48 (78.68 %) have given positive opinion, while 10(16.39 %) have given negative opinion. The intensity value of the statement is +54. This statement is ranked ninth. Thus majority of the respondents feel that strict rules and lack of support of government affects brick production.

About the fifth statement, “Lack of managerial guidance affects brick production “out of 61 respondents, 40 (65.57%) had a positive opinion, while 12 (19.67 %) have a negative opinion. The intensity value is +44. This statement is ranked 12th position. Thus some of the respondents are of the view that the lack of managerial guidance affects brick production.

Regarding the sixth statement, “Seasonal demand affects brick production” out of 61 respondents, 48 (78.68%) had a positive outlook, while 9 (14.75%) have a negative outlook. 4 respondents (6.55%) are neutral. This statement has the intensity value of +63. It is ranked fourth. Thus majority of the respondents are of the opinion that seasonal demand affects brick production.

Out of 61 respondents 39 (63.93%) have a positive attitude towards the seventh statement “Increasing transport and raw materials cost affects the
price of bricks” and 11 (18.03%) respondents have a negative attitude. This statement has the intensity value of +45. It is ranked eleven. Thus some of the respondents are of the opinion that increasing transport and raw materials cost affects the price of bricks.

On the eighth statement, “Increasing credit sales of bricks affects further production” of bricks out of 61 respondents 43 (70.49%) had given a positive opinion, while 14 (22.95%) have given a negative opinion. The intensity value is +48 and it is ranked tenth. Thus some of the respondents have viewed that increasing credit sales of bricks affects further production of bricks.

With regard to the nineth statement, “Inadequate availability of place affects production of bricks” out of 61 respondents 48 (78.68 %) have a positive attitude, while 6 (9.83 %) have a negative attitude. The intensity value of this statement is +59. It has secured the sixth rank. Thus some of the respondents feel that inadequate availability of place and storage affects production of bricks.

About the tenth statement, “Wastage of raw material affects production of bricks” out of 61 respondents 44 (72.13 %) had given a positive opinion while 14 (22.95%) have given a negative opinion. The intensity value is +55.
This statement is ranked eighth. Thus majority of the respondents’ feel that wastage of raw material affects production of bricks.

About the eleventh statement, “Lack of finance affects production and marketing of bricks” out of 61 respondents, 49 (80.32 %) had a positive opinion, while 6 (9.83 %) have a negative opinion. The intensity value is +79. This statement is ranked 1st position. Thus majority of the respondents are of the view that lack of finance affects production and marketing of bricks.

Regarding the twelfth statement, “Pilferage and theft affects production and marketing of bricks” out of 61 respondents, 43 (70.49%) had a positive outlook, while 8 (13.11%) have a negative outlook. 10 respondents (16.39%) are neutral. This statement has the intensity value of +61. It is ranked fifth. Thus majority of the respondents are of the opinion that pilferage and theft affects production and marketing of bricks.

Out of 61 respondents 45 (73.77%) have a positive attitude towards the thirteenth statement “Employing leased land for establishment of brick units and for storing of raw materials increase the cost of brick operations” and 14 (22.95%) respondents have a negative attitude. This statement has the intensity value of +41. It is ranked fifteenth. Thus some of the respondents are of the opinion that employing leased land for establishment of brick units and for storing of raw materials increase the cost of brick operations.
On the fourteenth statement, “Increasing wage of labour leads to poor return to brick units” out of 61 respondents 43 (70.49%) had given a positive opinion, while 12 (19.67%) have given a negative opinion. The intensity value is +43 and it is ranked thirteenth. Thus some of the respondents have viewed that increasing wage of labour leads to poor return to brick units.

With regard to the fifteenth statement, “Unhealthy competition among brick units creates the problem of price discrimination for bricks” out of 61 respondents 38 (62.29%) have a positive attitude, while 18 (29.50%) have a negative attitude. The intensity value of this statement is +42. It has secured the fourteenth rank. Thus majority of the respondents feel that unhealthy competition among brick units creates the problem of price discrimination for bricks.

6.3 SUGGESTIONS

Applicable to Brick manufacturers

1. The necessary financial assistance may be given to brick manufacturer by the bank, and the government should provide subsidies and concessions for purchasing Lorries and Tractors.

2. The government should give preference to brick manufacturers for the supply of raw material of coal and coal waste for burning.

3. The present storage capacity of raw bricks is inadequate. It must be extended. This will enable the chamber owners to protect the raw bricks from rain.
4. Steps may be taken to form co-operative society for the brick manufacturers to ensure the supply of raw material and marketing of bricks without any interruption.

5. The brick market in Namakkal district witnessed unhealthy competition by selling bricks at reduced rates than the price of competitors. Association network of the manufacturers must be strengthened.

6. Brick manufactures do not follow common measurement which causes higher price variation and affects stable income.

To the brick workers

1. The government should take necessary steps to ensure Job security to the workers through Labour Legislation.

2. Brick workers association may be formed in Namakkal district to protect the interest and welfare of the brick workers.

3. Workers co-operative society in Namakkal district may be started exclusively for brick workers.

4. The government should from rules and regulations regarding the working hours, minimum pay, provident fund, employee state insurance benefit, bonus and medical benefit for labourers.

5. The brick workers are to be considered as BPL category for provident fund, free house, education, training program and credit facilities by the government.
6. The most of the worker’s educational status was poor and they were illiterate. The non-government organization should take improve steps to increase the educational level of both manufacturers and workers.

7. This is mostly an unorganized sector. The brick workers may try to start a separate association for welfare of workers by organising the workers of whole Tamilnadu.

6.4 CONCLUSION

The present study has been under taken to identify and expose the problems experienced by both manufacturers and workers engaged in the production and marketing of bricks especially in Namakkal District. The extensive study has highlighted to light the inherent problems associated with production and marketing of bricks with clear focus on the financial viability of the industry in terms of investment and the socio economic status of the workers employed there in. The researcher shall have satisfaction of taking up a socially relevant topic which is ignored at the micro land in the specific district and has not been accounted for the study industry.

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