CHAPTER I

RESEARCH DESIGN
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INTRODUCTION

Poultry Industry in India is transforming itself at an incredible place, from an age old backyard vocation to a dynamic agro-based industry. With the most modern handling facilities it can contribute significantly towards the stupendous task of providing better health, education and standard of living to the people especially at rural India.

Creation of public awareness is needed for the overall development of Poultry Industry. The egg, earlier treated as an non-vegetarian item, is not being considered by most as not so. Mahatma Gandhi has stated, “Milk being an animal product cannot by any means be included in a strict vegetarian diet. In the medical language, milk can be classified as an animal food. On the other hand eggs are regarded by the layman as an animal food. In reality, they are not so, as sterile eggs are also produced and a sterile egg never develops into a chick, therefore, those who take milk should have no objection to taking sterile eggs”. This awareness is lacking and is to be spread in India to develop an excellent market for eggs in a systematic way.

In India, the diet of the people, in general, is deficient in proteins more particularly animal proteins such as milk, meat and eggs. It is heartening to find that in recent years, greater thought of one subject to livestock
production and improved techniques are being introduced in almost all species of farm animals.

India is basically an agricultural country with three fourth of its population still dependent on farming. However its contribution to the national economy accounts for only one third of gross domestic production, their standard of living is low and undernourished. For instance, one million people all over the world are undernourished and each year 15 to 20 million people die due to hunger and malnutrition and India alone one third of the world’s under nourished population There is a growing realization that for second economic growth, the basic concept of agriculture needs is becoming a viable alternative for the rural people in India. For this transformation, a dynamic linkage needs to be built up among the farmer, the consumer and the professional to bring about the needed induction of appropriate technology with adequate financial support.

Poultry is attractive as any other business and is a home-farm enterprise. It serves as an important role in converting grain and other product into eggs and poultry meat for the non-traditional benefit of mankind. Agriculture and poultry are inter-dependent as the cereals farms part of feed for poultry and poultry wastages are inputs for agriculture, poultry production can play a significant role to raise the economic status of the rural masses, improve their level of nutrition and also generate employment potentialities. Poultry farming is relatively easier and quicker, can be adopted to a wide
range of climatic conditions and can generally be conveniently carried out with other farm activities like crop production, dairying and sheep rearing. Much improvements in the confirmation and type of livestock have come about through the use of carefully planned breeding programmes and through scientific advancements.

Introduction of some of the world’s best poultry breeds has made a major contribution to the development of the poultry programme in India. The commercial poultry farming has increasingly been taken up during recent years in almost all over the country. More recently, stimulated by scientific research and discoveries, specialized methods of breeding for a specific purpose has begun to take place in general farming, established in orthodox lines. This has naturally led to a desire to know the theoretical implications involved in nurturing birds together with some particular end in view. Indeed, development is usually interpreted as creating the conditions for raising the level of income. The poultry industry is one of the leading supportive activities of agriculturists and egg production is the most important aspect of the industry. Poultry has forged already as the fastest growing segment not only of the livestock sector, but also an allied quality of agriculture.

A number of determinations play a vital role in the development of poultry industry. They are the public support to the agriculturists-turned. Small poultry farmers, for their viability. The second is the problem stricken medium and large farms. The third one is the need for a healthy mix of the
small and the large farms in view of the rural based poultry farming and the fourth is the policy reorientation to facilitate the development of the entire poultry industry.

IMPORTANCE OF THE STUDY

Poultry farming has been identified as one of the thrust areas in the Eighth Five Year Plan in India. The plan envisages an annual growth rate of seven percent in egg production. The development of farming has been given priority to help small rural farmers in the unorganized sector. It is also planned to ensure easy access to all necessary facilities including inputs, credit and marketing. Hence, a study of poultry industry on commercial viability is of special importance.

Poultry Farming is undertaken by thousands of rural as well as semi-urban masses. Poultry Farming with low capital investment generate employment opportunity for rural and semi-urban people. With the new occupation and employment generation the standard of living has come up considerably creating social impact.

During the early five year plan periods, some progress has been made in upgrading layer as a result of schemes sponsored by the Central and State Government. These schemes resulted in an increase in the size of farms and the egg production. To expedite the poultry business, large government farms are developed at Delhi, Simla, Bhubaneswar, Bangalore and Bombay.
It is proposed to establish three Central Regional Poultry Breeding Farms, each with a capacity of 5000 layers, three random sample laying test units, 61 intensive poultry production-cum-marketing centers, and to increase their number to 142 and the expansion of 3 Central Farms, 14 State Farms and 55 existing production-cum-marketing centers. The Seventh Plan envisaged an investment of Rs.620 million for poultry farming and the Eight Plan proposed an outlay of Rs.2,838 crores for poultry farming including animal husbandry and identified as one of the thrust areas”.

Poultry has also helped in developing many ancillary industries such as hatchery operation, poultry equipment and processing of poultry products. More than a million people in our country are dependent directly or indirectly on Poultry Farming for their livelihood, there are about half a million people engaged in allied operations like Feed Mills, Vaccine and Medicine, Transportation and Retailing of eggs. Egg is also used for preparation of a variety of products such as medicines, paints, varnishes, printer ink, adhesives, cake, shampoos etc. Poultry manure is an extremely rich source of nitrogen and organic material and is in demand as agricultural input. The rural poultry units, with the locational advantages differs in cost of production. The present study focuses its attention on the production efficiency and marketing potentialities of the poultry units, their related problems and how it helps the economic development of Namakkal district.
STATEMENT OF THE PROBLEM

The study area, Namakkal District is one of the most concentrated areas in poultry farming in Tamilnadu. There has been a tremendous growth in the size of farms and the poultry farming has become a part and partial of life for many people in this district. Inspite of its astonishing and abundant growth, the egg industry has to face stress in recent years.

Egg being highly perishable and fragile nature need special care during transportation from producer to consumer. The major problem faced by these engaged in marketing of eggs is that of maintaining the quality during the process of distribution. Some producers are expanding their farming activities in anticipation of long run opportunities. The problems are the structure of cost and its orientation towards price. There is an overall increase in the feed cost and the birds are also affected by diseases and parasites that generate during various seasons. Air Pollution and Water Pollution also create different types of contiguous diseases. Further the middlemen engaged in this industry take away a lion's share of profit of the egg producers. Fluctuations in egg prices also cause unreasonable returns to the producers. The egg prices fall in summer and go up in winter due to the main problem of preservation. Further, employment opportunities increase during winter seasons and so people get more income during this period. Sentimental values also affect the consumption of eggs during festival seasons.
In the past two years, the consumption of eggs has not increased, while production has been increasing at a higher rate. Prices of egg have registered a rise of ten to fifteen percent but in real terms, it has not shown any increase. On the other hand, farmers are bowed down by soaring prices of feed, making many units uneconomical to operate, combined with diversion of feed to exports. Further, for the poultry farmers, a viable marketing structure means the choice of appropriate marketing channel. There exists three prominent marketing channels, that is producer — consumer, producer — wholesaler — consumer and producer — wholesaler — retailer — consumer and also, the poultry farmers are price takers fixed by the consortium of the group in Namakkal Egg Co-ordination Committee and have to adjust the market structure. So, the marketing problem further aggravates according to the size of farms.

Inspite of the fact that poultry farming has become a good subsidiary occupation for many farmers and improved their conditions, there are problems creeping in the production and marketing size of the industry. The socio-economic impacts on the family of the farmers towards economic development need a special attention.

SIGNIFICANCE OF THE STUDY

The phenomenal growth in the egg production has led to the expansion of various economical marketing channels. The market should be expanded in such a way that the production equals consumption. It is interesting to note
that a majority of the rural population have little religious taboo against consumption of eggs. Egg is one such food commodity which cannot be adulterated and as per the estimation, an increase of one egg in per capita consumption can create 25000 additional job opportunities. This shows the tremendous potential for growth of the industry in the next two or three decades. India has achieved good progress in manufacturing the latest state of the art technology in equipment for poultry management to sustain the quality of poultry products. It is necessary to create the needed infrastructure facilities for processing, packaging, preservation and marketing of eggs. Attention is also needed to find out the ways of producing poultry feed, at an economical cost and improving the service for disease control measures. Availability of quality chicks should be ensured. Incentives and easy flow of institutional finance combined with appropriate training and guidance are also necessary at present. There should be an organized and projected development with modern technology. A viable and efficient structure needs to be established at the village, district and state levels for monitoring the poultry industry.

The new venture of poultry farming may act as a means for improving the socio-economic conditions of new class of businessmen, who keep this industry as a source of decent living. From the employment point of view, it may be a blessing in disguise, for those, who are underemployed and unemployed hither to in rural and urban areas. There is an urgent need for the
evolution of a systematic and effective marketing organisation at the State level first, which may be linked to National Level. Industrialisation, urbanization and population growth have a great impact on demand for poultry products. This demand is largely met through movement of poultry products from rural areas to urban areas. During this process, the commodity has to undergo many changes and it affects the quality. The present study attempts to trace out deficiencies and constraints which are cutting the profitability of the producers and the progress of the socio-economic conditions of the farmers, for the betterment of economic development.

There may be poor returns to the farmers in this industry due to false perceptions. The poor returns are basically due to over production of eggs and many farmers are unaware of the situation, with lots of hope of making huge profit, they invest in non-viable projects and thus loose their capital. Hence a clear and practical study on poultry industry is significant. The significance of this study is its analysis on the capital investment with various sizes of farms, cost of production in rearing the chicks, collection and marketing of eggs and the impact of poultry industry on the socio-economic conditions of the life style of the farmers for the betterment of economic development.
OBJECTIVES OF THE STUDY

The following are the objectives of this study:

i) To document the historic development of poultry farming in India, Tamil Nadu and Namakkal District.

ii) To analyse the cost structure of various sizes of farms and marketing procedure for eggs.

iii) To analyse the socio-economic impact on the family of the poultry farmers towards economic development.

iv) To identify the position of poultry owners before and after the poultry business.

v) To suggest measures to get rid of the problems in production and marketing aspects in poultry farming.

METHODOLOGY

The study comprises both primary and secondary data. The mass data collected from various hand books, year books, records of poultry farms, poultry journals, poultry international books and research publications are used to present a clear picture of poultry industry at present. The secondary data like cost and financial information are collected from the owners of the sample farms through a structured schedule. A pilot study is conducted before framing the interview schedule. A pre-tested and well designed interview schedule is used to collect primary data of sample respondents for identifying the changes in socio-economic aspects.
The data relating to the capital invested in various fixed assets are collected from the records of farms. The expenses incurred for rearing the chicks up to point of lay are noted from the records maintained by the sample farms. The expenditure during the period of lay and the number of eggs produced, cost price as well as the sales price during the entire period are collected from the records. The primary data relating to the sample farmers of the poultry industry are either of the owners or of the partner of the farms. Their status prior to the starting of the poultry units and their present conditions are elucidated through cordial conversation with the head of the families. Their responses are collected by way of interview schedule and opinions are also classified and codified for the purpose of analysis.

**SAMPLING TECHNIQUES**

India has poultry industry in almost all States. The area selected for this study is Namakkal District in Tamil Nadu. As per the records of the Poultry Wing of the Animal Husbandry Department, there are about 5240 farms in Namakkal District. At present 4540 farms are actively functioning. This District has 15 Panchayat Unions viz Namakkal, Mohanur, Puduchatram, Sendamangalam, Erumaipatti, Paramathi, Kabilarmalai, Rasipuram, Vennanthur, Namagiripettai, Kollimalai, Tiruchengodu, Elachipalayam, Mallasamudram and Pallipalayam. For the purpose of classification, the farms with bird strength between below 50000 are taken as small farms; birds strength between 50000 to 100000 are taken as medium
farms and the farms with birds strength 100000 and above are treated as large farms. As per this classification, there are 2475 small farms, 1540 medium farms and 525 large farms. The farms are post stratified according to their size. A sample of around ten percent from each size is selected at random. Thus 250 small farms, 150 medium farms and 50 large farms are taken as sample for the present study under stratified random sampling basis.

**SELECTION OF SAMPLE FARMS**

<table>
<thead>
<tr>
<th>Size</th>
<th>Number of Birds</th>
<th>Total No.of Farms</th>
<th>Sample Farms selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>Below 50000</td>
<td>2475</td>
<td>250</td>
</tr>
<tr>
<td>Medium</td>
<td>50000 – 100000</td>
<td>1540</td>
<td>150</td>
</tr>
<tr>
<td>Large</td>
<td>Above 100000</td>
<td>525</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4540</td>
<td>450</td>
</tr>
</tbody>
</table>


It is to be noted that, in the process of selection almost all types of location, that is rural, semi-urban and urban farms are included in the sample. The data that are primary in nature have been collected from the respondents of the sample farms.

**TOOLS USED**

The data collected for this study are analysed with the help of various statistical tools. Simple percentages, means and standard deviations are commonly used for clarity of expression. Tools such as F test, t-test and ANOVA for analyzing socio-economical impacts and chi-square test for opinion analysis. The impact of several cost related variables on total income
and profit were studies with the help of multiple regression analysis. Maps, Charts and diagrams are given to have clarity of the results obtained.

PERIOD OF STUDY

The period of study taken for this research is eight years from 2000-2008. Longer period from 1961 is taken for comparison purposes. The primary data are collected during the year 2007-2008.

LIMITATIONS OF THE STUDY

The area of the study is limited to the Namakkal District of Tamil Nadu, being a semi-urban and rural area, most of the small farms do not maintain proper accounting records. Many do not follow the system of double entry system of accounting. Another important limitation is the price of eggs, feed and medicines. They are highly sensitive. Hence for the purpose of analyzing the cost of production, cost during the selling period, marketing costs etc., the amount as shown in the books of the respondents are considered reliable. There may be some negligible variations in the average prices and the actual prices existing in the market.

REVIEW OF LITERATURE

Some empirical studies on income, employment and rural development have been published in India and abroad. They have linked the basic concepts and frame work of economic theory to the empirical study of poultry farming to address the important problems of finding the optimum size of poultry farm. In this review, attention is focused on studies not only dealing with
poultry but also on such investigations which had employed an analytical approach that could be applied in achieving the objectives of this study.

The previous studies on poultry farm have attempted to evolve a criteria for increasing production, mortality and feed practices. The need for such studies is increasing day-by-day for efficient and economical running of poultry farms and the various poultry development programmes undertaken by Government.

RURAL DEVELOPMENT

According to Bhattacharya\(^1\), Rural Development is "a process of change from the traditional way of living of rural communities to progressive ways of life, as a method by which people can be assisted to develop themselves on their own capacity and resources." The term Rural Development implies "priority production and investment attention to the commodities primarily produced in rural areas"\(^2\). According to Vasant Desai\(^3\), "Rural Development is a conscious effort at raising the standard of living of the people in the villages in India."

There are some of empirical studies pertaining to the rural development which are induced by the special schemes and extension activities of state sponsored schemes. Dhawan and John\(^4\) attempted to explore economic potentialities of dairy animals in increasing farm incomes by nationalizing the resources of some selected sub-urban farms in Punjab.
Balakrishnan estimated the percentage of income from crop against income from livestock and attempted to study the efficiency of mixed farming by conventional farm management analysis and production function analysis. Sidhu and Rangi concluded that poultry farming should become part and parcel of all the programmes for integrated rural development and economic upliftment of the rural people, with the help of linear programming and budgeting technique. Misra analysed alternative farming systems for increasing the current low income of small farmers in Orissa and concluded that the introduction of supplementary livestock enterprises had tremendous effect on income. Leite attempted to understand rural poverty in the Zunda Mata Region of Miras Geais State in Brazil and recommended that creation of off-farm jobs, co-operatives and credit expansion for small farmers in order to raise farm income of the depressed area. Gina identifies the factors that have hither to hindered the development and modernization of agriculture among Swazi farmers and provide a checklist of the factors that should be considered when designing rural development policies in Swazi Land. Rameshwar Singh and Singh attempted to study infrastructure of the poultry farms in rural areas and suggested that financial assistance should be provided to the weaker sections of the society for poultry production.

A properly planned, constructed and managed poultry housing system is a must to keep it healthy and vigorous. This will result in higher egg
production layers, high gain in body weight in case of broilers and labour saving. All these factors lead to increase the net profit of the owner.

Selvaraj attempted to assess the income, employment and consumption pattern of farm households in the dry land black soil region of Tamil Nadu and conclude that off-farm and non-farm employment had a significant share in the income of farm households. The main objective of Ramkumar Singh and Rameshwar Singh was to study the constraints of poultry farming which decreases the income and productivity and they suggested suitable remedial measures. A linear programming model was used by Heisey to analyse constraints to crop production among small cattle or poultry farmers. He suggested that selected crop subsidies and fixed allowance might achieve modest aggregate output and increased employment in the short run and expansion of non-farm employment might keep assets in the hands of the rural poor in the long run. Marimuthu and Subbarajalu have concluded that sheep farming can generate self-employment opportunities and improve the rural economy.

Throve and Galgalikar find that mixed farming with dairy enterprises has a positive effect on the income of the farmers in all the size groups.

According to Shaul Meydan, the best test of build up litter, when run through hand should be dry, friable and free from obnoxious odur. The litter
should be free from injurious materials also. The birds are purposely given only a small area to use the feed eaten only for providing eggs.

**WATER MANAGEMENT**

As a thumb rule, the total water requirements of a farm can be calculated at 50 ml per bird per day. This would include water for drinking and washing the wastage. Additional drinking space is needed during the hot weather.

Adequate insulation and ventilation make it possible for poultry men to control the temperature in the laying house during all seasons of the year. Ventilations needed to provide fresh air for the hens and to remove the moisture exhaled in breathing and through the droppings about 13.5 to 18 litres of moisture will be exhaled by 100 hens in one day.

Under Indian conditions, thatched roofing is continuously used because it has a good insulation value and it allows cheap construction. Additional lights stimulate egg production during the winter months from October to March. A hen should have a day light of at least 16 to 18 hours. Where there is 10 hours of day light, artificial light is needed for four to six hours. Some strain-cross imported leg horns lay hen with 18 hours of light. Generally 14 hours of light per day is used.

According to Alfred Marshall, the sums of money that have to be paid for the efforts and sacrifices for producing a commodity are expenses of production and this is called cost of production. According to Mehta fixed
cost is that part of the total cost of the firm which does not vary with variations in output and variable cost is dependent on the volume of output.

Joel Dean¹⁹, says that variable costs vary as continuous function of output while fixed cost, vary not at all. Maxton²⁰ has included feed cost, labour cost, auto truck cost, use of building equipment, cost of yards and ranges, depreciation of flocks, interest and miscellaneous charges for working out the cost of an egg. According to Morrison²¹ feed is the largest item of expense in egg production cost consists of the cost of pullets upto the laying point, feed, labour, electricity charges depreciation, interest on capital etc. Kumar²², attempted to analyse the cost structure of egg production and concluded that land requirement for poultry farming is low, the amount of capital investment need not be high, the gestation period for capital is short and poultry can utilize by products of food-grains which are unfit for human consumption. Kumar²³ includes establishment charges, supervisory charges, labour charges, expenditure on feeds, medicine, miscellaneous expenses, depreciation on poultry bird building, poultry house, implements and furniture and interest on working and fixed capital. Singh and Gaikward²⁴ included cost of birds, depreciation on building machinery equipment, interest on investment, cost of litter, feed, medication, labour charges, marketing charges and miscellaneous costs in the cost of production of eggs. Singh²⁵ has included feed cost, veterinary charges, labour, capital service, interest and depreciation under cost of production. Arputharaj and
Kamaladevi\textsuperscript{26} included depreciation of building and equipments, the cost of chicks, electricity and fuel, litter, labour charges in cost of production. Velusamy\textsuperscript{27} used linear programming to find out the least cost feed mix under nutrition requirements of fat, fibre, protein and minerals specified for laying stock with the feed stuff available like maize, rice polish, wheat, grain, fish meal and groundnut cake. Velusamy\textsuperscript{28} included feed cost, labour charges, medicine and veterinary charges, miscellaneous charges, depreciation and interest on capital investment in the cost of production of egg. According to Talukder\textsuperscript{29} and his colleagues, fixed costs include the cost of day old chicks, interest and depreciation of fixed capital. Capital like land, building and equipment and variable costs include expenses and interest on working capital. Gupta\textsuperscript{30} and others attempted to analyse various cost components and their relative contribution to the total cost of production, return from egg production per bird and investment practices followed by poultry farmers in adjoining areas of Kanpur City. Adeyemu\textsuperscript{31} examines the economics of egg production of forty co-operative farms in South-western Nigeria. Cost functions are analysed by the use of ordinary least squares and weighted least squares. In this study the relationship between cost per bird and number of birds was estimated by fitting curves. Ames and Ngemba\textsuperscript{32} attempted to analyse the profitability by establishing commercial poultry enterprises supplying to the main urban markets in Zaire and found that the profitability of farms appeared to be influenced by the mortality, the rate of laying and the
high cost of imported supplies such as hatching eggs, baby chicks, medicine, vitamins, minerals and protein feeds. Kareemuba Basha\textsuperscript{33} computed the cost of production of egg by adding fixed cost with variable cost. The fixed cost includes interest on fixed and variable capital and depreciation on machines and equipment and the variable cost includes costs of chicks, feed cost, labour cost, veterinary charges and miscellaneous charges. Ravindra Reddy\textsuperscript{34} includes cost of construction of shed, cost of equipment, cost of chicks, cost of feed, cost of medicines and cost of labour in the cost of production of egg. According to Satyanarayanan Soni and Verma\textsuperscript{35} cost refers to expenses incurred on production services. The total cost incurred in the production process of eggs is composed of fixed cost plus variable cost. Fixed cost includes depreciation on fixed capital, mortality, repairing of equipments, interest on fixed capital, and interest on working capital and variable cost includes cost of chicks, cost of feed, labour charges, cost of medicines, electric charges litter charges and insurance charges. Verma\textsuperscript{36} includes depreciation on building and equipments, cost of chicks, cost of feeding, cost of electricity, cost of labour, insurance charges of birds, cost of medicines, cost of repairs and maintenance of house and equipments in the cost of production of egg.

Mehta\textsuperscript{37} defined profit as the net income of the business man. The net income is calculated by deducting from the total receipts the total expenditure incurred in a business venture. Tandon and Dhondyal\textsuperscript{38} defined net farm
income as the difference between receipt and total expenses. Net farm income is derived by subtracting cost from the gross income. He also stated that the selection of right breed is a pre-requisite for successful poultry keeping. The selection of suitable breeds is not merely a matter of individual preferences and requirements but a choice hedged in by such factors as the environment, husbandry conditions, marketing facilities and local prejudices.

According to Ahuja\textsuperscript{39} an optimum firm is a firm which is producing optimum output with the optimum plant. According to Leftwich and Ecket, "the most efficient size of the plant is the one generating the short run average cost curve that form the minimum point of long run average cost curve". According to Singh and Gaikward\textsuperscript{40} the large size farms are earning more as compared to small and medium size farms in Anand Taluk of Gujarat State.

According to encyclopedia Britannica Nutrition\textsuperscript{41} may be defined as the science of food and the nutrients in food and their relation to health\textsuperscript{42}. Timmer and others are of the view that there are linkages among agriculture food and nutrition. Mathan and Gupta\textsuperscript{43} reported that an Indian daily diet contains much less protein as against the minimum requirement. According to them, egg consumption can supplement nutritional deficiency. In India Rao\textsuperscript{44} reports that India is qualitatively and qualitatively short of food and emphasizes that the gap between necessity and availability has to be made up for reaching even a minimum desirable level of nutrition.
According to C.B. Singh and Patel\textsuperscript{45} fixed costs includes the cost of chicks, depreciation and interest on fixed capital and rent.

Variable cost include the feed, labour, medicine, litter costs, miscellaneous costs and interest on operating capital under variable cost.

The present study includes the cost of day old chicks, depreciation on buildings and equipments and the interest on capital invested on buildings and equipments under fixed cost.

For this study, the cost of feed, medicine, labour lighting, water and miscellaneous expenses are included in variable cost.

The total cost of production vary from farm to farm and also it is influenced by climatic and soil conditions. Dr. D.G. Parkale and D.V. Karar\textsuperscript{46} in their study of economics of egg production, worked out that the share of the working cost and fixed cost is the total cost at the overall level.

According to Madhavi\textsuperscript{47} net income is obtained by subtracting the total cost (cost during laying + cost of rearing upto laying) from the total revenue from all birds. The total cost includes rearing cost upto laying and also the cost incurred after started laying. The total revenue includes sale of eggs, called birds and manure. The net income from the poultry farm is influenced by number of eggs per bird and marketing rate of birds. The feed price fluctuates often and the income is affected by feed cost. The egg price
varies from place to place and also varies according to the season and so also the net income.

All these studies are scientific in nature and their approach as 'business' is minimum. The present study analyses the poultry industry from a different angle. It is approached as a business unit, the production and marketing efficiency are studied and the impact of poultry industry in the socio-economic development are studied.

The previous studies have focused on poultry industry mainly from scientific angle, where the commercial vision is missing. These studies have given priority for broiler production rather than egg production. The criteria in analyzing the broiler production is entirely different from that of egg production, as broilers have no stage-wise analysis like cost up to the point of lay or cost during the period of lay.

The present study aims to focus attention on poultry units as 'commercially viable' units, taking into consideration of various farm sizes. Efforts are taken to locate the optimum size in relation to different farm sizes.

In the earlier studies, the cost is divided as fixed and variable with no practical coverage to stage-wise or process cost aspect. The study on cost effectiveness requires analysis in such a way to identify the appropriate costs in each stages.

Special importance is given to analyse the cost of production in various stages; i.e. initial cost on fixed assets, stage-wise analysis up to the period of
lay. These process stage micro analysis can help the farmers to formulate cost control measures in their farms at micro-levels in a scientific manner.

The optimum size in poultry industry is not a fixed one and it differs according to the area and size. The place of production and the marketing area have significant impact and hence technical analysis is made in connection with areas of poultry industry.

The product is perishable, quality differs due to temperature, rainfall etc., preservation is more expensive and hence the product has to reach the consumer as early as possible at least cost. The selection of a suitable channel for marketing is highly needed for efficient distribution in an economical manner.

Indian agricultural society is now in the transformation stage; i.e., from subsistence living to commercially social living. Any transformation society from one system to another needs some strong economical and commercial factors to consistently maintain that social upliftment. Poultry industry is one such industry and the impact of this industry on the economic and social life styles of poultry farmers are analysed with specific indicators.

Thus the present study highlights the stage-wise cost effective measures and cost efficiency is relation to different farm size, analyses the economical and suitable channel for marketing in relation to size and the impact of industry in the economic and social aspects of the transforming farming society for the economic development.
CHAPTERISATION

This study is divided into seven chapters.

i) The research design is presented in the first chapter.

ii) The second chapter reveals the position of poultry farming in India, Tamil Nadu and Namakkal District.

iii) Profile of Namakkal district has been explained in the third chapter.

iv) In the fourth chapter impact of poultry farming on socio economic factors have been presented.

v) The fifth chapter deals with analysis of cost structure.

vi) The sixth chapter gives analysis and interpretation of data of poultry business.

vii) The final chapter identifies the findings, suggestions and conclusion of the study.
FOOTNOTES

1. Bhattacharya, S.N., Rural Development in India, and other Developing Countries, Metropolitan Book Co. (P) Limited, New Delhi, 1983, P. VII.

2. Brahmanda, P.R., Dimensions of Rural Development in India, Himalaya Publishing House, Bombay, 1987, P. XIII.


16. Shaul Meydan, Processed Foods – Milorot Ltd., Post Abstract Israel, Published by MSD, USA.


22. Kumar, V.S., Economics of Egg Production : A case study, Eastern Economics, 63 (23), 1976, PP. 1031-33.

28. ibid
40. Singh, S.B. and Gaikward, OP.Git.


47. Madhavi, G.M.K., Economics of Scale in Poultry Farm, The Economic Times, July 1977, P. 43.