Chapter - 3

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3.0 TOPIC OF THE RESEARCH

INPUT - OUTPUT AND COST - BENEFIT ANALYSIS IN SELECTED KHADI AND VILLAGE INDUSTRIES.

3.1 Introduction of the Topic

The implementation of Khadi and Village Industries (KVI) activity is carried out through directly aided institution, stateboards, Non Governmental organisations (NGOs) and individual entrepreneurs. As on 31-3-98 there are 30 State Khadi and Village Industries Board, 4969 Registered institutions, 30129 co-operative societies and 7.85 lakhs individuals.¹

Among the other institutions the KVI activities are effectively undertaken by Registered institutions/ NGO's. Some of the reasons for its effective operations are listed below:

i. NGO's are the organisation established for the purpose of rural development,

ii. They are very close to the rural people and their activities are rural oriented

iii. Their main aim is to formating appropriate strategies for meeting the challenges of rural development,

iv. Compared to Government institutions their intimate knowledge of local situation helped them much in carrying out rural development activities.
They are able to communicate easily with local people as they understand the rural tradition and local community in their own idiom. Most of the NGO’s work at the microlevel with substantial freedom to experiment with alternative of modern methods of development which facilitate high level of innovation.²

Knowing the importance of NGO’s in Khadi and Village Industries Commission (KVIC) had allotted more funds to them in the year 1997-98 as given in the table No.3-1. Total fund issued for both Khadi and Village Industries was Rs.707.76 crores. NGO’s received Rs.268.66 crores, which is 37.96%. Other agencies received less than the NGO’s.
3.1.1. Statement of the Problem

In any manufacturing activity the important factor of production is converting a set of inputs to outputs. Failure in getting the optimum output from the set of input results in sickness of the industry. This may be the major reason for the closure of industrial units. Therefore, the present study, attempts to evaluate the various factors that are responsible for getting output. Another attempt is also made to measure the relativity of the input to output in an objective manner.
As the cottage and village industries have crucial role in the struggle against unemployment the scope of the present study will help to improve the performance of the khadi and village Industries. It is a wide spread belief that the decentralised sector suffers in efficiency, productivity and output maximisation. In order to understand the various factors responsible for the lapses mentioned above, the present study will be more useful. It throws some light on the operating parameters in the decentralised industries in relations to input - output measurement.

Khadi and Village Industries provided employment to 56.50 lakhs persons in the year 1997-98”. Generally Khadi and Village Industries have low technology input and high labour input with skill and craft manship of the artisans. This study tries to evaluate the output quantitatively. The parameters of input will be objectively determined to optimise the output. This will enable the cottage industries to operate profitably.

3.1.2. Scope of the Study

i. The result of the study will enable the policy makers of the institutions to understand the areas of low output, so that the productivity in the institutions can be improved through appropriate strategies.

ii. The findings of this study will also help the national level agencies like Khadi and Village Industries Commissions and Khadi and Village Industries Board's to suitably make necessary policies related to financing and making improvements in the production of Khadi and Village Industries.
iii. The result of the study will help the individual entrepreneur, to analysis his companys or enterprises or industries performance and improve the performance of inputs of capital, labour, materials and output of production. This will reduce the cost of production and thereby the profit will be increased.

iv. The findings will help the researcher to upgrade his knowledge in the field of input - output and cost - benefit analysis.

3.1.3 Concepts

3.1.3.1 input

a) Raw materials and their Characteristics

Most of the raw materials consumed in the Khadi and Village Industries are from agriculture sector. Some of them are cotton, cereals, pulses, oil seeds and spices, etc., which are perishable in nature. The cost of the actual consumption of the above raw material for this study is calculated as below.

\[
\text{Cost of raw material} = \text{opening stock} + \text{purchase} - (\text{closing stock} + \text{sales of raw materials}).
\]

b) Labour and its Characteristics

The labour force engaged in the sector are from rural area. They are mostly unskilled or semi skilled. The literacy rate of labour will also be very low. They are engaged either on part-time or full time basis. The supervisory and managerial staff are educated and are employed on full
time basis. In this study the labour means all the workers, supervisors, administrative staff and other such persons employed in the institution. The cost of labour includes production wages, salary and allowances to the staff, provident fund and gratuity.

c) Capital and its Characteristics

The major source of capital for these institution is Khadi and Village Industries Commission. However, for the purpose of the study, the capital here includes capital fund, profit, working capital from Khadi and Village Industries Commission and Banks, capital expenditure loan from Khadi and Village Industries Commission and depreciation reserves. Cost of capital is the interest paid for the above capital employed.

3.1.3.2 Output and Output Characteristics

Output here means finished products which are ready for sales. They may be khadi, silk, woolen cloth and other products. The Village Industries includes soap, dhal, spices, honey, ayurvedic medicines, foot wear, handicraft, matches, furniture, etc. For the purpose of the study, the value of production is taken as value of output. It is calculated as under:

\[
\text{Value of Production} = \text{opening stock of raw materials} + \text{work in progress} + \text{purchase} + \text{production charges} + \text{actual expenditure for the production} - (\text{closing stock of raw materials} + \text{closing stock of work-in-progress}).
\]


*Cost of Input*

In this study, major variables such as cost of raw materials, labour and capital are calculated for computation of total cost of input.

3.1.3.3 *Benefits Described*

*Measurable Benefits Studied*

Profit, employment, wages.

*Non-measurable Benefits Analysed*

Contribution to society, contribution to environment, contribution to human values and contribution to nation building.

3.1.4 *Objectives*

i. To analyse the relationship between inputs (Raw materials, Labour and Capital) and output of KVI products (selected products only).

ii. To study the relationship between economic and social benefits of Khadi and Village Industries (selected industries only), and

iii. To suggest a viable common model for the promotion of Khadi and Village Industries on the basis of the study.

3.2. *Hypotheses*

The provisional guiding hypotheses are given below:

Cost of major inputs constitutes a major share of the total value of outputs and hence the net profit is bound to be meager.
Cost of capital per worker tends to be less as this is expected to be the capital saving industry and labour intensive sector.

Promotion of Khadi and Village Industries may lead to social benefits helping the unemployed and the underemployed in the rural sector.

Social benefits accruing from Khadi and Village Industries are worth noted than the economic benefits namely, net profit from these industries.

3.3. Variables to be Studied

Input

Input analysis is related to 1) raw materials and its quality 2) labour and its efficiency 3) capital and its characteristics 4) land and building and their suitability 5) organisation and its competition.

Output

Cost analysis is related to working capital, fixed investment, employment and labour cost.

3.3.1 issues Based on Variables

Whether quantum of output and quality of output are based on raw material cost, raw material quality, labour cost and labour efficiency or capital cost or total input cost or are there any other influencing factors?
Whether the benefits accrued are based on investment, or quantum of employment or wages paid and are there anything else influencing the benefits?

3.4 **Indicators Fixed for Measurement**

1. Profit
2. Employment
3. Wages

3.5.0 **Design of the Study**

This study is a diagnostic study, analysing the primary and secondary data. It becomes a descriptive study wherever the human and the social values are described.

3.5.1 **Discipline**

The study covers the discipline of Economics including, Rural Industries, Managerial Economics and Management of Khadi and Village Industries.

3.5.2 **Sampling Techniques and Area of the Study**

This study needed data from the final accounts of institutions with item wise value of closing and opening stock of materials. Hence purposive sampling techniques are used, wherever needed to fulfil the objectives of the study.
In Tamil Nadu, Tamil Nadu Sarvodaya Sangh with its 65 branches working in all district is responsible for the khadi and village industries activities. They come under registered institutions which are directly aided by KVIC. Further Gandhigram khadi and village industries public charitable trust - Gandhigram, Gandhi Ashram - Thiruchenkodu, Gandhi Nikedan - T.Kallupatti, Madurai, Gandhi Seva Sangh Chattrapatti are some of the successful KVIC society under the financial assistance of KVIC. Doctoral research or any other study need data atleast for a period of ten years. The Khadi and Village Industries institutions in the study are from Dindigul District, Karur District and Thiruchirapalli District that are functioning continuously over a period often years.

**Selected institutions under the Study**

1. Gandhigram Khadi and Village Industries Public Charitable Trust, Gandhigram, Dindigul District, Tamil Nadu.
2. Madurai North Sarvodaya Sangh - Palani, Dindigul District, Tamil Nadu.
3. Gandhi Seva Sangh - Chattrapatti, Dindigul District, Tamil Nadu.
5. Thiruchirapalli North Sarvodaya Sangh -Thiruchirapalli, Thiruchirapalli District, Tamil Nadu.

**3.5.2.1. Gandhigram Khadi and Village Industries Public Charitable Trust (GKVIPCT), Gandhigram**

Started on 7th October, 1947 Gandhigram is seen as a development outfit. This community began with Seven or Eight youth
under the leadership of the well-known social worker and educationalist Dr. T. S. Soundram and Dr. G. Ramachandran, were the disciples of Mahatma Gandhi. Since then the institution has been implementing the constructive programmes of Mahatma Gandhi. Till 1977, the khadi department remained a part of Gandhigram society. On 28th February 1977 the Khadi department was separately registered as GKVIPCT.

The major activities of GKVIPCT are: cotton and muslin spinning and weaving, production of washing soap, toilet soap, shampoo, leather articles, edible oils, tooth powder, ayurveda medicines and fibre products, processing of cereals and pulses, rice and dhal, bleaching and dyeing of khadi and polyvastra and marketing of all the above products.

3.5.2.2. Madurai North Sarvodaya Sangh (MNSS), PaSani

The MNSS with its head quarters at Palani was registered as an independent institution in 1977. This Sangam is implementing KVI programmes in Dindigul District. The Sangam has got 16 production and 12 marketing unit at various places in the District. It produces textile goods and village industries goods. The major activities of MNSS, Palani are khadi spinning, weaving, polyvastra, silk along production of non-edible oil soap, honey processing, handicrafts, date-fruit, leather goods and all the manufactured products are marketed through their sales centres.
3.5.2.3. Gandhi Seva Sangh (GSS), Chattrapatti

Gandhi Seva Sangam with its head quarters at Chatrapatti in Dindigul District was founded in 1958, and it has been carrying out constructive programmes of Mahatma Gandhi in various ways like running khadi and village industries, organising school and orphanage. The major activities of GSS are: crushing of non-edible oil, non-edible oil soap production, khadi spinning and weaving and marketing of KVI products.

3.5.2.4. Karur Sarvodaya Sangh (KSS), Karur

Karur Sarvodaya Sangh has its head quarters at Karur, Karur District. Major activities of this institution are khadi, textile, soap leather. This sangh have seven sales outlets in various places in TamilNadu.

3.5.2.5. Thiruchirapalli North Sarvodaya Sangh (TNSS), Thiruchirapalli

Thiruchirapalli North Sarvodaya Sangh has its head office at Thiruchirapalli. Main activities of this institution are production of khadi, silk, polyvastra, handicraft, chappal. This institution has more than eleven sales showrooms in various places in Tamilnadu.

3.5.3 Period of Study

The study covers a period of twelve (12) financial years from 1st April, 1986 to 31st March, 1987 and from 1st April 1997 to 31st March, 1998.
3.6 Statistical Techniques for Testing the Variables

The following statistical techniques are employed in the study to measure the nature, value and characteristics of various inputs in getting the required maximum or optimum output. Mean averages, ratio analysis, co-efficient correlation techniques, regression analysis and linear programming are used.

3.7 Analytical Tools

Techno-economic analysis, content analysis of financial statements, qualitative analysis of inputs and outputs and investment analysis with present worth techniques are used. The study contains charts, graphs and diagrams as required to fulfil the needs.

3.8 Sources of Information, Data Collection and Limitation in Data Collection

The industrial co-operatives in the study area of Dindigul District, Karur District and Thiruchirapalli District are either dormant or not functioning continuously over a period often years.

It was very difficult to get required data from the individual artisans, who were getting finance from KVIC.

State Khadi Boards activities wise accounts are not available as they maintain comprehensive central account of the state level. The researcher had no option, but to select the following institutions for the reason listed below:
i) The institutions are maintaining separate account for Khadi Village Industries and publish audited balance sheet every year.

ii) They also published the detailed account of purchase, opening stock, closing stock, reserve, loans, sales, income and expenditure etc along with the balance sheet without which the study cannot be undertaken.

iii) All the institutions selected for the study are functioning effectively for the past fifteen (15) years.

iv) The present study mainly depends on secondary data. For better reliability the investigator is in need of printed balance sheets for a period of ten years which are available in the following institutions in three districts in Tamil Nadu implementing KVI programmes.

Primary data are collected from the personnel of the units and secondary data are taken from the audited balance sheets of Khadi and Village Industries institutions selected for the study.

3.9 Operational Definitions of Concepts

Khadi - Means any cloth woven on handloom in India from cotton silk or woolen yarn or a mixture of these yarn hand spun in India.

Village Industry: The village industry has been defined as any industry located in a rural area (population of which does not exceed 20 thousand) which produces any goods or renders any service with or without the use of power and in which the fixed capital investment (in plant and machinery and land and building) per head of an artisan or a worker does not exceed 50 thousand rupees.
Net Profit: This is obtained by subtracting management overheads, reserves, depreciation and interest from gross profit and miscellaneous income. Taxes have not been provided in the profit and loss accounts.

Gross Profit: This is the surplus earned in manufacturing and trading operations. Miscellaneous income and management overheads are not included in its calculation.

Lakh: A unit of number equal to hundred thousands (1,00,000/-)

Financial year: First April to thirty first March of one calendar year.

One Rupee: A unit of Indian Currency consisting of 100 paise. One U.S. dollar is equal to Rupees as on 2nd August - 2000 and one rupee is equal to 45.32.

Fixed Capital: This is net value of fixed assets camparing land, buildings, machineries, equipments, tools, vehicles and furniture.

Capital Fund: It means ownfund of the organisation comprising initial capital and subsequent addition thereon from retained profit.

Wages: In economics any regular payment to an employee of a business for his or her labour by hour, week, month, or some other period or by units of output.
Growth rate: Growth rate is the average percentage of increase or decrease in a particular or value with respect to any period of time.

Rural Area: An area which comprises any village or includes an area outside the municipal limits, the population of which does not exceed 20,000.

Working Capital: The sum of current assets as listed in the balance sheets of the sample institutions consisting of stocks, sundry debtors, receivables, advance loans, cash and other current assets.

3.10 Chapterisation

The report of the study is divided into TEN chapters, as detailed below:

3.10.1 First Chapter

This chapter covers issues in the subject, taken for study priority of issues topic as a whole, importance of the topic in meeting the societal needs, and the subject is focussed towards the national objectives of development and promotion of national building activities.

3.10.2 Second Chapter

It contains the content analysis of books, articles, research studies, their coverage of subject areas and issues, uncovered areas in the subject and research gaps and coverage of research gaps in the present study.
3.10.3 Third Chapter

It deals with the design of the study, contains topic of the study, statement of the problem, Scope of the study, concept, objectives, hypothesis of present study, variables to be studied and Issues based on variables, indicator fixed for measurement, design of the study, discipline, sampling techniques and the data used, period of the study, statistical techniques for testing the variables, analytical tools and chapterisation.

3.10.4 Fourth Chapter

It deals with analyses of raw material cost of inputs and production value of output, define the importance of raw material cost in the KVI, calculation of raw material cost and calculation of value of production, comparison analysis of raw material cost (input) and value of production (output) with the mean ratio, co-efficient correlation, regression, linear programming, findings and suggestion of the above analyses.

3.10.5 Fifth Chapter

This chapter deals with the labour cost of inputs and production value of output, concept of labour cost, calculation of labour cost and analysing the data with the statistical tool of tabulation, ratio, trend analysis, mean, correlation, regression and linear equation, interpretation of analysis, suggestion and findings of the above analysis.

3.10.6 Sixth Chapter

Sixth chapter deals with the performance of capital cost and output (production value) concept of capital and capital cost, role of capital cost
in Khadi and Village Industries analysis with analysis tool of table, graph, mean, correlation, regression, and linear equation, findings and suggestions of above analyses.

3.10.7 Seventh Chapter

The Seventh chapter evaluates, the cost of Material Labour Capital (MLC) and Value of Production (VP), concept of material labour capital and value of production, relationship between material labour capital to value of production in Khadi and Village Industries (KVI), statistical analyses with the help of the tools of mean, average (mean), table, coefficient correlation, trend analyse, regression and linear equation, findings and suggestion of the above analysis.

3.10.8 Eighth Chapter

In the Eight chapter, management as an input and its influence on output is discussed.

3.10.9 Ninth Chapter

In this chapter an attempt is made to evaluate the profit, investment, employment and wages as benefits from Khadi and Village Industries activities.

3.10.10 Tenth Chapter

In this chapter, a summary of the findings and conclusions of the study are presented.
End Notes


