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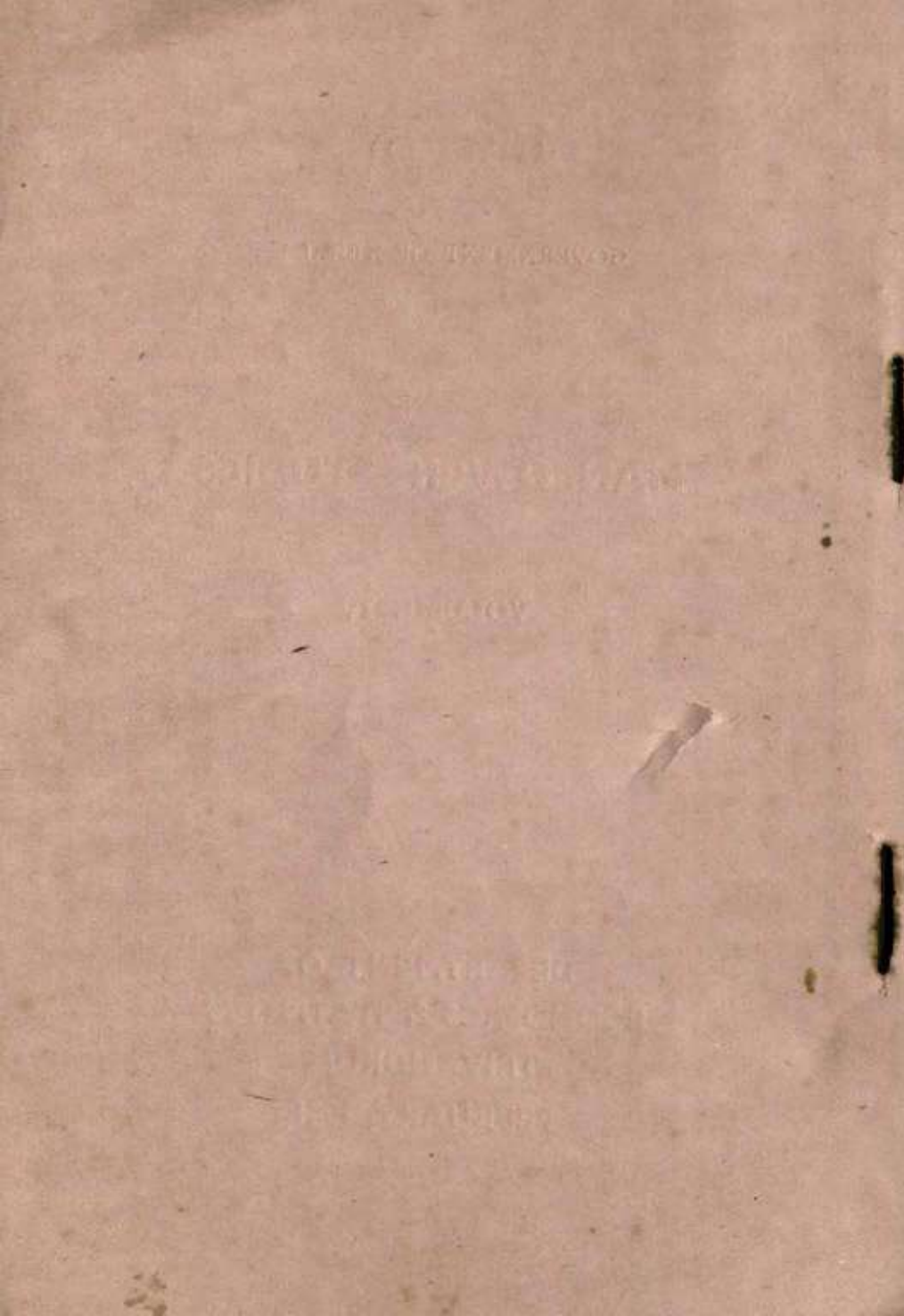


GOVERNMENT OF KERALA

MANPOWER STUDIES

VOLUME IV

**DEPARTMENT OF
ECONOMICS & STATISTICS
TRIVANDRUM
FEBRUARY 1981**



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MANPOWER STUDIES

VOLUME 17

DEPARTMENT OF
ECONOMICS & STATISTICS
FRANZOSIUM

PREFACE

A major goal of development planning is eradication of unemployment. 'Man power Planning' is gaining greater importance in the development process. The essence of 'Man power Planning' is to match employment generation with the demand for work. Demand for jobs is highly dispersed not only regionally but also by ages, sex and class of workers. It is also fragmented in terms of timing and duration for a large number of the unemployed. The economy now faces the paradox of unemployment of the trained and untrained personnel and also the shortage of hands in several areas. If an employment strategy is to be effective it has to be based on the understanding of the characteristics of various types of unemployment, tracing them to their root causes, particularly the inequitous social and economic structure and inequitous institutional set up. An efficient system of 'Man power Planning' alone can equip the economy, to meet these challenges effectively. The 'Man power studies' is a series of publication which the 'Directorate of Economics and Statistics' has commenced with a view to enable the State to vitalise her 'Man power Planning' System.

The Manpower Unit started functioning in the Directorate of Economics and Statistics from April 1974. This unit could publish 23 studies in three volumes. This publication, i.e. Volume IV, contains 6 studies relating to various disciplines, prepared by officers working under the unit.

It is hoped that the 'Man power Studies' included in this volume will be of immense use to the planners and administrators.

(Sd.)

Dr. P. A. NAIR,

Director of Economics and Statistics

Trivandrum,
23-2-1981.

The first of these is the fact that the
 population of the country has increased
 very rapidly since the year 1850. This
 increase has been the result of a
 number of causes, the most important
 of which are the following:—
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 and the consequent immigration of
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 of people from all parts of the
 world.

CONTENTS

	<i>Pages</i>
1. A study on the Employment Potential in the Khadi and Village Industries in Kerala—P. C. Jain.	.. 1—82
2. Involvement of Man power in Mini Industrial Estates in Kerala—T. Money.	.. 83—116
3. Manpower involvement in private Medical Care in Kerala—Some Highlights—K. Parukutty Amma	.. 177—193
4. Inservice Training of Medical and Paramedical personnel in Health Services—K. Parukutty Amma.	.. 135—157
5. Employment in Fish Marketing in Kerala—C. Bhaskaran	.. 159—190

CONTENTS

100-101

102-103

104-105

106-107

108-109

110-111

112-113

114-115

116-117

118-119

120-121

122-123

124-125

126-127

128-129

130-131

132-133

134-135

136-137

138-139

140-141

142-143

144-145

146-147

148-149

150-151

152-153

154-155

156-157

158-159

160-161

162-163

164-165

166-167

168-169

170-171

172-173

174-175

176-177

178-179

180-181

182-183

184-185

186-187

188-189

190-191

192-193

194-195

196-197

198-199

200-201

202-203

204-205

206-207

208-209

210-211

212-213

214-215

216-217

218-219

220-221

222-223

224-225

226-227

228-229

230-231

232-233

234-235

236-237

238-239

240-241

242-243

244-245

246-247

248-249

250-251

252-253

254-255

256-257

258-259

260-261

262-263

264-265

266-267

268-269

270-271

272-273

274-275

276-277

278-279

280-281

282-283

284-285

286-287

288-289

290-291

292-293

294-295

296-297

298-299

300-301

302-303

304-305

306-307

308-309

310-311

312-313

314-315

316-317

318-319

320-321

322-323

324-325

326-327

328-329

330-331

332-333

334-335

336-337

338-339

340-341

342-343

344-345

346-347

348-349

350-351

352-353

354-355

356-357

358-359

360-361

362-363

364-365

366-367

368-369

370-371

372-373

374-375

376-377

378-379

380-381

382-383

384-385

386-387

388-389

390-391

392-393

394-395

396-397

398-399

400-401

402-403

404-405

406-407

408-409

410-411

412-413

414-415

416-417

418-419

420-421

422-423

424-425

426-427

428-429

430-431

432-433

434-435

436-437

438-439

440-441

442-443

444-445

446-447

448-449

450-451

452-453

454-455

456-457

458-459

460-461

462-463

464-465

466-467

468-469

470-471

472-473

474-475

476-477

478-479

480-481

482-483

484-485

486-487

488-489

490-491

492-493

494-495

496-497

498-499

500-501

502-503

504-505

506-507

508-509

510-511

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616-617

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620-621

622-623

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704-705

706-707

708-709

710-711

712-713

714-715

716-717

718-719

720-721

722-723

724-725

726-727

728-729

730-731

732-733

734-735

736-737

738-739

740-741

742-743

744-745

746-747

748-749

750-751

752-753

754-755

756-757

758-759

760-761

762-763

764-765

766-767

768-769

770-771

772-773

774-775

776-777

778-779

780-781

782-783

784-785

786-787

788-789

790-791

792-793

794-795

796-797

798-799

800-801

802-803

804-805

806-807

808-809

810-811

812-813

814-815

816-817

818-819

820-821

822-823

824-825

826-827

828-829

830-831

832-833

834-835

836-837

838-839

840-841

842-843

844-845

846-847

848-849

850-851

852-853

854-855

856-857

858-859

860-861

862-863

864-865

866-867

868-869

870-871

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878-879

880-881

882-883

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888-889

890-891

892-893

894-895

896-897

898-899

900-901

902-903

904-905

906-907

908-909

910-911

912-913

914-915

916-917

918-919

920-921

922-923

924-925

926-927

928-929

930-931

932-933

934-935

936-937

938-939

940-941

942-943

944-945

946-947

948-949

950-951

952-953

954-955

956-957

958-959

960-961

962-963

964-965

966-967

968-969

970-971

972-973

974-975

976-977

978-979

980-981

982-983

984-985

986-987

988-989

990-991

992-993

994-995

996-997

998-999

1000-1001

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6. Unemployment among B.Ed. Degree holders in Kerala.
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5. A study on the Characteristics of unemployed post graduates in Kerala.

A STUDY ON
THE EMPLOYMENT POTENTIAL IN THE KHADI AND
VILLAGE INDUSTRIES IN KERALA

THE BILGOLUENI MOUNTAINS IN THE KHAYS AND
THE LARGI FOUR STRIES TERRAINS

"In a country, where, even after three decades of planned development, more than half of the population is living below the poverty line the level of employment and earnings provided in Khadi & Village Industries, sector is contributing in a very significant way for bringing this category of persons much above the povertyline. In Kerala also the development of this potential sector is very vital because of its economic justification. The study reveals that an important feature of this activity is the very high participation ratio of women who contribute substantially to their family income. It is pointed out that the 'Fibre' industry has much development potential in the State. The development of Khadi and Village Industries in Kerala will also go a long way in increasing the rural participation in the developmental efforts. As the Mahatma observed 'Khadi is the only true economic proposition in terms of millions of village, until such time, if ever, when a better system of supplying work and adequate wages for every able bodied person above the age of 16, male or female, is found for his field, cottage or even factory in everyone of the villages in India, or till sufficient cities are built up to displace the villages so as to give the villages the necessary comforts and amenities that will regulate life demands and is entitled with".

CONTENTS

	Page
1. Introduction	.. 7
2. Objectives of the study	.. 7
3. Methodology of the study	.. 8
4. Coverage of the study	.. 10
5. Of field response	.. 10
6. The story of Khadi	.. 10
7. Development of Khadi and Village Industries under the Five Year Plans	.. 11
8. Growth of Organisation in the Khadi and Village Industries sector	.. 14
9. The Development Agencies in Kerala	.. 15
10. The Composition of Khadi and Village Industries in Kerala	.. 15
11. Employment in the Khadi and Village Industries Sector	.. 16
12. Employment potential in Khadi and Village Industries in Kerala	.. 32
13. Khadi production in Kerala	.. 34
14. Fibre Production in Kerala	.. 35
15. Capital formation of khadi & village industries sector in Kerala—	.. 38
16. Flow of finance in Khadi and Village Industries sector in Kerala	.. 40
17. A socio-economic enquiry into Khadi and Village Industries sector in Kerala	.. 44
18. What ails Khadi and Village Industries sector in Kerala..	59
19. Towards optimal utilisation of the employment potential in Khadi and Village Industries in Kerala	.. 61
20. Conclusion	.. 63
21. Annexure	.. 65

CONTENTS

1	Introduction
2	1. The geographical situation of the district
3	2. The population of the district
4	3. The economic situation of the district
5	4. The cultural situation of the district
6	5. The administrative situation of the district
7	6. The political situation of the district
8	7. The social situation of the district
9	8. The health situation of the district
10	9. The education situation of the district
11	10. The housing situation of the district
12	11. The environment situation of the district
13	12. The sports situation of the district
14	13. The science and technology situation of the district
15	14. The military situation of the district
16	15. The foreign relations situation of the district
17	16. The international situation of the district
18	17. The world situation of the district
19	18. The future development of the district
20	19. The conclusion
21	20. Appendix
22	21. Bibliography
23	22. Index
24	23. Summary
25	24. Acknowledgements
26	25. Postscript
27	26. References
28	27. Notes
29	28. Figures
30	29. Tables
31	30. Glossary
32	31. Abbreviations
33	32. Symbols
34	33. Units
35	34. Conversion factors
36	35. Maps
37	36. Photographs
38	37. Illustrations
39	38. Diagrams
40	39. Charts
41	40. Graphs
42	41. Tables
43	42. Figures
44	43. Tables
45	44. Figures
46	45. Tables
47	46. Figures
48	47. Tables
49	48. Figures
50	49. Tables
51	50. Figures
52	51. Tables
53	52. Figures
54	53. Tables
55	54. Figures
56	55. Tables
57	56. Figures
58	57. Tables
59	58. Figures
60	59. Tables
61	60. Figures
62	61. Tables
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66	65. Tables
67	66. Figures
68	67. Tables
69	68. Figures
70	69. Tables
71	70. Figures
72	71. Tables
73	72. Figures
74	73. Tables
75	74. Figures
76	75. Tables
77	76. Figures
78	77. Tables
79	78. Figures
80	79. Tables
81	80. Figures
82	81. Tables
83	82. Figures
84	83. Tables
85	84. Figures
86	85. Tables
87	86. Figures
88	87. Tables
89	88. Figures
90	89. Tables
91	90. Figures
92	91. Tables
93	92. Figures
94	93. Tables
95	94. Figures
96	95. Tables
97	96. Figures
98	97. Tables
99	98. Figures
100	99. Tables

1. Introduction

"Khadi is the sun of the village solar system. The planets are the various industries which can support Khadi in return for the heat and sustenance they derive from it", said the Mahatma. The Gandhian model of economic regeneration of the village based Indian Economy is not a concise packet of positive macro-economic analysis containing chiselled up tools like the "multiplier" and "accelerator". It is an ethereal cum corporeal complex of multidimensional ideas in the economic sphere to the promoument of normative rules and upliftment of the 'weakest of the weak' and poorest of the poor'. He wanted every village to be an entity of its own. Gandhian Economics, the present Indian attraction, have agro-based small scale and cottage industries as the economic base. One of the principal aims of economic planning the major accent of the VI Plan—is the provision of employment opportunities for the large "army of the unemployed" in the country. Employment generation at low capital cost is the unique feature of village and small scale industries. Prof. Gadgil has rightly stated that the entire Khadi and Village industries programme is a relief and rehabilitation programme for the sustenance of subsistence level of people.

Unemployment is a major malady of the Kerala Economy. She has rightly adapted the strategy of integrated rural development to benefit the fruits of intersectoral and intrasectoral balances of growth. Decentralised planning would go a long way in bridging the economic gulf in the State through an interlinked process of unemployment eradication and employment generation. In Kerala the Khadi and Village Industries sector projects a profound scope for employment and income generation. Being labour intensive, the development of this sector is quite in consonance with the "development spirit" of the Kerala Economy.

2. The Objectives of this Study

The Study aims at the following:—

1. An evaluation of the Khadi and village industries segment of the Kerala economy in the employment generation and absorption perspectives.
2. Attempt at an assessment of the employment potential in this labour intensive sector of the economy.
3. Identification of the "lead industry" from the multifactoral employment angle.
4. Pinpointing the "growth points" in this sector to complement our endeavour of unemployment eradication in the state.
5. Demarcation of the impending impasse in the employment generating development cycle of this traditional sector, and
6. Fixing up the role of the individual, group, institutions, organisation and the state in the development of this traditional sector.

3. Methodology of this study

No methodological "path breaking" is claimed for this study. The dominant data base of this study is a well carried out sample survey incorporating a reasonable geographical coverage. The study has been limited to 'Khadi' and 'Fibre' industries alone as they were identified as the crucial constituents of the village industries sector in Kerala. The study is made more "location specific" to feel even the minute sensations of the "growth membrane" of the participant Industries. Data compiled from the Annual report of the Khadi and Village Industries commission have been made use of in evaluating the 'development trend' of this sector in Kerala.

Two questionnaires were designed for this study. (Appendix I) questionnaire No. I was canvassed from 'the managerial personnel' of the selected institutions through which an "institutional version" of the problem and a "high level analysis" of the prospect of development of the industries could be obtained. Questionnaire No. II has been made more 'personal' with which a 'workman version' of the 'sectoral expansion potential' could be evoked. This questionnaire contained, also, a Socio economic enquiry of the artisans class in this sector.

The number of units selected under the Khadi and Fibre industries in different districts of Kerala are given in tables 1 and 2 respectively, given below. From these institutions 10% subject to a minimum of 2 persons from the supervisory and managerial category and 5% subject to a minimum of 2 persons from the artisans were selected systematically for the purpose of questionnaire No. II. Casual labourers were excluded from the workers list.

TABLE 1
Number of units selected under Khadi Industry in
different districts of Kerala

<i>Sl. No.</i>	<i>Name of District</i>	<i>No. of units selected</i>
(1)	(2)	(3)
1.	Trivandrum	2
2.	Quilon	1
3.	Alleppey	1
4.	Kottayam	1
5.	Ernakulam	1
6.	Trichur	2
7.	Palghat	1
8.	Malappuram	1
9.	Kozhikode	2
10.	Cannanore	1
11.	Idukki	..
Total		13

TABLE 2

**Number of units selected under different sections of Fibre industry
in the districts of Kerala**

(1)	No of units selected in each district													(13)
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)		
Type of industry	Tiruvandrum	Quilon	Alleppey	Kottayam	Idukki	Ernakulam	Trichur	Palghat	Malappuram	Kozhikode	Canimnore	Total		
Screwpine mat weaving ..	..	3	1	2	..	..	1	..	..	..	1	3
Fancy articles	1	1	..	2	..	1	1	..	..	..	..	6
Sisal yarn making	1	..	1	..	..	..	..	..	..	..	..	2
Kora grass making	1	..	1	..	..	..	..	1	..	..	..	3
Total Fibre	3	4	3	4	..	1	2	1	..	..	1	19

4. Coverage of the study

The Geographical coverage of this study included eleven Districts of Kerala. 13 institutions selected at random have been studied in detail in respect of Khadi industry. In the Fibre industry 19 institutions, also selected at random, formed the sample units. The survey could collect details from all the 32 institutions in questionnaire No. I which formed the basis of "institutional version" of the topic of study. The "artisans approach" to the subject could be compiled from the 445 questionnaire No. II canvassed in the course of the study. Experienced investigators attached to the District Statistical Offices, under the expert guidance and supervision of a hierarchy of officers, did the field work. A thorough scrutiny of the data has been done to make it ripe for further analysis.

5. Of field response

Field responses have been mixed. It was passive, sceptical, optimistic and even fatalistic "we are the victims of poverty", rebuked the artisans. "Poverty line is our perpetual path". They suffer more of the torture of disguised unemployment. "What survey? "Surveys do not make us survive". Some were passive in spirit. "Why these penetrating questions? Are we going to be taxed further?". They were more sceptical. "Atleast the Government are in search of the weakest". "something good must be in the offing" "Why? these expensive surveys cannot be without a positive purpose". The optimists responded in private groups. "No surveys can save these declining industries". "Well hunger is our fate". The tone of fatalism has been more dominant in the "response—reaction record" of the survey—It may be noted that this traditional sector keep the artisans more traditional in growth. The Khadi and Village industries sector has not reached its full stage of expansion in the State. It remains a 'subsistence sector'. Development efforts, carried out in a systematic manner, can convert this into a "surplus sector".

6. The Story of Khadi:

'Khadi' was introduced in the nation as a political weapon for the boycott of foreign goods in general and cloth in particular and thus stimulate in every Indian, desire for independence as well as an attitude for self discipline. Gandhiji referred to Khadi as a "livery of freedom". In December 1923 the 'All India Khadi Board' was established as an integral part of the 'Congress Association', later in the year 1925 the 'All India Spinners Association' was formed. Till 1935 the association concentrated its activity on propagation, production and sale of Khadi with the result that the social objectives of Khadi were relegated to the background. A revitalization of the social objectives of Khadi was found with the adoption of the doctrine of "Samagra seva" the central theme of which was that Khadi could have a permanent effect only when carried out as part of a wider programme of non-violent village reconstruction.

7. The development of Khadi and Village Industries under the Five Year Plans.

Traditional rural artisans like Blacksmith, carpenter, handloom weaver, leather maker, potter etc. constitute a vast repository of skill and production potential in the country. In the 'Directive principles of State policy, the Government of India evolved a policy for the development of Khadi and Village Industries. The growth and development of this sector is thus closely related to the 'planned development process' of the national economy.

Even after three decades of Planning a significant percent of the people of our country still remain below the poverty line and millions of young persons are unemployed. According to 'Yojana Bhavan' estimates there were 29.4 crores persons below the poverty line in 1977-1978 with 23.9 crores in rural and 5.5 crores in urban. Total unemployment on March 1978 was 20.6 million persons 16.5 million in rural and 4.1 million in urban.

As much as 79% of the total population, 82% of the unemployed, 80% of the uneducated and 81% of the landless are all in the villages. But by a quirk of fate 80% of the employment generated, 90% of the industries started 100% of the profit earned and 95% of the services rendered are concentrated in the metropolitan cities, big provincial towns and growth centres. The only hope of pushing poverty naked behind the rural curtain is the development of decentralised industrial sector including Khadi and Village Industries. Accordingly this sector had been given extra emphasis in different five year plans.

In the 1st Five Year Plan development of Khadi and Village Industry was treated as an integral part of the development of Agriculture. It was also hoped that with the development of this sector excessive pressure on Agriculture could be averted and maximum utilization of leisure time managable industrial pursuits during the off season for agriculturists could be made. The plan allocation was Rs. 15 crores.

The second Five Year Plan made the development of the Khadi and Villages Industries an integral part of the over all plan for the country's industrialization. The main objectives were extention of work opportunities, raise progressively the standard of living of artisans and bring about a more balanced and integrated rural economy. It was expected that with the growing investment in heavy industries additional purchasing power of higher magnitudes would be generated in the economy and that the village industries would be able to meet the growing requirements of commodities in common demand. These industries were looked upon as means of reducing inflationary pressures which was likely to be generated due to investments in heavy industries.

A number of protective measures to safeguard the interests of village industries were taken which included mainly—

1. Reservation of specific spheres for village industries.
2. Prohibition on expansion capacity of large scale industries.
3. Imposition of excise duty on large-scale industrial products.
4. Supply of raw materials on preferential basis
5. Provision of technical research and training for village industrialists. A co-operative society for village industries was also recommended for the development of this sector. The plan provided Rs. 83.78 crores for the development of this sector.

The third plan emphasis was on the integration of village industries with the rural economy. Positive forms of assistance such as—

1. Improvement of skills
2. Supply of technical guidance
3. Better equipments
4. Liberalised credit—were given importance.

An amount of Rs. 92.40 crores was allotted for the development of this sector.

During the plan holiday period of 1966-67 to 1968-69 the plan provision was Rs. 53.05 crores.

The fourth plan emphasised the concept of viability as the basis of prerequisite for undertaking any economic activity. The emphasis in policy was shifted from one of protection to positive forms of assistance such as improving skills, supply of technical guidance and better equipment and credit. The adoption of intermediate "appropriate technology" to ensure quality of production was also stressed. Rs. 110 crores was allotted in the plan.

The Fifth Plan thrust was to arrest the displacement of additional artisans from the existing crafts providing fuller work opportunities, widening of the employment base in backward areas and ensuring a level of earning adequate to meet the basic needs of life. Research and development was accorded an important place. The plan provision was Rs. 208 crores.

The sixth plan (1978-83) made a provision of Rs. 1295.66 crores for the development of this sector

Table 3 given below illustrates clearly that only a meagre percentage of the public sector outlay is allotted for the development of this sensitive and employment oriented sector.

TABLE 3

Financial Outlay Under Planned for Khadi & Village Industries

(Rupees in Crores)

Plans	Public sector outlay	Plan Provision for Khadi & village Industries	Fund made Available Khadi & village industries	Col. 3 as percentage of Col. 2	Col. 4 as percentage of Col. 3
(1)	(2)	(3)	(4)	(5)	(6)
I Plan	1960	15.00	11.58	0.8	77
II Plan	4672	83.78	78.71	1.8	94
III Plan	8577	92.40	86.90	1.1	94
Annual Plans 1966-67 to 1968-69	6625	53.05	53.05	0.8	100
IV Plan	15783	111.00	97.73	0.7	88
*V Plan	28991	208.00	118.26	0.7	57
VI Plan	69380	1295.66	..	1.9	..

* for four years only

(Source: Commerce Research Bureau)

During the first plan period, only 0.8% of the public sector outlay was made available for the development of Khadi and Villages Industries. This percentage for the successive plan periods were 1.8, 1.1, 0.8, 0.7 and 1.9 respectively. It may also be noted that the full utilization of the plan provision is seldom achieved in this sector. The percentage of utilization is given in col. 6 of the table. Full utilization was achieved only during the period of plan holiday. The utilization was very low, i.e. 57% during the fifth plan period. This reveals a disquieting picture. An efficient and fuller utilization of the available fund is a sine qua non for the development of this sector.

Now development in its real sense is a passport to a privileged few, not available to many. Employment in specialised group means — "leisure" Employment in domestic sector means — "All work no pay and Nil Income" Employment in traditional sector means — "subsistence" —.

Neglect of this sector by planners and administrators denied 'subsistence' to many.

8. Growth of Organization in the Khadi and Village Industries Sector

The 'Khadi and Village Industries Commission' was established in 1957 under the Khadi and Village Industries Act of 1956. It has both financial and executive powers. The activities of the commission extend over a wide range viz.—procurement of raw materials, disposal of goods, training of artisans, supply of tools and extension of research. The Commission comprises of five members assisted by a financial adviser and a Chief Executive Officer. The commission is responsible to the parliament through the ministry of Rural Reconstruction.

The Khadi and Village Industries Board is the executive agency in the State. The Board is a Statutory organization constituted under Act 9 of 1957 of the Kerala Legislative Assembly. The Board receives funds for developmental purposes from the KVIC and a Government of Kerala from the plan allocation-in the form of grants, subsidies and loans.

Table 4, given below, gives an account of the organization engaged in the Khadi and Village Industries sector.

TABLE 4

Growth of Organizations in the Khadi & Village Industries Sector

Organization	1955-56	1960-61	1965-66	1973-74	1974-75	1975-76	1976-77	1977-78
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
State Boards	2	14	15	15	20	20	20	20
Registered Institutions	242	720	1037	678	700	688	628	694
Co-operative Societies	60	11765	19371	20079	23715	23715	27071	27071
Total	304	12499	20423	20772	24435	24423	27719	27785

(Source: Commerce Research Bureau)

In 1955-56 there were only 2 state Boards which increased to 20 in 1977-78. There were 242 registered institutions engaged in Khadi productions and propagation. In the next quinquennium there was a substantial increase in number of these institutions. The number rose to 1037 in the year 1965-66. But the period 1973-74 to 1977-78 showed a decreasing trend in the number of

registered institutions with only 694 in the year 1977-78. There were only 60 Co-operative societies engaged in Khadi and Village Industries in the year 1955-56. The subsequent years showed a commendable 'Co-operative initiative' in the Khadi and Village Industries sector. The number of societies rose steadily and stood at 27071 in the year 1977-78.

9. The Developmental Agencies in Kerala

In Kerala the net work of Khadi and Village Industries are being organised by three main agencies.

- I. 3 direct dealing institutions
- II. 442 institutions which are directly aided by the Khadi and Village Industries Board.

And

- III. Departmental production centres of Khadi and Village Industries Board.

The three direct dealing institutions are:—

- a. Kerala Sarvodaya Sangh, Kozhikode
- b. Kerala Khadi and Village Industries Association, Trichur

And

- c. Kerala Gandhi Smarak Nidhi, Trivandrum.

In addition, the Khadi and Village Industries commission has a departmental production centre at Kanimangalam in Trichur District and a 'Khadi gramodyog Bhavan' at Cochin in Ernakulam District to effect sales of Khadi and Village Industries products on a large scale. Apart from these Semi governmental institutions, charitable institutions and social service organisations have volunteered for the propagation of the village industries products in Kerala on a massive scale. Inspired by the initiative of voluntary organisations in redempting this neglected sector, Banks have started extending financial assistance to the village industries projects. But to be true, the developmental infrastructure of these rural industries is in a stage of infancy in the State.

10. The Composition of Khadi and Village Industries in Kerala

Kerala manufactures only 'Cotton Khadi', 'Silk and woolen Khadi' are the untouched areas due to the unfavourable production conditions. Fibre industry is the Major component of the village industries sector in the State. The Fibre industries segment comprise of production of screwpine mats, door mats, hubbrush, straw cases, banana fibre bags, Talipot palm fibre products, garlands, Fancy articles, sisalyarm fibre articles, etc. All there

articles are excellent exhibitions of 'Super skill' and 'creative craftsmanship'. Other major village industries in the state include ghani oil industry, village leather industry, lime manufacturing industry, cottage match industry, carpentry and blacksmithy industry, non-edible oil and soap industry, cane and bamboo industry, gur and khandsari industry, palm gur industry, handmade paper industry processing of cereals and pulses industry, village pottery industry, Bee-keeping industry, coconut palm leaves industry, medicinal plants industry, Fruit processing industry etc., to list a few of them.

11. Employment in the Khadi and Village Industries Sector

The heterogeneous character of the unemployment situation complicates the problem of employment generation. The Khadi and Village industries sector stood remarkable in the process of employment generation. From the angle of employment creation the Fibre industry, Bee-keeping industry and palmgur making industry rank top in the country. Village industries like processing of cereals and pulses carpentry and blacksmithy handmade paper, soap manufacturing and fruit processing do not seem to be highly employment generating at present

Table 5 gives an account of the growth of employment in the Khadi and Village industry sector in the country during the plan periods. During the last three years of the first plan the sector could provide employment to 24.73 lakh persons in the country. The Khadi sector could absorb 15.59 lakh persons while the village industries sector employed 9.14 lakh persons. In the second plan period there was a remarkable progress in the employment absorption capacity of this sector. It gave employment to 97.69 lakhs persons of rural India. The Khadi sector absorbed 67.36 lakh persons and the village industries offered employment to 30.33 lakh persons. It is obvious that khadi sector was in its "high speed growth path" while village industries developed in slow pace. By the end of the third plan the total employment in the combined sector stood at 127.76 lakh persons comprising of 92.14 lakh persons in the Khadi segment and 35.62 lakhs persons in the village industries. During the plan holiday of 1966-67 to 1968-69 the sector could offer employment only to 67.42 lakh persons. Here again the Khadi industry employed the maximum number, of persons. The 'Fourth plan period' showed a comparative slackening in respect of employment generation in this sector. The subsequent plans set apart lesser amounts than the previous plans for the development of the rural economy. However the shift in emphasis was in favour of equitable distribution of income and growth with stability.

TABLE 5

Growth of Employment in Khadi & Villages Under Plans

(No. of persons in lakhs)

Year	Khadi			Village Industries			Khadi & Village Industries Total
	FT	PT	Total	FT	PT	Total	(8)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1953-54	0.31	3.48	3.79	0.01	3.04	3.05	6.84
1954-55	0.49	4.74	5.23	0.06	2.96	3.02	8.25
1955-56	0.61	5.96	6.57	0.08	2.99	3.07	9.64
Total I Plan	1.41	14.18	15.59	0.15	8.99	9.14	24.73
1956-57	0.91	7.89	8.80	0.60	6.18	6.78	15.58
1957-58	1.33	10.03	11.36	0.42	5.22	5.64	17.00
1958-59	1.47	12.52	13.99	0.33	5.02	5.35	19.34
1959-60	1.96	14.12	16.08	0.47	5.28	5.75	21.83
1960-61	2.05	15.08	17.13	0.73	6.08	6.81	23.94
Total II Plan	7.72	59.64	67.36	2.55	27.78	30.33	97.69
1961-62	2.09	15.37	17.46	0.84	4.53	5.37	22.83
1962-63	2.34	15.64	17.98	0.82	6.51	7.33	25.31
1963-64	2.35	16.25	18.60	0.72	6.54	7.26	25.86
1964-65	2.35	16.80	19.15	0.72	6.17	6.89	26.04
1965-66	1.81	17.14	18.95	0.81	7.95	8.76	27.72
Total III Plan	10.94	81.20	92.14	3.91	31.70	35.61	127.75
1966-67	1.71	16.52	18.23	0.75	6.30	7.05	25.28
1967-68	1.32	12.04	13.36	0.75	6.95	7.70	21.06
1968-99	1.32	12.04	13.36	0.79	6.93	7.72	21.08
Total Annual Plans	4.35	40.60	44.95	2.29	20.18	22.47	67.42

TABLE 5 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1969-70	1.26	9.74	11.00	0.87	8.18	9.05	20.05
1970-71	1.17	8.24	9.41	1.05	8.74	9.79	19.20
1971-72	1.21	8.42	9.63	1.24	7.15	8.39	18.02
1972-73	1.26	8.73	9.99	1.37	7.03	8.40	18.39
1973-74	1.07	7.77	8.84	1.32	7.96	9.28	18.12
Total IV Plan	5.97	42.90	48.87	5.85	39.06	44.91	93.78
1974-75	1.10	7.91	9.01	1.57	8.25	9.82	18.83
1975-76	1.13	7.12	8.25	1.84	9.37	11.21	19.46
1976-77	1.30	7.23	8.53	2.23	9.49	11.72	20.25
1977-78	2.39	6.83	9.22	3.16	11.78	14.94	24.16
Total V Plan	5.92	29.09	35.01	8.80	38.89	47.69	82.70
Grand Total	36.31	267.61	303.92	23.55	166.60	190.15	494.07

Source: Commerce Research Bureau

The 'fifth plan' period also could not rise the employment positions in this sector. Infact the total employment declined to 82.70 lakh persons. The overall employment position, by the end of the fifth plan, stood at 494.07 lakhs in this sector. Khadi and Village industries sector can be proud of the fact that it has contributed substantially in lessening the burden of chronic unemployment during the last two decades.

Table 6 gives an account of the growth of employment in the Khadi and Village Industries sector in Kerala for the period 1970-71 to 1977-78.

TABLE 6

**Employment in the Khadi and Village Industries Sector—
Kerala**

<i>Year</i>	<i>No. of persons employed in Khadi</i>	<i>Village Industries</i>	<i>Total</i>
1970-71	10831	50806	61637
1971-72	10000	66136	76136
1972-73	10216	83280	93496
1973-74	9979	90294	100273
1974-75	10494	103945	114439
1975-76	11158	94642	105800
1976-77	11893	94285	106178
1977-78	12009	100148	112157

As evidenced by the table given below the general trend of employment in the Khadi component of the sector was an increasing one with the exception of the year 1973-74. The period 1970-71 to 1973-74 was a stage of unbalanced growth in the employment position of the Khadi industry in Kerala. The year 1977-78 could offer the maximum employment to artisans in this sector. The number employed is 12,099 in this year. In the case of village industries, the period 1970-71 to 1974-75 represented an 'expansion phase' of this sector. Employment showed a steady increase. The year 1975-76 and 1976-77 were a stage of "stationary state" in regard to employment generation in the village industries. But the employment stagnation was broken in the year 1977-78 marking an upswing in the employment curve in the industry. The number employed stood at 100148 in the year 1977-78.

TABLE 7

Growth of Employment in the Khadi & Village Industries Sector in Kerala in Comparison with the Position in all India 1972-73 to 1976-77

(Number of Persons in Lakhs)

Year	India/Kerala	Village Industries									
		Khadi	Palm Gar	Bee Keeping	Gar & Khadi Sari	Village Pottery	Seed Collection	Oil Production	Soap Production	Non Edible oil and Soaps	Total Fibre
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1972-73	INDIA	9.98	2.92	1.48	1.09	0.60	0.42	0.01	0.04	0.47	0.45
	KERALA	0.10	0.26	0.12	0.01	0.04	..	..	0.01	0.01	0.32
	Percentage of Kerala to all India	1%	8.9%	8.1%	0.9%	6.7%	..	..	0.3%	2.1%	71.1%
1974-75	INDIA	9.78	3.31	1.43	1.11	0.50	0.93	0.03	0.04	1.00	0.64
	KERALA	0.10	0.30	0.13	0.02	0.04	0.03	0.01	..	0.04	0.48
	Percentage of Kerala to all India	1%	9%	9%	1.8%	8%	3%	33%	..	4%	75%
1976-77	INDIA	8.53	3.16	1.46	1.32	0.78	1.07	0.05	0.07	1.19	0.77
	KERALA	0.12	0.16	0.15	0.02	0.04	0.01	..	..	0.01	0.53
	Percentage of Kerala to all India	1.4%	5%	10.3%	1.5%	5.1%	0.9%	..	..	0.8%	68.6%

TABLE 7—Contd.

Year	India/Kerala										Total		Remarks		
	(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)		(23)	(24)	(25)
1972-73	INDIA		0.34	0.34	0.29	0.10	0.10	0.09	0.04	0.02	0.03	0.01	8.84	18.82	
	KERALA		0.01	0.04	..	..	0.02	..	..	0.01	0.01	..	0.86	0.96	
	Percentage of Kerala to all India		2.9%	11.8%	..	..	20%	..	..	50%	33%	..	10.1	5.2%	
1974-75	INDIA		0.36	0.33	0.19	0.21	0.08	0.47	0.05	0.04	0.07	..	10.97	20.57	
	KERALA		0.01	0.01	..	..	0.01	..	..	..	0.01	..	1.09	1.19	
	Percentage of Kerala to all India		2.8%	3%	..	..	12.5%	..	..	..	14%	..	10.7%	5.9%	
1976-77	INDIA		0.59	0.31	0.22	0.32	0.12	0.64	0.05	0.03	0.22	..	12.27	20.80	
	KERALA		0.01	0.02	0.01	..	0.03	..	..	..	0.01	..	1.04	1.16	
	Percentage of Kerala to all India		1.7%	6.4%	4.6%	..	25%	..	..	..	8.3%	..	8.9%	5.7%	

Source: Khadi and Village Industries Commission.

Table 7 gives a comparative study of the trend of employment in the Khadi & Village Industries sector in India and Kerala for the period 1972-73 to 1976-77. In the year 1972-73 the percentage of employment generated in the State in the Khadi & Village Industries Sector, in relation to the all India total, stood at 5.2%. In the Khadi segment this percentage was 1% and in the village industries 10.1%. Among the village industries Fibre Industry was well advanced in the State of Kerala followed by cottage match industry, bamboo and cane industry and lime industry. In all the above village industries a significant share of the total employment in the country was from Kerala. In the year 1974-75 the percentage share of employment in the combined sector increased to 5.9%. The increase was due to the increased contribution of the village industries component in Kerala. In the year 1976-77 the percentage share in the Khadi segment showed an increase and that of village industries marked a decline resulting in a fall in the overall percentage share given in Col. 24.

Comparing the trend of employment in the Khadi sector in Kerala with that of the national trend, a reciprocal relationship can be observed. The national trend was a decreasing one while the state trend was one of increase. But in the case of village industries the national figures of employment showed a steady rise over the period 72-73 to 1976-77. In Kerala, on the other hand, the employment growth was an irregular one showing the seasonality of the industries in question. This unsteady path of progress is indicative of the need for a balanced approach in the problem. A combined effort of private initiative and Governmental incentives can only rectify this deficiency in the sector to a certain extent.

Table 7 A to 7 U given in the Appendix provided comparative figures of employment in the Khadi and Village Industries sector for the year 1972-73 to 1976-77. The percentage relation to the all India position is also furnished in the table.

TABLE 8

**Employment Generation in Khadi & Village Industries
during the Year 1977-78**

Sl. No.	Name of Industry	Employment		
		FT	PT	Total
1	Khadi	12099	..	12099
2	Fibre	50597	1190	51787
3	Bee-keeping	537	15050	15587
4	Palm-Sugar	217	15130	15347
5	Pottery	3825	360	4185
6	Cane and Bamboo	804	1622	2426
7	Cane sugar & Kandsari	1112	999	2111
8	Collection of medicinal plants	..	2005	2005
9	Village Oil	457	1370	1827
10	Lime	1154	446	1600
11	Cottage Match	406	1098	1504
12	Village Leather	659	265	924
13	Processing of Cereals and Pulses	267	38	305
14	Carpentry & Blacksmithy	186	10	196
15	Hand made paper	178	..	178
16	N. E. O. Soap	39	51	90
17	Fruit Processing	11	18	29
	Khadi (Total)	12099	..	12099
	Village Industries (total)	60449	39652	100101
	Grand Total	72548	39652	112200

Source: Khadi & Village Industries Commission

A closer look at Khadi and the different components of the village industries sectors, from the employment angle, is given in Table 8. The village industries are listed in order of relative employment generation capacity* in the table obviously Fibre Industry contributed 51.7% of the total employment of the Village Industries segments. The least contribution was by fruit processing industries in Kerala. Industries like Bee-keeping, palm gur making, pottery making, cane and bamboo manufacturing and Cottage Match display high rate of expansion potential and employment generations. Kerala is not deficient in skill and expertise. But the individual initiative is the "bleak flame" which spreads a shade in the path of growth and expansion.

The sample study conducted by the Directorate of Economics & Statistics throws some light on the strategic role of the Khadi and Village Industries sector in mitigating the unemployment problem in Kerala. The study in respect of Khadi covered the districts of Trivandrum, Quilon, Alleppey, Kottayam, Ernakulam, Trichur, Palghat and Kozhikode. Eleven Institutions, as detailed in col. 2 of Table 9 given below, were studied in detail primarily to assess the employment generation and other related aspects of the Khadi sector.

The 'Kerala Gandhi Smarak Nidhi' of Trivandrum had 44 working branches spread over the whole of Kerala. The 'Kerala Khadi and Village Industries Association' of Trichur stood second with 33 working units in the State. 'The Kerala Sarvodaya Sangh' of Kozhikode had 22 working units in the State. There were 119 institutions engaged in the production and propagation of Khadi in the State of Kerala.

On the employment front, 'The Kerala Sarvodaya Sangh' of Kozhikode ranked first, employing a total of 4583 persons in their different units in the State. It is unique that they provided full time employment mainly to males. 'The Kerala Gandhi Smarak Nidhi' of Trivandrum which stood second in respect of employment, employing a total of 1439 persons, extended employment opportunity mainly to the Women folk. The third largest employer is the 'Njekad Khadi Production Industrial Co-operative Society' of Trivandrum District which employed 187 persons out of which 186 were females. There is male domination in the supervisory cadre in the Khadi sector employing 472 males and 76 females. The Khadi Sector could offer full time employment to 4262 females and 1648 males. Khadi seems mainly a Women Industry as it could employ more of the women folk in Kerala. Khadi is not a 'part time employment generator' as it would extend part time employment only to 14 males and 61 females. The Khadi sector is still a supplementary source of income to the Kerala rural Community.

In the Fibre sector 23 institutions spread in the districts of Trivandrum, Quilon, Alleppey, Kottayam, Trichur, Ernakulam Palghat and Cannanore have been studied in detail. The district of Alleppey pioneered the work on Fibre Industry in Kerala with the 'Vallikunnam Harijan Multipurpose Co-operative Society' entering the field of production in 1961. In the middle of

the sixties three more societies entered the field of Fibre Industry. The advent of the seventies marked the 'bloom' of Fibre Industry in Kerala as a series of institutions in the line of Fibre management were set up. There were 20 live centres engaged in Fibre Industry in the year 1979 with the 'Intensive Khadi Centre' under the Khadi & Village Industries Board, having the maximum number of units.

Year	No. of Societies	No. of Units	Total Production (kg)	Value (Rs. Lakhs)
1960	1	1	100	1.00
1961	2	2	200	2.00
1962	3	3	300	3.00
1963	4	4	400	4.00
1964	5	5	500	5.00
1965	6	6	600	6.00
1966	7	7	700	7.00
1967	8	8	800	8.00
1968	9	9	900	9.00
1969	10	10	1000	10.00
1970	11	11	1100	11.00
1971	12	12	1200	12.00
1972	13	13	1300	13.00
1973	14	14	1400	14.00
1974	15	15	1500	15.00
1975	16	16	1600	16.00
1976	17	17	1700	17.00
1977	18	18	1800	18.00
1978	19	19	1900	19.00
1979	20	20	2000	20.00

Employment Generation by Different Khadi Producing

Sl. No.	District	Name of Institutions	Year of starting	No. of units/branches	Details of Employment		
					Supervisory cadre		
(1)	(2)	(3)	(4)	(5)	Male (6)	Female (7)	Total (8)
1	Trivandrum	(a) Kerala Gandhi Smarak Nidhi	1962	44	72	26	98
		(b) Njekad Khadi Production Industrial Co-operative Society	1959	2	1	3	4
2	Quilon	Gandhi Smarak Grama Seva Kendram	1956	2	..	3	3
3	Alleppey	Aroor Service Co-operative Society	1947	1	1	..	1
4	Kottayam	Khadi & Village Industries Co-operative Society	1960	1	..	3	3
5	Ernakulam	Pampakuda Khadi Producers Industrial Co-operative Society	1967	7	..	5	5
6	Trichur	(a) Manapuram Spinners and Weavers Association	1949	3	5	..	5
		(b) Kerala Khadi and Village Industries Association	1955	33	25	33	58
7	Palghat	Akathethara Khadi Producers Co-operative Society	1959	3	..	2	2
8	Kozhikode	Kerala Sarvodaya Sangh	1958	22	367	..	367
		Gramodaya Khadi Sangham	1955	1	1	1	2
Total				119	472	76	548

Institutions in the District of Kerala

in 1979

Artisans						Total workers		
Full time			Part time			Male	Female	Total
Male	Female	Total	Male	Female	Total			
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
27	1250	1277	14	50	64	113	1326	1439
..	183	183	..	..	..	1	186	187
..	19	19	..	..	..	..	22	22
..	5	5	..	..	..	1	5	6
4	81	85	..	..	..	4	84	88
15	..	15	..	..	..	15	5	20
..	32	32	..	8	8	5	40	45
..	..	..	..	..	..	25	33	58
..	53	53	..	3	3	..	58	58
4216	..	4216	..	..	..	4583	..	4583
..	25	25	..	..	..	1	26	27
4262	1648	5910	14	61	75	4748	1785	6533

Employment Generation by Different Fibre

Sl. No.	District	Name of Institutions	Year of starting	No. of units	Details of Employment		
					Supervisory cadre		
					Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Trivandrum	(a) Mariyapuram Village Industrial Co-operative Society	1978	1	2	..	2
		(b) Women's Cottage Industrial Co-operative Society	1964	1	..	2	2
		(c) Nirmalalayam Centre	1975	..	..	4	4
2	Quilon	(a) Mahila Cottage Industrial Co-operative Society	1971	1	..	2	2
		(b) Thodiyoor Cholakattukulangara Khadi & Village Industries	1970	1	1	..	1
		(c) Mahila Khadi & Village Industries Co-operative Society	1973	1	..	..	..
		(d) Thodiyoor Puliyoor Vanchi Khadi and Village Industries Co-operative Society	1970	1	1	..	1
3	Alleppey	(a) Sree Narayana Cultural Mission	1978	1	1	..	1
		(b) Vallikunnam Kannimal Khadi & Village Industries Co-operative Society	1970	1	1	..	1
		(c) Vallikunnam Harijan Multipurpose Co-operative Society	1961	1	1	..	1
		(d) Sri. V. K. Thankappan Charamangalam, Muhamma	1977	1	3	..	3
4	Kottayam	(a) Vaikom Town Thazhaya Co-operative Society	1972	..	1	..	1
		(b) Thalayazham Thazhaya Vyavasaya Sahakara Sangham	1973	..	1	..	1

10

Producing Institutions in the District of Kerala

in 1979

Artisans			Total Workers					
Full time			Part time					
Male	Female	Total	Male	Female	Total	Male	Female	Total
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
3	..	3	3	6	9	8	6	14
..	40	40	..	..	..	..	42	42
..	124	124	..	..	..	..	128	128
..	70	70	..	230	230	..	302	302
..	400	400	163	..	163	164	400	564
..	45	45	..	..	..	..	45	45
..	512	512	..	..	..	1	512	513
..	..	..	3	16	19	4	16	20
..	..	..	..	..	..	1	..	1
..	..	..	36	16	52	37	16	53
10	1	11	14	29	43	27	30	57
..	..	..	..	..	..	1	..	1
..	..	..	..	..	..	1	..	1

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	(c)	N. E. S. Block Vanitha Khadi & Village Industries Co-operative Society	1965	1	..	1	1
	(d)	Vaikom Kunnu Thazhappaya Vyavasaya Sahakarana Sangham	1976	..	1	..	1
	(e)	Kidangoor Grama Vyavasaya Sahakarana Sangham	1974	..	..	1	1
5	Trichur	(a) Departmental Fibre Centre	1975	..	..	..	..
		(b) Kaipamangalam Grama Vyavasaya Sahakarana Sangham	1973	..	1	..	1
6	Ernakulam	(a) Guild of Charity	1967	..	..	4	4
		(b) Koothattukulam Village Industries	1964	..	..	1	1
7	Palghat	Mankara Mahila Samajam	1978	..	1	2	3
8	Cannanore	(a) Office of the Centre Khadi Officer, Intensive Khadi Centre, Kerala Khadi & Village Industries Board	1974	9	36	7	53
		(b) Cheruvathur Village Industrial Co-operative Society	1971	..	1	..	1
Total				20	52	34	86

10 Cntd.

(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
..	12	12	1	..	1	1	13	14
..	..	..	..	34	34	1	34	35
1	10	11	..	..	..	1	11	12
..	30	30	..	..	..	..	30	30
43	208	251	..	..	..	44	208	252
..	207	207	..	5	5	..	216	216
..	35	35	..	7	7	..	36	36
..	25	25	..	..	..	1	27	28
260	762	1022	..	..	..	296	779	1075
..	175	175	..	103	103	1	278	279
317	2656	2973	220	446	666	589	3129	3718

Table 10 gives an account of the employment generation in the Fibre Industry in Kerala. In the Fibre Segment the 'Intensive Khadi Centre', under the Khadi and Village Industries Board, ranked the highest employer extending job opportunities to 1075 persons consisting of 296 males and 779 females. The second highest employer has been the 'Thodiyoor Chelakattukulangara Khadi and Village Industries' of Quilon District which could employ 163 males and 164 females during 1979. The third largest employer—'The Thodiyoor puliyoor Vanchi Khadi & Village Industries Co-operative Society' belongs to the district of Quilon. In the supervisory cadre the Fibre Sector could employ 86 persons in the year 1979. It could extend full time employment to 317 males and 2656 females, making a total of 2973. The Fibre sector offered part time avocation to 220 males and 446 females. The total employment generated in 1979 stood at 3718 comprising of 589 males and 3129 females. The Fibre Industry also employed more of women both fully and partially.

12. Employment potential in Khadi and Village Industries in Kerala

The Khadi and Village Industries sector in Kerala can absorb a good number of jobless, and lessen the problem of chronic unemployment. Khadi can be promoted only on the basis of an interstate co-operation. Cotton is scarce in Kerala. Cotton producing States can be linked in this government of expansion. The following table gives an account of the artisanversion of the employment potential in the Khadi & Village Industries in Kerala.

TABLE 11

Employment Potential in Khadi & Village Industries in Kerala (Artisan's Vision)

Name of District	Khadi			Fibre			Total		
	FT	PT	Total	PT	PT	Total	FT	PT	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Trivandrum	12820	2580	15400	3300	460	3760	16120	3040	19160
Quilon	120	..	120	14210	120	14330	14330	120	14450
Alleppey	132	65	197	174	490	664	306	555	861
Kottayam	137	25	162	160	15425	15585	297	15450	15747
Ernakulam	..	..	..	..	..	..	..	..	..
Trichur	..	..	..	..	..	..	..	..	..
Palghat	180	55	235	32	20	52	212	75	287
Kozhikode	1613	10	1623	..	..	..	1613	10	1623
Cannanore	25	..	25	..	..	..	25	..	25
Total	15027	2734	17762	7876	16515	34391	32903	19250	52153

In respect of Khadi the districts of Trivandrum and Kozhikode offer the highest employment potential. The district of Cannanore gives only a low employment potential which shows the under developed nature of the Khadi sector in that district though in early Cannanore district encouraged and fostered Khadi through Payyannur Khadi Centre and because the nerve centre of Khadi movement in old Malabar district. It may be noted that Khadi offers the prospect of full time employment to many educated and therefore enterprising men can exploit this potential possibilities to enter the field of self employment. In the Fibre component the districts of Kottayam, Quilon and Alleppey project the maximum employment opportunity. The district of Kottayam offers employment opportunity to more of women in this sector. Women unemployment is another problems of this State.

The inter-scale and intra-scale aspects of the Khadi and Village Industries in Kerala also emphasis the employment potential in this sector. The inter scale aspects are efficiency of small scale industries and the place of the small scale Sector in the State economy. The intra-scale aspect is one of inter industry comparison.

Variables like the output, fixed capital ratio, worker fixed capital ratio, value added worker ratio, and the output worker ratio of this sector are explanatory of the expansion potential of this segment in the Kerala State. There is a high output fixed capital ratio in this sector showing a high capital productivity in this unit. The importance of this sector looms large in an economy where capital is scarce and labour is surplus. The worker fixed capital ratio also is high in this sector which shows that this sector is more labour intensive. Labour intensive programmes are the only alternative to the problem of unemployment. A high value added fixed capital ratio, which is shown in this segment, marks the increase in the value of inputs. An increase in the value of inputs imply inter alia that inputs are combined with fixed capital more optimally in the small scale sector of Kerala economy. But there are some disquieting features in this employment generating sector. A low output-worker-ratio is shown by this sector implying low productivity of labour. This is supplemented by a low value added worker ratio. As such innovations and improvements in machinery and methods of production with a view to increase the percapita labour productivity are to be attempted. More advanced conditions of production in large industries make labour more productive in the capitalist sector. On any count an effective promotion of cottage and small scale industries, which are widely despersed in rural areas and small towns, can be justified in the growth context of Kerala economy since it projects a commendable employment potential. Among the village industries Fibre Offers the maximum employment potential.

13. Khadi Production in Kerala

Table 12, given overleaf, gives an account of the production figures in the Khadi Industry in Kerala for the year 1978-79. The main items of production are yarn, cloth and Muslin. The production total for the reference period comes to Rs. 89,21,190. The sale proceeds for the year stood at Rs. 1,25,45,058. A detailed note on the Khadi production front revealed that there 'exists excess capacity' in the Khadi production front. Fuller utilization of existing capacity is hindered by entanglements of a varied nature. Production bottlenecks can be averted through a proper planning in the industry. Sales promotion and finding of new foreign markets are some of the incentives.

In the Khadi segment expenditure overtook the receipt and the industry thus was in loss during the reference year 1978-79. But the loss shown for the year is not representative of a usual trend. The lukewarm nature of the participants in the industry and lack of industrial talents may be the reason for the dismal fate to the sector. Table 13 below gives an account of the expenditure on the capital and working side of the industry. The expenditure total comes to Rs. 431 lakhs making a huge loss to the industry.

TABLE 12

Production and sale of Khadi in Kerala during 1978-79

Name of item	Production			Sales		
	Unit	Qty.	Value in Rs.	Unit	Qty.	Value in Rs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Khadi Cloth	Sq. Mt.	1015001	8553112	Sq. Mt.	182136	12285349
Khadi Yarn	No. of hanks	208782	152320	No. of hanks	56283	69786
Muslin Khadi	Sq. Mt.	21702	215758	Sq. Mt.	21702	189923
Total	..	..	8921190	..	..	12545058

14. Fibre Production in Kerala

Table 13 gives the details of production and sales in the Fibre industry in Kerala for the year 1978-79. The main items of production are table mats, Screwpine mats, Fancy articles made of sisalfibre, different Kinds of fancy mats, hub brush, bags, purses and brushes etc. The value of production for the reference period came to Rs. 40.44 lakhs. The sales proceeds from the industry is Rs. 43.50 lakhs during the period under reference. The industry offers extensive possibilities of production expansion. But the Fibre segment has turned out to be a cinderella in the Village Industries component in the State. Foreign markets for this excellent craft can be tackled at Government levels.

TABLE 13

Production and sale of fibre products in Kerala during 1978-79

Sl. No.	Name of items	Unit	Production		Sales	
			Quantity	Value in Rs.	Quantity	Value in Rs.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Mats	No.	3522	11800	3497	13733
2.	Table mats	No.	10352	124887	10522	145418
3.	Screwpine mats	No.	113620	3412704	118620	3602959
4.	Butterfly mats	Sqft.	36000	50400	30460	45690
5.	Door mats	No.	876	7008	1765	25904
6.	Round mats	Sqft.	41100	45210	42100	50520
7.	Round square mats	Sqft.	126000	124200	127600	136250
8.	Oval mats	Sqft.	2400	2880	2050	2665
Mats (Sub Total)		--	..	3,7,79,089	..	40,23,219

(1)	(2)	(3)	(4)	(5)	(6)	(7)
9.	Bags	No.	2346	30079	1200	43278
10.	Brushes	No.	187	5610	355	14277
11.	Banana Fibre	Kg.	192	1872	249	2650
12.	Cycle hub brush	No.	239260	30000	240994	43276
13.	Door Curtains	No.	7	56	7	80
14.	Embroidary articles	No.	..	..	..	..
15.	Fancy Articles	No.	NA.	38572	NA.	31338
16.	Fibre Products	NA.	NA.	49270	NA.	51105
17.	Palm Fibre	KG.	5630	39404	6405	47793
18.	Parse	No.	1031	12492	1970	27216
19.	Sisal twine Rope	NA.	NA.	49851	NA.	53597
20.	Sisal yarn	Qut.	31	13719	18	13050
Fibre Products (Sub-Total)		..	..	2,64,925	..	3,27,660
Grand Total		..	..	40,44,014	..	43,50,879

Table 14 gives the figure of expenditure in the different units selected under the fibre in Kerala. The expenditure total, excluding capital investments, stood at Rs. 79.30 lakhs for the reference period. The lack of proper management and organisational skill in the sector contribute to this dark side of the village industries growth. The motivational climate is lacking in the industry. A sense of belongingness, self-actualisation needs, which are the lofty goals of a prospective organization are quite missing in the Fibre segment in Kerala.

TABLE 14

Cost of production in fibre sector in Kerala during 1978-79

Sl. No.	Name of unit	Capital investment	Working capital		
			Raw materials	Payment of salaries, wage bonus etc.	Others
1	Mariyapuram village Industries Co-operative Society	2000	1750	1138	..
2	Women's Cottage Industries Co-operative Society	..	35000	14925	..
3	Nirmalalayam centre	..	23987	54088	..
4	Mahila Cottage Industries Co-operative Society	1086	7741	21208	42560
5	Thodiyoor Puliyoor Vanchi-Khadi & Village Industries Co-operative Society	..	923410	463805	350
6	Thazhava Panchayat Mahila Khadi & Village Industries Co-operative society	..	26225	9000	200
7	Thodiyoor Ghela kottukulangara Khadi & Village Industries	..	405060	1749340	300
8	Sri V.K. Thankappan Charamangalam Mohamma	7950	33910	110750	19040
9	Vallikunnam Kunnimal Khadi & Village Industrial Co-operative Society	..	..	..	..
10	Vallikunnam Harijan Multi-purpose Co-operative Society	176	..	2180	655
11	Sree Narayana Cultural Mission	9701	14808	4901	526
12	Vaikomkundu Thazhappaya Vyavasaya Sahakarana Sangham	..	3000	4500	..
13	Thayazhem Thazhappaya Vyavasaya Sahakarana Sangham	144	..	300	416
14	Kidangoor Grama Vyavasaya Sahakarana Sanghem	..	708	4380	655
15	Vaikom Town Thazhappaya Co-operative society	..	..	600	..

Sl. No.	Name of Unit	Capital investment	Working Capital		Others
			Raw materials	Payment of salaries, wage, bonus etc.	
16	N.E.S. Block vanitha Khadi and Village Industries Co-operative Society	136	14400	11799	3718
17	Koothattukulam Village Industries	..	..	..	..
18	Giuld of Charity	4041	68163	82873	32489
19	Departmental Fibre Centre Khadi and Village Industries	..	23189	12127	3268
20	Kaipamangalam Grama Vyavasaya Sahakarana Sangham	..	..	1985	117
21	Mankara Mahila Samajam	5206	1037	4831	300
22	Office of the centre Khadi officer, Intensive Khadi centre Kerala Khadi and Village Industries Board	666697	2153601	979139	555194
23	Cheruvattur village Industries Co-operative	..	..	..	..
Total		697137	3735989	3533869	660318

15. Capital Formation of Khadi and Village Industries Sector in Kerala

Capital formation is the switch to start the development mechanism in any sector. The capital investments in the economy, through Khadi and Village Industries sector, comes to Rs. 28,90,604 for the year 1978-79. The contribution of the Khadi sector figured more which stood at Rs. 21,93,467 and that of Fibre was Rs. 697137 Table 15 gives the District-wise details of capital formation in the industry.

TABLE 15

Capital Formation in Khadi and Village Industries in Kerala

Sl. No.	Name of District	Khadi	Fibre	Total
		Capital Investment	Capital Investment	Capital Investment
1.	Trivandrum	1242950	2000	1244950
2.	Quilon	..	1086	1086
3.	Alleppey	325	17827	18152
4.	Kottayam	48002	280	48282
5.	Ernakulam	..	4041	4041
6.	Trichur	42000	..	42000
7.	Palghat	17085	5206	22291
8.	Kozhikode	843105	..	843105
9.	Cannanore	..	666697	666697
State Total		2193467	697137	2890604

16. Flow of finance in the Khadi & Village Industries Sector in Kerala

Kerala produces Khadi and Village Industries products worth Rs. 10.42 crores annually out of which Khadi accounts for Rs. 1.49 crores and other Village Industries products for Rs. 8.93 crores. The Khadi and Village Industries commission provides financial assistance for the development of these rural industries. The Kerala Khadi and Village Industries Board is the major agency receiving financial assistance from the commission. In turn the Khadi and Village Industries Board finances a net work of 493 working Khadi and Village Industries Co-operative Societies and 45 other registered institutions. Also the commission directly finances the Kerala Gandhi Smarak Nidhi, Kerala Sarvodaya Sangh and the Kerala Khadi and Village Industries Association which are known as directly aided institutions.

The Commission has some approved pattern of financial assistance to different industries. Assistance patterns are different in the case of institutions and individuals artisans. Normally 4% of interest is charged on loans by the commission. For programmes implemented by societies and institutions recognised by the commission or State Board as per the approved patterns availing bank finance, there is a scheme to subsidise the interest to the extent of the difference between the normal bank rates and 4%. But this interest subsidy benefit is not given to individual artisans. But a new scheme has been introduced by which a grant of Rs. 100 is given to individual artisans through these institutions.

Banks have extended its unstringent economic aid to some selected prospering rural industries in Kerala. They issued finance to individual artisans too. In financing the scheme the banks have mainly looked in to the scope for expansion, gestation period, period of operation and expected turn over of the industry. On the above Criteria Banks have advanced finance to schemes like cottage Match, Soap Industry, Screwpine Industry, Cane and Bamboo Industry, Village Pottery Industry, Beekeeping Industry, Lime Industry, processing of cereals and pulses.

Finance is the pivot of any project. Banks are the catalitic agents in the flow of finance. The sample study reveals that in adequacy of finance is a limiting factor in the case of Khadi and Village Industries in Kerala.

Finance comprise of loans and grants. The loans are given by the Government. Banks advance loans to the rural sector. Table 16 gives an account of the flow of finance from various sources to the Khadi and Village Industries sector for 1978-79. The grant amount for the year 1978-79 was Rs. 12,371,44.

The outstanding loans to this sector in Kerala was Rs. 13,519,152 for 1978-79. The Government are the main financiers in the field of Khadi and Village Industries sector in Kerala.

Flow of Finance in Khadi and Village

Source of Finance	Khadi			
	Loans			
	Obtained	Repaid	Balance	Grants
(1)	(2)	(3)	(4)	(5)
Government (Central or State)	8443524	956881	7486643	412738
Banks	74485	4765	69720	..
Co-operative Societies	..	..	..	..
Other Institutions	..	..	..	..
Private party	..	..	..	..
Total	8518009	961646	7556363	412738

17. Socio-economic enquiry in to the Khadi and Village Industries Sector in Kerala

A Socio economic enquiry of the artisans engaged in Khadi and Village Industries was conducted through questionnaire No. II designed for the purpose of this survey. 433 Families were selected for the Socio-economic enquiry in the State, out of which 254 families belonged to the Khadi Sector and 179 families represented the Fibre Sector.

1. The religious composition:

Table 17 gives the religious distribution of the families selected for the detailed study.

TABLE 17

Distribution of families engaged in Khadi & Village Industries according to religion

Sl. No.	Name of Religion	No. of Families engaged in		
		Khadi	Fibre	Total
(1)	(2)	(3)	(4)	(5)
1.	Hindu	224	152	376
2.	Christians	21	14	35
3.	Muslims	9	13	22
	Total	254	179	433

In both Khadi and Village Industries Hindus formed the predominant religious group followed by Christians and Muslims. In percentage the Hindu representation in Khadi and Village Industries is 86.8.

2. Participation of the weaker sections:

Table 18 given below throws light on the low participation of the weaker sections of the community in the Khadi and Village Industrial enterprises.

TABLE-18

**Distribution of families
belonging to SC/ST engaged in Khadi and
village Industries in Kerala**

Community	No. of persons engaged in		
	Khadi	Fibre	Total
(1)	(2)	(3)	(4)
Scheduled Caste	4	19	23
Scheduled Tribe	1	..	1
Not specified	2	11	13
Total	7	30	37

The participation rate of Scheduled Caste Communities in decentralised rural enterprises is very low. The scheduled castes in Kerala figure top is participation among the weaker communities. The participation rate works around to 1% only. Though small, their participation is prominent in the Fibre segment. The Scheduled Caste Communities are gifted with skill and expertise but the missing link is individual initiative or entrepreneurial talent. The entrepreneurial shyness of this community is a logical concomitant of the social backwardness. Governmental and quasi-governmental financial aids and entrepreneurial guidance can go a long way in lifting up the participation rate of the weaker sections in self employment programmes in the State.

3. Asset preference

The families engaged in Khadi and village Industries sector showed a preference to land holdings as shown in table 19 given below:

TABLE 19

**Distribution of families according to land ownership/
possession**

<i>Extent of land held</i>	<i>Khadi</i>	<i>Fibre</i>	<i>Total</i>
(1)	(2)	(3)	(4)
No land	4	..	4
Below 5 cents	16	6	22
5-10 cents	48	43	91
11-20 cents	53	32	85
21-30 Cents	33	26	59
31-50 cents	35	31	66
51-99 cents	32	24	56
1 Acre and above	33	17	50
Total	254	179	433

In the khadi & village Industries sector in Kerala the number of families Possessing no land at all is negligibly small. Ownership of land is a token of social status in the villages of Kerala. It may also be noted that only a small percentage of families possesses land more than one acre. In both Khadi and Village Industries sector the highest number of families had small holdings ranging between 5 and 20 cents. The preference for small holdings indicative of the capacity in generating "income surplus". But Khadi and Village Industries sector in Kerala is a subsistence sector and never a surplus sector. The income flow is limited from this sector of the economy and hence investment in landed property becomes an impossibility for this set of people.

4. Activity status

Economically active members are a source of income for the family. The size of income of the family depends, to a great extent, on the number of economically active one. Table 20 furnishes the details of the size of earning members in the families engaged in the rural industries sector.

TABLE 20

Distribution of families engaged in Khadi and village Industries according to the size of the earning members in the family.

<i>No. of earning members</i>	<i>Khadi</i>	<i>Fibre</i>	<i>Total</i>
(1)	(2)	(3)	(4)
1	43	25	68
2.	123	94	217
3.	63	37	100
4.	20	13	33
5.	4	5	9
6.	1	3	4
7.	..	2	2
Total	254	179	433

Maximum number of families had two or three economically active members. This tendency holds good both in Khadi and Village Industries sectors. The families engaged in this subsistence sector had relatively large size. The question of economic existence compel more members to undertake some income earning activities. In their hard trial to make bothends meet, the Khadi and Village Industries are a supplementary channel of income.

5. Occupational distribution

Table 21 gives the occupational distribution of the families engaged in this sector. Khadi and Village industries are a 'supplementary sector' in Kerala State.

TABLE 21

**Occupational distribution of the families engaged in
Khadi and Village Industries in Kerala**

Sl. No.	Name of occupation	Khadi	Fibre	Total
(1)	(2)	(3)	(4)	(5)
1.	Cultivation	13	9	22
2.	Agricultural labour	61	23	84
3.	Mining & quarrying	2	..	2
4.	Khadi	30	..	30
5.	Fibre	30	43	73
6.	Household industry	25	8	33
7.	Manufacturing other than household industry	{ except Khadi & Fibre 8	2	10
8.	Construction	4	5	9
9.	Trade & Commerce	15	24	39
10.	Transport & Storage	4	2	6
11.	Services	62	63	125
Total		254	179	433

Both in Khadi and Fibre industries the participant families were mainly employed in the services sector. As the table reveals, 125 families, out of a total of 433, were making a living principally from the services sector. 84 families whose major occupation was Agricultural labour comes second. Only 30 families took Khadi manufacture as the principal avocation. There were only 43 families exclusively engaged in the Fibre sector. This trend of occupational distribution in the Khadi & Village Industries speaks of the "subsidiary income generating status" of the sector in the context of Kerala economy. The employment generation of this sector is partial and income flow is tiny. In Kerala this sector is below the line of 'self-sustained growth'. But this is never a matter of dismal fate to the industry. The only effort must be to reassign the industry the status of a 'self-sufficient industry'. The expansion potential in this sector in Kerala is self-explanatory. Self-employment schemes based on Khadi and village Industries in Kerala are the apt alternative for unemployment eradication. Group initiative of the educated unemployed in Kerala can very well turn in these lines of activity with governmental aid.

6. Worker participation

In the 254 families engaged in Khadi manufacture and related works, 282 persons were participating in the industry in different capacities. Among the total number of workers in the industry there were 29 males and 253 females. Females dominated in the work force covering this industry in Kerala. The details of worker participation in the Khadi industry, is given below: (table 22)

TABLE 22

Worker participation in the Khadi industry in Kerala

Description of work	No. of persons		
	Male	Female	Total
A. ADMINISTRATION:			
1. Managerial	5	4	9
2. Supervisory	2	5	7
3. Clerical	6	2	8
4. Salesmn	2	..	2
5. Others	..	..	..
B. MANUFACTURING			
1. Yarn winding	..	2	2
2. Spinning	3	159	162
3. Weaving	10	58	68
4. Others	1	20	21
Total (A+B)	29	253	282

On the administrative side of Khadi production males numbered more though marginally. But in the manufacturing side of the industry female participation is apparently dominant. This may be due to the enthusiastic encouragement given to women entrepreneurship in Kerala's Industrial area. More workers, both men and women were found engaged in the spinning process, and weaving could employ the next highest number of workers. The female folk engaged in Khadi production supplement the income of the family to ensure a moderately comfortable secure and sheltered life.

Table 23 gives below presents the worker participation in the Fibre industry. In the Fibre industry also female participation was more. From the 179 families engaged in Fibre industry, there were 198 persons employed directly in the sector.

TABLE 23

Worker participation in the Fibre Industry in Kerala

Description of Occupation	Screw fibres		Kona Grass		Fancy Articles		Sisal yarn		Total		
	M	F	M	F	M	F	M	F	M	F	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Manager	..	..	..	1	..	1	1	..	1	2	3
Secretary	4	1	..	1	..	1	..	..	5	2	7
Office staff	1	1	1	..	1	2	..	1	3	4	7
Marketing	..	..	..	..	..	..	..	..	..	..	..
Collection of raw-materials	..	..	..	..	..	..	..	..	..	..	..
Spinning	..	..	..	1	..	4	..	..	..	5	5
Weaving	..	121	2	7	..	14	..	2	2	144	146
Other occupation	1	13	..	..	..	14	..	2	1	29	30
Total	6	136	3	10	1	36	1	5	12	186	198

Among the Fibre units, Screwpine industry provided employment to the maximum number of persons. This can well be identified as the lead industry in the Fibre Complex. More are found employed in the weaving process. The production of Fancy articles occupy the second place in regard to employment absorption. Sisal yarn making and koragrass manufacture has not developed much in the State. More of protection to these segments of the Fibre complex can save the industry, and hence the artisans too, from wanton devastation.

7. The economic importance of Khadi and Village Industries

The economic importance of Khadi and Village Industries in Kerala is derived, mainly, from the percentage income contribution of this sector to the total family income. The study revealed that, in the case of relatively high income families, the contribution of Khadi and Village Industries to the 'family income stream' was quite negligible. But low income families engaged in this sector depend exclusively on this sectoral income to make both ends meet.

Table 24, given below, gives a picture of the percentage income contribution.

TABLE: 24

Distribution of families engaged in Khadi according to their percentage share of contribution to the gross monthly income

Gross monthly income Rs.	Below 5%											Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Less than Rs. 100	..	..	..	..	1	2	2	6	1	7	19
101-150	..	..	..	..	..	1	2	5	4	5	17
151-200	..	..	..	3	3	2	1	7	4	4	24
201-250	..	..	1	6	4	2	2	6	3	4	28
251-300	..	..	1	1	3	3	3	9	1	4	25
301-400	..	..	2	5	11	10	3	10	5	4	50
401-500	..	..	5	4	3	..	..	3	..	4	19
501-600	1	1	4	8	1	2	1	3	5	5	30	
601-750	1	1	2	1	1	1	1	..	2	1	10	
751-above	2	2	10	2	3	3	5	5	1	1	32	
Total	4	4	25	30	30	26	20	54	26	39	254	

Maximum number of families engaged in Khadi manufacture belong to the middle income group of Rs. 301-400. The number of families falling in the higher income bracket, i.e. families having a monthly income greater than Rs. 750, is also not low and stood at 32, out of a total of 254. This was due to the increased participation of the services sector in Khadi manufacture. Taking the income slab of Rs. 0 to 250 as the lower quartile of the income range the number of families falling in this group stood at 88. The income slab of Rs. 251 to 500 can be taken on the middle range. The number of families falling in this group was 94. Income above Rs. 501 may be taken as the upper quartile and the number of families in this group comes to 72. This clearly documents the concentration of middle income groups in Khadi production in Kerala.

It may also be noted that the contribution of the khadi segment to the family income comes below 40%. Of the 254 families, 115 families get on income share of below 40% from this sector. 74 families get 41 to 75% of the family income from Khadi. Again more than 75% of the gross monthly income of 65 families was from Khadi as per the result of the study. This analysis, again, support our earlier finding that to many, Khadi and Village Industries sectors, are a supplementary source of income.

TABLE: 25

Distribution of families in Fibre Industries according to the percentage share of contribution to the gross Income

Monthly gross income (Rs.)	Percentage of Share income from Fibre Industries to gross monthly income										Total
	5%	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		above 90%
Upto 100	..	..	..	..	..	..	..	4	1	13	18
101-150	..	..	..	..	..	..	2	17	4	2	25
151-200	..	..	..	..	1	..	2	18	10	3	34
201-250	..	..	..	..	..	..	6	14	9	3	32
251-300	..	..	..	..	1	2	3	5	4	1	16
301-400	1	..	..	..	4	2	1	4	2	1	15
401-500	..	..	..	..	1	1	4	4	1	2	13
501-600	..	..	..	1	..	1	2	1	4	3	12
601-750	..	..	1	1	..	1	..	1	1	2	6
751 and above	1	..	..	..	3	..	3	1	..	..	8
Total	2	..	..	2	10	7	23	69	36	30	179

TABLE 26

Distribution of families engaged in Khadi according to family size and monthly gross income

Gross Monthly income	No. of members in the family										Total		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(11)	(12)	(13)
Upto 100	4	5	4	4	3	1	1	1	..	..	..	..	19
101-150	1	5	2	3	3	4	2	..	..	..	..	..	17
151-200	..	..	4	4	5	6	3	4	1	1	..	..	24
201-250	..	1	2	2	5	6	7	2	3	2	..	..	28
251-300	..	..	..	..	6	6	8	1	1	2	..	..	25
301-400	..	..	4	4	3	9	17	6	5	2	3	1	50
401-500	..	1	..	..	2	3	4	2	2	3	..	2	19
501-600	..	1	..	..	5	2	7	4	2	2	5	2	30
601-750	..	..	1	1	1	1	2	3	..	1	..	1	10
Above 750	..	..	2	2	5	4	5	7	2	3	1	3	32
Total	5	13	19	38	42	56	30	16	16	16	9	10	254

182 families, out of 254 had membership of family ranging from 4 to 8. There were 35 families having members 9 and more. The principle of 'small is beautiful' seemed to have adhered to only by a small selection of families engaged in Khadi and Village Industries in Kerala. The big size of the family reduces the size of the individual share of the family income cake. There are only 9 families out of 254 where monthly income is above 300 rupees with less than 4 members in the family.

TABLE 27

Distribution of families engaged in Fibre according to family size and gross income

Gross income member	No. of members in the family											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Total
Upto 100	1	3	4	4	5	1	2	1	..	..	..	18
101-150	..	2	3	7	6	3	2	2	..	..	..	25
151-200	1	..	5	9	10	6	1	1	1	..	..	34
201-250	..	..	4	7	6	6	3	4	2	..	..	32
251-300	..	2	1	3	1	4	2	..	2	..	1	16
301-400	..	..	1	2	1	5	1	3	..	1	2	15
401-500	..	..	3	2	1	1	1	2	3	..	..	13
501-600	1	..	..	1	..	..	2	..	4	2	2	12
601-750	..	..	..	..	2	..	..	2	..	2	..	6
Above 750	..	..	..	..	1	1	1	1	1	..	3	8
Total	3	7	18	35	33	27	15	15	13	5	8	179

In the Fibre segment also the picture is not different. Large families are more and 'planned families' are few in number. Material prosperity and family size are negatively correlated in the case of a developing economy. There are only 5 families out of 179 where monthly income is above Rs. 300 with family size less than 4 in the fibre sector. More than 65% of the families have members more than 4.

8. Employment intensity in Khadi and village Industries sector:—

The existence of chronic under-employment and disguised unemployment in a sector of the economy is determined by the intensity of employment obtained in that sector.

TABLE 28

Intensity of Employment in Khadi and Village Industries in Kerala (Month)

Employment intensity group No. of days	Khadi		No. of persons Fibre		Total		Total
	Male	Female	Male	Female	Male	Female	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
'0' days	1	15	6	15	7	30	37
1—5	..	5	..	10	..	15	15
6—10	..	2	..	16	..	18	18
11—15	..	15	1	15	1	30	31
16—20	8	36	..	22	8	58	66
21—25	6	103	1	45	7	148	155
26—30	14	77	4	63	18	148	158
	29	253	12	186	41	439	480

The intensity of employment in the Khadi and village Industries sector in Kerala is given in table 28. The study revealed that there is the existence of disguised unemployment and under employment in this sector in Kerala. Of the 282 persons working in the Khadi employment of the rural industrial sector, atleast 82 persons do not get employment for more than 20 days in a month. In Fibre also the same is the story. But a majority of workers in both the segment got employment for 20 to 30 days in a month. There is a possibility for attaining full employment in this sector.

9. Extent of indebtedness:

The Khadi and Village Industries workers are also found in the "queer street" through not deterring the somber state of mind. Majority of them had an outstanding debt of less than Rs. 1000. This too sounds a sceptical note. This doesn't mean the sector to be of copious profit chances. It would equally be erroneous to eulogise this sector as 'loss proof'. People are less industrious and risk taking. Table 29 gives the state of indebtedness in Khadi and Village Industries in Kerala

TABLE 29

Outstanding debt of the families engaged in Khadi and Village Industries in Kerala

<i>Outstanding debt Rs.</i>	<i>Khadi</i>	<i>Fibre</i>	<i>Total</i>
Below Rs. 100	40	50	160
101-150	10	3	13
151-200	13	6	19
201-300	17	8	25
301-500	25	21	46
501-750	9	17	26
751-1000	17	16	33
1001-2000	28	24	52
2001-3000	13	10	23
3001-5000	5	11	16
5001-10,000	5	9	14
above 10,000	2	4	6
Total	254	179	433

As the table illustrates, there were no one without debt in the Khadi and Village Industries sector. In the Khadi component 110 persons had only marginal debt and only two persons had a debt of above Rs. 10,000. This holds good in the case of Village Industries the sector too. People are less risk taking and as such avoid debt at the cost of poverty. Poverty is preferred to debt. Their debts coil till the end of their career as an artisan.

Easy terms of credit would be ablessing to artisans engaged in this sector. But often the credit facilities do not reach the hands of the artisans done to official and non-official lapses. A closer look at the financial need, and debt management in the Khadi & Village Industries sector is of urgent importance. If some debt relief schemes can be launched, it will help to same extend to reduce the present difficulties experienced by the artisans engaged in Khadi and Industries

18. What ails the Khadi and Village Industries sector in Kerala

The development prospects of a labour intensive, employment generating rural sector of the economy remains in the balance. Emanation of a surplus income stream to fill the reservoir of state income converge to a divisions dream. A conducive development milieu is far beyond this sector. The clear picture revealed by this potential segment of the economy speaks for the pit-falls in the sector.

The impediments in the growth path of the Khadi and Village Industries sector in Kerala are mainly financial, infrastructural, entrepreneurial, managerial and administrative. Kerala has surplus labour. But Paucity of finance prevents potential projects. The state Budget does not provide adequately for this sector on grounds of priority. Less organised are people in this sector. Collective bargaining is less effective on grounds of finance in Khadi & Village Industries. The central aid also flows only 'in stero type' fashion. The dynamism of this decentralised sector is seldom cared while granting the central aid. Other financing agencies were also shy towards this sector. But, of recent, the nationalised banks have stressed a rural bias in the credit advance policy. This shift in the credit policy of banks have given an extra filling to rural industries. Adequate and timely financial flow to the Khadi and Village industries sector in Kerala can nature the long term aspirations of thousands of artisans who otherwise are in a strew to make both ends meet.

The infrastructural inadequacy is yet another impasse on the line of rural industrial growth. Raw material scarcity impedes the quick progress of this sector. There is hardly any effective machinery to ensure the unrestrained flow of production components. There exists no setup to give technical guidance in skill formation and production management. Societies which act as the connecting link between artisans and the consumer market, often, seem not interested in the development of the sector. Many societies have made the sponsoring of rural industries as a 'namesake' affair. There were instances of these co-operative organisations exploiting the fruit of skill of these gifted artisans. Yet another set of societies and organization use the rural industries label to avail the benefit of grants from Governmental and semi governmental agencies. What is evident in this sector is lack of 'sincerity of interest' and motivation. No sector can follow the path of expansion unless the basic needs of functioning are made available. Cotton is a raw material, scarce in Kerala. The collection centres of cotton are far away from the production centre: There is no centralized agency in Kerala to supply the rawmaterials direct to artisans and collect the finished goods back. Finding new markets, either domestic or foreign, is a sinequanon for the dynamic development of the sector. The artisans are unaware of the changing condition of demand for their product. There is an information gap. A liaison agency is a missing link. Marketing of Khadi and village Industries product is an equally important field requiring extra attention. A little care on the industrial infrastructure in this sector can speed up the momentum of rural industrial growth in Kerala.

Entrepreneurial talents do not blossom in village industries. Being labour intensive, labour problems are a dis-insentive to the one who take up the vecture. People are disillusioned and disillusionment spirings from deep personal and common concern about unemployment, poverty, abuse of power, corruption and violencic. Etrepreneurs are less risk aking. Profit motive surpasses the employment motive. The "State of economy" is a very general term for the toiling millions. The creation of a conductive industrial climate can save these industries from the period of extention.

Administrative and managerial lapses invigorate the decay of these industries in Kerala. The official eggheads seem to have literally curled up in their bureaucratic shells. Political sanction remain in papers. Bureaucratic implementation is at snail-speed. Amounts are either surrendered or lapsed due to poor progress with the developmental projects. The decentralisation of administration is a welcome sign in the development of rural industries in the state. The 'District Industrial Centres' is not giving proper attention to the needs of Khadi and Village Industries sector in Kerala. It is the duty of those who have picked up the mantle for steering the destiny of the state to switch the engine of rural industries segment in propelling the state economy.

19. Towards optimal utilization of the employment potential in Khadi and villages Industries in Kerala.

The Khadi & Village Industries in Kerala is an industrial cynderella. It must be revamped within a definite time horizon to achieve optimal utilization of employment potential in this sector.

The Khadi and Village industries commission has allotted Rs. 5 crores for the development of this sector for the year 1978-79. The most important developmental programmes for this financial year included the following.

1. Setting up of 1045 gobargas plants.
 2. Commissioning 12 toilet soap manufacturing units.
 3. Registration & expansion of 138 cottage match units.
 4. Establishing two major Honey processing units at Balusserry (Kozhikode) and Trichur.
 5. Opening of Khadi and Village Industris sales depots exclusively for leather products.
 6. Opening of 200 Khadi production centres.
 7. Training unemployed youths and workers in various industries.
 8. Extending individual assistance programme.
 9. Introduction of consultancy service for setting up industries and extending training facilities.
 10. Setting up raw material bank for soap and cottage match industries.
- and
11. Setting up of major splints and veneers units under cottage match industry.

The Kerala Government has constituted a high level committee headed by the Minister for Industries for the implementation of the "Special Employment Programme" of the state Khadi and Village Industries Board. It aims at

providing additional employment to one lakh persons in the course of three years. The investment required for the scheme is proposed to be provided by three agencies:—

1. Khadi and Village Industries Commission.
2. Kerala Government
- and
3. Nationalised Banks.

According to an official press release of the Government of Kerala the Khadi and Village Industries Board proposes to start 4 Khadi spinning and weaving units in the district of Idukki with two units in the co-operative sector. Each unit would provide employment to 70 persons. The Board would provide Rs. 1,90,000 and Rs. 35,280 respectively as grants to the co-operatives for starting the units.

The sample study conducted by the Directorate of Economics and Statistics brought to light many impediments that block the development of the Khadi and Village Industries sector. In the light of the analysis the following suggestions are made to clear off the impending impasse inhibiting this sector.

1. A reliable Government agency must supply raw materials at the production centres at reasonable prices.
2. Establishment of an independent agency to look after the monitoring of this sector.
3. Generous extension of grants and interest free loans to potential projects.
4. Making available land and other fixed capital for an employment generating project, by local bodies or organisations.
5. The intervention of intermediaries on the marketing side should be checked by the creation of a marketing agency in the block level under Government guidance. This agency should invariably have collection depots in major production centres.
6. A 'Technical Expertise Wing' of the Khadi and Village Industries Board must be started to give guidance to the unemployed ones in the villages to take up self employment projects.
7. Mobilization of Bank finance to this sector on easy terms can be an additional stimulant.
8. Product standardising techniques should be given to artisans at the production centres by an appropriate agency.
9. The 'Market Research Wing' can explore the potential demand from foreign markets for the Khadi and Village Industries products

10. Introduction of Khadi uniform in schools and Government offices on a compulsory basis at least for two days in a week may go a long way in improving the demand for Khadi cloth.
11. All office equipment such as paper, paper weight, table cloths, window curtain, pencils, carpets, etc. used in Governmental and semigovernmental offices must be obtained from the Khadi and village industries sector.

and

12. Increased publicity to Khadi and village Industries products will definitely earn in an increased measure, both national and international markets.

20. Conclusion

Findings of this survey are more suggestive than exactly definitive. It is evident that the Khadi and village Industries in Kerala play a Vital role in solving the unemployment and under employment of the state with minimum investment and gestation period. Emphatic emphasis on the uplift of this sector is needed to help in reducing the cost of production, capitalise the skill of local artisans, generate employment in rural areas, facilitate the dispersal of ownership and also the economic power, improve the income levels and living and finally to bring about prosperity to the rural areas.

Economists like Gadgil has advocated a dynamic and integrated approach to the development of the Khadi and Village Industries. In order to bridge the gap between traditional and modern industries, it is necessary to establish reciprocal and mutually beneficial relationship between these two sectors and integrate them effectively with the overall industrial structure. But Kerala is industrially shy. This syness resembles in the small industries sector also. Industrial promotion is one among the long cures of the economic disease of the state. Planned development of the Village industries has been inhibited by the absence of integration of efforts. Rural industries must also adopt to the changing needs and accept an intermediate technology.

The sociology of Khadi and Village Industries also assumes importance in Kerala. Educated unemployment is a "Special curse" of this state. The orientation of the attitude of jobless in respect for all kinds of work, is the major function of the Khadi and Village Industries movement. The 'white collar preference' must be shed by our jobless millions. In the Khadi and Village Industries sector production must be linked with 'values'. The spirit of creativity is another message of this sector. This sector should promote the svalue Co-operation among our brotheren. Co-operation indicates the qualities necessary for living generously harmoniously and effectively with one's followmen. Dicipline, Co-operation, social sensitiveness and tolerance are the sociological messages of this sector for the people of Kerala. In short a social transformation

reorientation of values concerning life, status, money and work, are the important factors which have to be initiated by the Khadi and Village Industries programme.

Planning is an exercise in social engineering and a frame of policy—mix designed to make possible the realisation of developmental goals and egalitarian objectives within a definite time limit. We had planning for three decades. The paradox is that a vast majority remained still to be covered for getting the benefit of progress. The grim fact is that problem of hunger, privation and inequality seem to have eluded solution. The 'Yojaana Bhavan' calculated the number of people below the 'poverty line', as 47.65% and 40.70% respectively in rural and urban India. In the State of Kerala also the bulk of the people, the toiling millions, are groaning under heavy burden of social and economic inequality, poverty unemployment and high prices.

Kerala has rightly shifted to the programme of decentralised planning. Emphasis now is on decentralised and area based planning rather than sectoral planning. The main thrust of investment strategy under the new plan tries to increase substantially the employment content of the plan so as to effect removal of unemployment. Khadi and Village industries must assume a prime place in the new investment policy in Kerala. The area approach perforce calls for a dynamic manpower planning, planning for optimum utilization of the vast idle manpower of the state for productive purposes. The educated unemployed should be attracted to this potential sector.

Kerala economy is growing. Our development, mechanism has somehow or other created a wide gap between haves and have not Village industries can only arrest this trend and plugging the gap. Hunger will still linger. To conclude and to quote Arnold Toynbee—"the twentieth century will be chiefly remembered not as an age of political conflicts or technical innovations, but as an age in which human society dread to think of the welfare of the whole human race as a practical objective".

21. ANNEXURE TABLES

TABLE 7A

Employment—Khadi—Spinners from 1972-73 to 1975-76

Year	Name	Number of spinners in cotton Khadi					New model charuka	Muslin Charuka	Self sufficiency Charuka	Total	% in relation to All India
		Traditional amber	Amber	Cotton	Muslin Charuka	Total					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
1972-73	India	..	670178	..	..	61102	..	..	731280	..
	Kerala	..	6946	..	..	1462	..	..	8408	1.2
1973-74	India	509464	..	..	111092	35283	..	..	655839	..
	Kerala	4639	..	..	1367	1830	..	..	7836	1.2
1974-75	India	550401	..	73191	..	101177	1836	..	732230	..	
	Kerala	2658	..	3001	..	1134	985	..	7778	1.1	
1975-76	India	441781	..	49469	..	74757	2375	2285	570667	..	
	Kerala	2224	..	2894	..	1541	1660	2	8321	1.5	
1976-77	India	449735	..	42292	..	73586	3651	584	569848	..	
	Kerala	1376	..	2858	..	1778	2502	2	8516	1.5	

(Source: Khadi and Village Industries Commission)

TABLE 7B

Khadi—Employment—Weaving from 1972-73 to 1976-77

<i>Year</i>	<i>Name</i>	<i>No. of weavers in cotton Khadi</i>	<i>% in relation to All India</i>
(1)	(2)	(3)	(4)
1972-73	India	72070	1.6
	Kerala	1169	
1973-74	India	59264	
	Kerala	1350	2.3
1974-75	India	56803	
	Kerala	1892	3.3
1975-76	India	54008	
	Kerala	1944	3.6
1976-77	India	59513	
	Kerala	2438	4.1

Source: Khadi and Village Industries Commission.

TABLE 7C

Khadi—Employment—Other Artisans for the period 1972-73 to 1976-77

<i>Year</i>	<i>Name</i>	<i>No. of other Artisans in Cotton Khadi</i>	<i>% in relation to All India</i>
(1)	(2)	(3)	(4)
1972-73	India	11921	
	Kerala	194	1.6
1973-74	India	10394	
	Kerala	267	2.6
1974-75	India	11054	
	Kerala	291	2.6
1975-76	India	9821	
	Kerala	444	4.5
1976-77	India	20593	
	Kerala	230	1.1

Source: Khadi & Village Industries Commission.

TABLE 7D

Khadi—Employment—Salaried Staff for the period 1972-73 to 1976-77

<i>Year</i>	<i>Name</i>	<i>No. of Salaried staff engaged cotton Khadi</i>	<i>% in relation to All India</i>
(1)	(2)	(3)	(4)
1972-73	India	15362	
	Kerala	445	2.90
1973-74	India	16675	
	Kerala	526	3.15
1974-75	India	19838	
	Kerala	533	2.69
1975-76	India	21053	
	Kerala	634	3.01
1976-77	India	19000	
	Kerala	647	3.41

TABLE 7E

Manufacture of Cane Gur and Khadi Sari Employment (part-time) persons in Nos.

<i>Name</i>	<i>Year</i>					
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
(1)	(2)	(3)	(4)	(5)	(6)	(7)
India	943228	108796	107058	110746	129975	132340
Kerala	455	435	1478	1593	1624	1800
% in relation to All India	0.5	0.4	1.4	1.4	1.3	1.4

Source: Khadi & Village Industries Commission.

TABLE 7F
**Palm Gur making and other palm products employment
 (part-time) persons in Nos.**

Name	Year					
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
(1)	(2)	(3)	(4)	(5)	(6)	(7)
India	228793	292452	304649	330851	325157	316345
Kerala	18770	26240	19240	29898	15403	15535
% in relation to All India	8.2	8.8	6.3	9.0	4.7	4.9

Source: Khadi & Village Industries Commission.

TABLE 7G
Beekeeping—Employment (part-time) persons in Nos.

Name	Year					
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77
(1)	(2)	(3)	(4)	(5)	(6)	(7)
India	138291	147812	150421	143065	147030	145940
Kerala	12482	12495	12544	12969	15269	15377
% in relation to All India	9.0	8.5	8.3	9.0	10.4	10.5

Source: Khadi & Village Industries Commission.

TABLE 7H
Village Pottery—Employment (persons) in Nos.

Year	Name	No. of persons employed			% in relation to All India
		F. T.	P. T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	31211	22565	53776	5.5
	Kerala	2775	195	2970	
1972-73	India	36748	22985	59733	5.6
	Kerala	3077	219	3368	
1973-74	India	27220	20203	47423	8.4
	Kerala	3463	534	3997	
1974-75	India	31895	17662	49557	7.1
	Kerala	3159	375	3534	
1975-76	India	36973	28565	65538	5.9
	Kerala	3566	294	3860	
1976-77	India	49004	29268	78272	4.9
	Kerala	3309	500	3809	

Source: Khadi & Village Industries Commission.

TABLE 7 I

Non-edible Oil Production Employment No. of persons

Year	Name	No. of persons employed			% in relation to All-India
		F.T.	P.T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	244	3626	3870	1.0
	Kerala	4	37	41	
1972-73	India	43	462	505	0.8
	Kerala	..	4	4	
1973-74	India	54	3350	3404	6.1
	Kerala	7	201	208	
1974-75	India	101	3499	3600	5.2
	Kerala	9	179	188	
1975-76	India	131	3520	3651	2.0
	Kerala	5	63	73	
1976-77	India	202	5233	5435	3.9
	Kerala	9	205	214	

TABLE 7 J

Non-edible Oil Soap Production Employment—Persons in No.

Year	Name	No. of person employed			% of this All-India
		F.T.	P.T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	923	4662	5585	19.9
	Kerala	56	1057	1113	
1972-73	India	944	3392	4336	21.9
	Kerala	34	914	948	
1973-74	India	1097	2834	3931	4.9
	Kerala	37	154	191	
1974-75	India	1280	2770	4050	5.6
	Kerala	28	198	226	
1975-76	India	1337	5366	6703	4.7
	Kerala	22	296	318	
1976-77	India	1631	5555	7186	2.6
	Kerala	28	160	188	

TABLE 7 K

Fibre—Employment (Persons in Number)

Year	Name	No. of persons employed			% in relation to All-India
		F.T.	P.T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	25461	11669	37130	67.8
	Kerala	18000	7200	25200	
1972-73	India	30882	14530	45412	69.8
	Kerala	22495	9205	31700	
1973-74	India	39117	18711	57828	79.0
	Kerala	31805	13900	45705	
1974-75	India	43133	20892	64025	74.8
	Kerala	33560	14350	47910	
1975-76	India	44952	21755	66707	75.5
	Kerala	35285	15087	50372	
1976-77	India	51532	25297	76829	69.7
	Kerala	37504	16035	53539	

TABLE 7 L

Village Leather—Employment Persons in No.

Year	Name	No. of persons employed			% in relation to All India
		F.T.	P.T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	17961	15715	33676	2.1
	Kerala	360	341	701	
1972-73	India	18258	15857	34115	2.2
	Kerala	412	344	756	
1973-74	India	15210	21085	36395	2.0
	Kerala	394	349	741	
1974-75	India	17584	17964	35548	1.9
	Kerala	444	232	676	
1975-76	India	32048	18022	50070	1.5
	Kerala	500	235	735	
1976-77	India	39868	19066	58934	1.4
	Kerala	590	253	843	

TABLE 7 M

Ghani Oil—Employment
Persons employed

Year	Name	No. of persons employed			% of the All India
		F.T.	P.T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	21322	12787	34109	
	Kerala	441	1827	2268	6.7
1972-73	India	21803	12510	34313	
	Kerala	937	3067	4004	11.7
1973-74	India	23595	9692	33287	
	Kerala	875	1203	2078	6.2
1974-75	India	22270	10629	32899	
	Kerala	366	415	781	2.4
1975-76	India	24039	10555	34595	
	Kerala	159	836	995	2.9
1976-77	India	20258	10690	30948	
	Kerala	426	1076	1502	4.9

TABLE 7 N

Processing of Cereals and Pulses—Employment
No. of Persons

Year	Name	No. of persons employed			% of the All-India
		F.T.	P.T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	10550	16462	27012	
	Kerala	40	..	40	0.2
1972-73	India	8614	20861	29295	
	Kerala	40	..	40	0.1
1973-74	India	8015	12549	20564	
	Kerala	60	..	60	0.3
1974-75	India	10231	8795	19026	
	Kerala	60	..	60	0.3
1975-76	India	9966	12725	22691	
	Kerala	25	..	60	0.1
1976-77	India	12785	9532	22317	
	Kerala	359	658	1017	4.6

TABLE 7 O

Carpentry and Blacksmithy Employment—(Persons in Nos.)

Year	Name	No. of persons employed			% of the All India
		F.T.	P.T.	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	6506	2138	8644	
	Kerala	115	38	153	
1972-73	India	6889	2845	9734	
	Kerala	147	55	202		2.1
1973-74	India	7905	2514	10419	
	Kerala	133	52	185	
1974-75	India	16878	3748	20626	
	Kerala	148	..	148		0.7
1975-76	India	19895	5335	25230	
	Kerala	242	40	282	
1976-77	India	27440	4864	32304	
	Kerala	171	46	217		0.7

TABLE 7 P

**Lime Manufacturing—Employment
No. of persons**

Year	Name	No. of persons employed			% of the All-India
		FT	PT	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	3664	1444	5108	
	Kerala	641	280	921		18.0
1972-73	India	5579	4642	10221	
	Kerala	1389	366	1755		17.2
1973-74	India	2694	4228	6922	
	Kerala	693	222	915		13.2
1974-75	India	5029	2934	7963	
	Kerala	725	594	1319		16.6
1975-76	India	4239	3347	7586	
	Kerala	1291	617	1908		25.2
1976-77	India	8106	3702	11808	
	Kerala	1756	821	2577		21.8

TABLE 7Q

**Collection of Forest Plants and Fruits for Medical
purposes (Employment) Persons in Nos.**

Year	Name	No. of persons employed			% of th All India
		FT	PT	Total	
1971-72	India	44	79272	79316	
	Kerala	..	..	..	..
1972-73	India	1320	7783	9103	
	Kerala	..	..	..	..
1973-74	India	114	41051	41165	
	Kerala	..	..	..	..
1974-75	India	63	47128	47191	
	Kerala	1	..	1	..
1975-76	India	240	72719	72959	
	Kerala	8	400	408	0.6
1976-77	India	149	63216	63385	
	Kerala	3	193	196	0.3

TABLE 7R

Hand Made Paper—Employment (Person in Nos.)

Year	Name	No. of persons employed			% of All India Total
		PT	MT	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	3446	544	4090	
	Kerala	207	19	226	5.5
1972-73	India	3441	688	4129	
	Kerala	209	45	254	6.2
1973-74	India	3382	640	4122	
	Kerala	192	8	200	4.9
1974-75	India	3504	700	4204	
	Kerala	190	29	219	5.2
1975-76	India	3546	698	4244	
	Kerala	166	96	262	6.2
1976-77	India	3635	964	4599	
	Kerala	185	44	229	4.9

TABLE 7S
Cottage Match—Employment (No. of Persons)

Year	Name	No. of persons employed			% of All India
		FT	PT	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	736	2006	2742	
	Kerala	114	88	202	7.4
1972-73	India	467	1924	2391	
	Kerala	188	214	402	16.8
1973-74	India	708	2482	3190	
	Kerala	138	494	632	19.8
1974-75	India	708	2852	3560	
	Kerala	40	173	213	5.9
1975-76	India	755	2002	2757	
	Kerala	50	256	306	11.1
1976-77	India	938	1994	2932	
	Kerala	65	270	335	11.4

TABLE 7 T
Cane and Bamboo—Employment (Persons in Nos.)

Year	Name	No. of persons employed			% of the All India
		FT	PT	Total	
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	..	..	..
	Kerala	..	..	..	..
1972-73	India	..	..	..	..
	Kerala	..	..	..	..
1973-74	India	2398	2467	4865	
	Kerala	370	306	676	13.9
1974-75	India	3385	3397	6782	
	Kerala	582	482	1064	15.7
1975-76	India	5596	4585	10181	
	Kerala	718	595	1213	12.9
1976-77	India	6511	5846	12357	
	Kerala	721	597	1318	10.7

TABLE 7U

**Fruit Processing and Fruit Preservation Employment
(Persons in Nos.)**

<i>Year</i>	<i>Name</i>	<i>No. of persons</i>		<i>employed Total</i>	<i>% of All India</i>
		<i>FT</i>	<i>MT</i>		
(1)	(2)	(3)	(4)	(5)	(6)
1971-72	India	..	..	..	..
	Kerala	..	..	..
1972-73	India	..	..	..	..
	Kerala	..	..	..
1973-74	India	106	349	455	
	Kerala	4	2	6	1.3
1974-75	India	63	182	245	
	Kerala	..	6	6	2.5
1975-76	India	76	239	315	
	Kerala	1	5	6	1.9
1976-77	India	69	297	366	
	Kerala	5	12	17	4.6

9. Details of production and sales during the above period.

Items	Production			Sales		
	Unit	Quantity	Value (Rs.)	Unit	Quantity	Value (Rs.)

10. Details of Expenditure (Period same as under Item 8)

Items of Expenditure	Amount spent on Capital Investment etc.	Amount spent on working Capital (Raw Material and other incidental expenses of production)
Total		

11. Details of Finance (Both grants and loans)

<i>Source of Finance</i>	<i>Whether loan or grant</i>	<i>Amount obtained so far</i>	<i>Amount obtained during the reference year</i>	<i>Amount repaid during the reference year</i>	<i>Balance outstanding</i>
Total					

12. Problem solution matrix

<i>Sl. No.</i>	<i>Nature of the problems faced by the enterprise/ establishment</i>	<i>Suggestions to solve the problem</i>

BUREAU OF ECONOMICS AND STATISTICS
STUDY ON PROSPECTS OF EMPLOYMENT IN KHADI AND VILLAGE INDUSTRIES

Questionnaire No. II

(To be canvassed in respect of Khadi and Village Industries workers only)

CONFIDENTIAL—FOR OFFICE USE ONLY

- | | |
|---|----|
| 1. Name of District | .. |
| 2. Name of Panchayat/Municipality | .. |
| 3. Name of Establishment | .. |
| 4. Name of the head of the household | .. |
| 5. Religion | .. |
| 6. Whether belonging to Scheduled Castes/Scheduled Tribes | .. |
| 7. Extent of land owned by the household (Acres '00) | .. |
| 8. Number of earning members in the household | .. |
| 9. Type of work in the enterprise in which the worker is directly engaged | .. |
| 10. Main occupation of the household (based on relative income share) | .. |
| 11. Subsidiary occupation of the household | .. |
| 12. Monthly gross income from the main occupation (Rs.). | .. |
| 13. Monthly gross income from the subsidiary occupation (Rs.). | .. |

14. Monthly income from other Sources:

Sl. No.	Sources of income	Income (Rs.)

15. Outstanding debt of the household as on date of Survey

16. Average monthly expenditure of the household (Rs.)

17. Do you own a house

Yes/No.

18. Household particulars.

Sl. No.	Relation to head of the household	Sex	Completed age	Educational standard (State the Std. passed only)	skill if any	Actively status (occupation)*	Subsidiary occupation if any	No. of days worked during last month	Emoluments obtained last month Rs.

*(All activities pursued by the member should be included).

- 19. Name of the person (with Sl. No. as under item 18) engaged in Khadi and Village Industry activity
- 20. Is the occupation/activity subsidiary
- 21. Are you fully employed in the enterprise/occupation
- 22. Do you experience any raw material scarcity
- 23. Do you get satisfactory wage/price
- 24. Does the enterprise/occupation cause any problem to your health
- 25. Are you a member of any society? (K & V.I.)
- 26. If yes, is the working of the society effective
- 27. If No, what are your suggestions for improvement of the working of the society
- 28. What are the facilities offered by the society/institution for continuing this occupation
- 29. Is there any scope for engaging additional persons in the enterprise
- 30. If yes,

Yes/No.
Yes/No.
Yes/No.
Yes/No.
Yes/No.
Yes/No.
Yes/No.
Yes/No.
Yes/No.
Yes/No.

Yes/No

Area in which additional hands can be absorbed	Line of development suggested for absorbing additional hands		Additional employment likely to be generated	
	F.T.	P.T.	F.T.	Total
31. Have you got any training facility				
32. Suggestions for the improvement of the functioning of the institution				
33. Name and Signature of the Investigator				
34. Date of canvassing the questionnaire				

Yes/No

Yes/No

INVOLVEMENT OF MANPOWER IN
MINI-INDUSTRIAL ESTATE
IN KERALA

INVOLVEMENT OF MANPOWER IN
INDUSTRIAL ESTATES
IN ISRAEL

"Kerala still remains industrially backward. Industrialization is the key to *solve* the unemployment menace in the state. The Mini 'Industrial Estates' Programme launched by the Government of Kerala in 1975 marked an industrial awakening and entrepreneurial enthusiasm in the state. The dispersal of industrial units in the rural area for effective utilization of rural manpower in industrial advancement in the shortest time is the principal objective of this massive programme. This study gives a clear idea of manpower utilization in Mini Industrial estates in its technical and non-technical components. It reveals that judicious and scientific selection of enterprise for inclusion under this scheme can go a long way in diverting the trend of infant units falling suddenly sick. Since Agriculture reached a stage of saturation industrial expansion alone can absorb the army of unemployed in the State".

Korea and Japan, which were looked upon as the
 main source of raw materials for the Japanese
 economy. The Japanese Government in Korea in 1939
 issued an order of the day, and subsequently established
 the Korea Development Bank in 1941 for the purpose of
 financing the economic development of the country.
 The bank was established in Seoul, Korea, and its
 capital was 100 million yen. The bank was given a
 special status of a public corporation. The bank
 was authorized to issue bonds and to borrow money
 from the Japanese Government. The bank was
 established to finance the economic development of
 Korea and to provide loans to the private
 industry. The bank was given a special status
 of a public corporation. The bank was authorized
 to issue bonds and to borrow money from the
 Japanese Government. The bank was established
 to finance the economic development of Korea
 and to provide loans to the private industry.

CONTENTS

	<i>Page</i>
1. Introduction ..	89
2. Objectives ..	89
3. Collection of data ..	90
4. Type of Ownership of units ..	90
5. Type of Industries ..	90
6. Products manufactured in the Mini Industrial Estates ..	92
7. Entrepreneurs ..	93
8. Monthly income of entrepreneurs ..	93
9. General Particulars ..	94
10. Inome of the Workers ..	95
11. Some Suggestions ..	95
12. Summary and Conclusions ..	96

CONTENTS

1	Introduction	1
2	Objectives	2
3	Collection of data	3
4	Type of Ownership of firms	4
5	Type of Industries	5
6	Factors mentioned in the study Industrial factors	6
7	Empirical	7
8	Monthly income of entrepreneurs	8
9	General findings	9
10	Income of the firms	10
11	Some suggestions	11
12	Summary and conclusion	12

1. Introduction

India is said to be "a rich country inhabited by poor people". The country abounds in natural resources, raw materials and manpower. As present a considerable portion of our supply of man-power is being wasted without being exploited to the fullest extent possible. Ours is primarily an agricultural country. Industrialisation is the only way by which we can exploit our abundant supply of man power. Within the Country Kerala continues to be an industrially backward state in contrast to the industrially advanced states like Maharashtra, Gujarat, Punjab and Tamilnadu. It is evident that industrialisation is the major key to the solution of the problem of unemployment. It was with this end in view, that the Government of Kerala started the massive rural industrialisation programme popularly known as the "Mini Industrial Estate Programme in April 1975. It was the first of its kind ever taken up in the country and as such it get attention from every quarter. The introduction of Mini Industrial estates has opened a new chapter in the history of industrial development of Kerala. It is a new experiment and it can bring about a momentum for further development in the industrial sector. The dispersal of industrial units in the rural areas for the effective utilisation of rural man-power to achieve a particular pattern of industrial development within the shortest possible time is the objective of Mini Industrial Estate programme.

The new industrialisation programme launched by the State Government has paved the way for an era of industrial awakening and entrepreneurial enthusiasam. The message of industrialisation has been taken to every nook and corner of the villages of our country and this has resulted in the growth of industrial centres in rural areas. Therefore a detailed analysis of the man-power utilisation in Mini Industrial Estates will help us to focus attention on the problems and factors that impede the smooth industrial growth in our State.

2. Objectives

The Mini Industrial estates Programme envisaged the setting up of 10,000 new Small Scale Industrial units in rural areas of the State. It was planned to set up one Mini Industrial Estate consisting of 10 units each in all the 1971 Panchayats in the State. Effective utilisation of man-power available, promotion of rural industrialisation, increasing employment opportunities and promoting self employment, meeting the requirements of rural areas locally, preventing the migration of labour from rural areas to urban areas and providing infra-structural facilities to absorb the surplus man power employed in the agricultural sector as far as possible were the main objective of the programme. The importance of Mini Industrial estates lies in the fact that they provide immediate and permanent employment at a relatively low cost. The Mini Industrial programme meets the demand for consumer goods considerably and facilitates the mobilisation of resources which might otherwise remain unutilised. As such a study on this programme will be of considerable use.

The study is intended to obtain a vivid picture of the volume and pattern of man power utilisation in the Mini Estates, the proportion of technical and non-technical persons employed, their qualification, wages and salaries, sex, age, length of service, whether they are local or outside people etc. Moreover the possibility of absorbing more man-power in future can also be assessed on the basis of this study.

3. Collection of data

Data on the relevant aspects of man-power utilisation in Mini Industrial Estates have been collected by sending questionnaires to the concerned units. The tabulation of the data has been done by the staff of the Man power division of Bureau of Economics and Statistics.

Eventhough it was proposed to start 1024 units, only 508 units have been commissioned actually. Of this details have been collected from 245 units. The district-wise number of units proposed, commissioned and covered by survey is given Table 1.

Out of the total number of units Commissioned, about 48% of the units have been surveyed, and the conclusions have been derived on the basis of these units.

4. Type of ownership of the Units

District-wise distribution of the Mini industrial estates according to type of ownership is given in Table II. It is seen that about 73% of the total units (179 units) come under proprietary (single) ownership and 21% (51 Units) come under partnership management. Only 2% (5 units) come under Co-operative management. The details of management in the case of 4% of the Units (10 units) are not known.

5. Type of Industries

It was decided that the 10,000 units to be set up in the State must be proportionately allotted to various categories and sub-categories of industries which have scope in the State. The Government of India have published a list of 670 industries which have to be encouraged in the Small Scale Sector. These resource based industries include (i) wood and timber Industries (35 lines of products (including) bamboo products boxes building fittings furniture etc.)

2. Agricultural implements (5 lines of products') including agricultural machinery and tools etc.)

3. Textile and fibre industries (11 lines of products) (including brushes and brooms ropes, measuring tapes etc.)

4. Food and allied Industries (28 lines of products) including areca-nut processing, cattle feed, beverages etc.)

5. Rubber products (12 lines of products) (including cycle tyres and tubes, industrial rubber products etc.)
6. Paper conversion products (26 lines of products) (Carbon paper, fibre boards exercise books etc.).
7. Leather industries (16 lines of products), (Shoes, finished leather etc.)
8. Mineral based Industries (58 lines of products—Building materials, Asbestose, cement etc.)
9. Chemical Industries (9 lines of products—paints and varnishes, cement colours and paints, distempers, lacquers, Plastic emulsion paints, printing inks etc.).
10. Inorganic chemicals (22 lines of products Aluminium hydroxide salts and bio chromatess etc.)
11. Plastic goods (21 lines of products—Acrylic sheets, containers etc.,
12. Oils, soaps and cosmetics (19 lines of products—Aromatic chemicals) lubricating oils, chlorinated paraffin wax etc.).
13. Dye-stuffs (4 lines of products—different types of dyes and bleaching agents etc.)
14. Organic Chemicals and intermediates (51 lines of products Acids Di-mothylavine etc.).
15. Drugs and pharmaceuticals (39 lines of products—autobmobiles ancillaries, garage equipments, surgical and medical instruments, machine tools etc.
16. Engineering Industries (198 lines of products—automobile ancilliary garage equipments, surgical and medical instruments, machine tools etc.
17. Electrical and electronic industries (48 lines of products—accessories for generating industries, transmission and distribution equipments, electric motors etc.
18. Electronic industries (88 lines of products—consumer electronics, radio receivers, testing and measuring instrument etc.
19. Miscellaneous and residual including service industries (lines of products not estimated).

On a scrutiny of the list it is seen that the vast majority of the items can be manufactured within the state and some of these especially have ample scope for intensive development in Kerala. The units in the Mini-Industrial estates are to select the items of their production from the above list.

6. Products Manufactured in the mini Industrial Estates

As given in the above list they produce a variety of goods from good items to machinespare parts. Some of them are aluminium and allied products, coconut oil/cakes, wooden furniture, printing presses, paper products, electrical equipments, mosaic tiles, cutlery, ceramics, chemicals, medicines, agricultural implements, rubber goods etc. An overall assessment of the items manufactured shows that 16% of the units are undertaking hosiery and knitting works (including weaving and ready made garments). Another prominent item is coconut oil/cakes. Nearly 8% of the units are engaged in the production of coconut oil/cakes. Similar is the position of production of chappals and other rubber goods. Of the total 245 units surveyed 18 units are producing plastic goods and 13 units are established on aluminium based Industries. Food articles are produced by 12 units only.

The districtwise distribution of the units accordingly to manufactured products is given in Table III.

A closer view (district-wise) of the products manufactured shows that in Trivandrum District hosiery and knitting occupies the top rank. Out of the 22 units, 4 units are engaged in hosiery and knitting. Two units produce coconut oil/cakes and other two are printing presses. Agricultural implements are produced by 2 units. It is seen that no unit is engaged in fabrication works, making of wooden furniture or making of paper products. They also produce plastic goods, P.V.C. Cables, electrical goods and accessories, safety matches etc. In Quilon seven units produce oil and oil cakes. Making of wooden furniture comes second. There are five such units in Quilon Mini Industrial Estate. Aluminium and allied products, rubber products, polythene bags etc., are the other prominent items. Here also there are no fabrication units or paper products manufacturing. In Alleppey, Plastic materials, coconut oil and aluminium products are the chief items of production. Besides, they also produce electrical equipments, rubber products, sodium silicate, gate grills, chemicals, paints, paper products etc. etc. In Kottayam, they make rubber products, paper products and Engineering goods mainly. In Ernakulam district 30 units have been covered by the survey and eight units are engaged in making cotton cloth or hosiery and knitting products, 4 units are making engineering goods, 2 units produce wooden furniture and two units produce paper goods. Electric motors, pumpsets, storage batteries, food products, crape rubber are other items of production. In Idukki, Cotton fabrics, rubber roller, grills, mosaic tiles, aluminium products, surgical bandages etc., are produced mainly. Scientific glass apparatus, washing soap, Ayurvedic soap and candles are manufactured in Idukki. Manufacturing of important articles like medicines, machine spare parts, ceramic items, textile spares, chappals, mosaic tiles is undertaken in Palghat. In Malappuram weaving occupies the top rank. They also manufacture coconut oil/cakes, wooden furniture, grills and machine parts. We can come across some new items in Kozhikode. They are chicery powder, gold ornaments, cattle feed, opticals etc. Nine units are engaged in hosiery and knitting. 4 units are engaged in the manufacture of chappals and other rubber goods. Coconut oil, wooden furniture etc., are other prominent items.

7. Entrepreneurs

The entrepreneur is the pivot of an industrial unit. It is he who builds and equips the factories, buys the raw materials needed for the factory, employs the workers, finds out market for the finished goods and finally sells out the produce produced in the factory and pockets the profit or loss.

An age-wise classification of the entrepreneurs is given in Table IV. It shows that 9% of them are in the age group of 20-25 years. 25% of the entrepreneurs are between 25-30 years of age, 19% of the entrepreneurs come between 30-35 years. 13% belong to the age group of 35-40 years; between 40-45 years there are 8% and between 45-50 years there are 9% of the entrepreneurs. Above 50 years there are only 8% of the entrepreneurs while the details of age in respect of 9% of them are not available.

In regard to the educational qualifications of the entrepreneurs, it is seen that 46% of them are having only secondary education. 3% of the entrepreneurs have only primary education. Graduates/post graduate entrepreneurs are to the tune of 12% and the technically qualified industrialists are about 13%. These details are given in Table V.

Experience makes a man perfect. Ample knowledge and experience in the particular line are of very great importance in the management of a business concern. 46% of the entrepreneurs are having previous experience in conducting the business and such firms are making good profit also. About 13% of the industrialists are trained in the line and 6% of them are having other business or industrial units elsewhere.

One of the most important bottlenecks in conducting industrial surveys in Kerala is the unwillingness of most of the entrepreneurs to give the details of their business. The investigators are viewed with suspicion, and the entrepreneurs very conveniently take it for granted that the investigator/Surveyors are people determined to trap them for income tax matters. In this survey 28% of the entrepreneurs have given the information that they are not in a position to say whether their firms are running at loss or profit while 47% of them have agreed that their firms are running on profit. These details are given in Table VI.

8. Monthly income of entrepreneurs

As reported above most of the entrepreneurs are reluctant to furnish details of their monthly income and it is evident from the Statistics given below in Table VII.

Details of monthly income in respect of 45% of the entrepreneurs are not available. 4% of the Industrialists run their business on loss. 11% of them are getting between Rs. 700-800 as their monthly income, 2% get

between Rs. 600-700. About 10% of the Industrialist & come under the income group of Rs. 500 600 while another 10% receive between Rs. 200-300. 3% of the Industrialists receive a moderate income of Rs. 400-500 while 4% get only between Rs. 100-200. It is observed that 1% of the entrepreneurs get only less than Rs. 100.

9. General Particulars

Workers.—Generally workers can be broadly classified into permanent workers and temporary workers. Distribution of the workers according to the temporary or permanent nature of their work according to the locality to which they belong is given in Table VIII.

The total number of people working in the surveyed units comes to about 1399. Of this 735 people are permanent workers. This include 589 male workers and 146 female workers. The number of temporary workers comes to 664 including 483 males and 181 females. 963 people out of the total of 1399 are local people (707 males and 256 females) and the remaining workers are from outside the locality (365 males and 71 females).

An analysis of the educational qualification of the workers in the Mini Industrial Estate is given in Table IX. The details of educational qualifications of the majority of workers (56%) are not available or their qualifications are not specifically mentioned. Nobody having post-graduate degree/diploma is working in the Mini Industrial Estates as a labourer. A very low percentage of the workers, i.e. about 1% of the workers are graduate or have studied upto pre-degree classes. 29% of the workers are S.S.L.C passed or having secondary education. 2% of the workers have upper primary education while 7% of the workers are having only primary education. Technically qualified workers are to the tune of 5%. They are mostly holders of either technical certificate or technical degree.

The distribution of the workers according to their age is given in Table X. Majority of the workers come under the age group 20-30 years. They account for about 66% of the total working population. (51% males and 15% females). 16% of the workers are between 15-20 years of age. Child labour is comparatively less and only 1% of the workers are below 15 years of age. Similarly those who are 50 years or above constitute only 3% and 2% of the workers are between 40-50 years while 12% are between 30-40 years. Of the total workers, female workers come to 24%.

Regarding the service details of the workers 431 workers are having more than one year service. This is about 31% of the total working population. 834 (59%) workers are having below one year's service and 8% of the workers have only less than one month's service. The service details of 2% of the workers (23 people) are not available. These details are furnished in Table XI.

Based enrolment on the workers can be classified as (1) monthly paid workers, (2) weekly paid workers (3) daily paid workers and (4) apprentices and others. Monthly payment is made to 533 workers (44 males and 119 females), 343 (233 males and 110 females) people are paid weekly 474 (393 males and 81 females) are paid daily and 49 people are apprentices or others. These details are given in Table XII.

10. Income of the Workers

The distribution of the workers according to their income is given in Tables XIII, XIV and XV. Among the monthly paid workers, there are only 13 people who are getting a pay of Rs. 500 or above. 24 people receive their pay between Rs. 400-500. Women do not come into the income group above Rs. 400 at all. There are 46 workers in the income group of Rs. 300-400. This includes two women. It is seen that lower the income, higher the number of workers. 146 workers including 12 female workers receive their pay between Rs. 200-300 while the majority of them i.e., about 266 persons (185 males and 81 females) get their pay between Rs. 100-200 and even though they are monthly paid workers 38 people (15 males+23 females) get only a meagre income of less than Rs. 100. Weekly paid workers are comparatively less than the monthly paid workers. A good many of them i.e., about 142 (65 males and 77 females) got less than Rs. 30 in a week, 92 people get between Rs. 30-45, 81 people get a weekly payment between Rs. 45-60. There are only 12 people who get their weekly payment between Rs. 60-90 while there are 16 persons whose income is above Rs. 90 in a week. The remaining 474 workers are daily paid ones or apprentices. Of this 10 people are getting Rs. 15 or above daily, 93 get between Rs. 10-15. The largest number of daily paid workers (259) come in the income group of Rs. 5-10 and the remaining 112 workers got only less than Rs. 5 a day.

A massive programme of small industries development to deal with the challenge of unemployment is the need of the hour in Kerala. Any further delay or failure to mobilise all the available resources and to provide effect organisational backing to meet this challenge will not be forgiven by the growing army of the unemployed who are denied the basic right to work and a decent existence. Development of the Mini Industrial Estates provides easy employment to the unemployed. 512 people are needed in future in the Mini Industrial Units due to expansion of the units and reasons like that Technically qualified people and other s trained in the industrial lines are greatly in demand while people with General educational qualifications are not in demand generally. Of the future requirement the demand for technical certificate holders comes to about 18%, those traineeel in industrial lines 27%, untraineeel 27% other 14%, people with secondary education 10% and people with upoer primary education 4%.

11. Some suggestions

Entrepreneurs and industrial units must be selected after a thorough scientific study. The functioning of the unit has to be evaluated periodically so that necessary steps can be taken for the smooth functioning of the unit.

At least for a period of 5 years these units should be viewed as infant units and repayment of loans should not be insisted upon during this time. Repayment of loans must be in easy instalments.

Making arrangement for the availability of raw materials in time at reasonable price will do a lot for the smooth functioning of the unit. Products if standardised, can capture the market and if this is done according to their quality, the consumers will come forward to purchase the products of these Mini Industries. The Government can give enough publicity of these products through the Public Relation Department. Control of movements of raw materials from the State is to be effected strictly. Many of the entrepreneurs complain that the machinery bought through the SIDECO are not in working conditions and the entrepreneur is not given any help or proper follow up in this regard. This is not fair, because for no fault of the entrepreneur he will be compelled to lose huge amounts which is not accountable. Imparting training to those engaged in industrial activities can improve the working of the industries.

As agriculture in Kerala has already attained nearly its saturation point, absorption of any more people is not at all possible. So if employment is to be given industrial sector is to be developed further. During the five year plans our traditional industries have not been developed and as a result of this, employment facilities in this sector have not increased much. The underdevelopment of the industrial sector in Kerala can be attributed to so many factors. One of them is the low capital investment of Central Government in Kerala compared to other States of India. The State is not in receipt of its due share from the financial agencies like the I.D.B.I., I.C.I.S., I.F.C.L., L.I.C. etc. etc. As Mini Industries are less capital intensive, their development will involve only very little capital. The development of Mini Industrial Estates bring about immediate employment to the unemployed. If the Governmental agencies try to implement their policies vigorously, and effectively the small industries in Kerala can be developed fast and a solution could be found for the unemployment problem in Kerala.

12. Summary and Conclusions

Kerala is one of the smallest States in India. But it tops the list in the percentage of literacy and over increasing unemployment among its educated inhabitants. The problem of acute unemployment in Kerala is so well known that it needs no elaboration. The lion's share of this unemployment is constituted by the rural sector which contributes about 85% of the total population. Unless the rural agrarian economy is changed into an industrial economy more and more employment opportunities cannot be generated. For this we should be able to exploit to the maximum extent the favourable conditions now available in the State. It is with this end in view that the State Government launched the Mini-Industries Programme. It aimed at consolidation and stabilisation of the gains already made in the small scale sector, reviving the sick units by providing necessary assistance and establishing another 10,000 new small scale industrial units.

Even though the proposal was to begin 1000 units in 1975-76, only 508 units were commissioned actually. More than 48% of the units have been covered by this survey. It is true that we cannot jump so high in empty air unless we cover a bar. For each and every endeavour there will be difficulties of its own. But the difficulties faced by the units in the Mini Industrial Estates are numerous. They suffer from problems of entrepreneurship, raw material, marketing and capital formation.

There are two categories of entrepreneurs: (1) the educated unemployed who have real interest in the working of the unit and (2) those who are attracted by the benefits of the subsidies offered to small units. These people will be having business firms or concerns elsewhere. The benefits due to the Mini units will be collected by these people for the development of other units and as a result sick units will increase like anything.

Availability of raw materials in time at reasonable prices is the most important thing for the smooth functioning of the unit. Those who depend upon the Governmental machinery for their raw materials become the worst sufferers because distribution of raw materials through Government agencies is not smooth and most often the industrialists do not get them in time. Purchasing of raw materials in bulk quantity is not possible for the tiny units and buying piecemeal will affect the cost of production. Another thing to be noted is that the price of raw materials at quota rate is not much lower than their price in the open market.

Capital formation is another major bottleneck that stands in the way of Mini Industrial Estates. Financial institutions are reluctant to lend their helping hand to these tiny units because these units very often come under sick units due to lack of sufficient working capital and working knowledge of the industry. Irregularities in the purchase of the machinery, non-availability of skilled labour and managerial skill etc. are other problems that confront these tiny units.

The units in the Mini-Industrial Estates are run on limited amount of capital and as such they cannot bear the expenses of standardisation of products. Owing to this the products of the Mini Estates are placed in a disadvantageous position because they cannot capture the market. A satisfied consumer is the best form of advertisement. If the consumers are suspicious of the quality of the product, naturally such products will experience poor marketing.

Power and transportation problems are not of lesser importance than the above said problems. Even though Kerala is highly rich in the production of electricity our Industrial units have to suffer a great deal due to low voltage, short supply etc.

TABLE—I

LIST OF INDUSTRIAL ESTATES

No. of Units

	<i>Proposed</i>	<i>Commissioned</i>	<i>Covered by the Survey</i>
Trivandrum	86	47	22
Quilon	90	51	34
Alleppey	98	48	30
Kottayam	105	55	12
Ernakulam	149	61	30
Trichur	78	54	7
Idukki	69	41	22
Palghat	90	36	25
Malappuram	66	27	19
Calicut	107	47	21
Cannanore	86	41	23
Total	1024	508	245

TABLE II
MINI INDUSTRIAL ESTATES

Type of ownership in 1978

	<i>Proprietor- ship</i>	<i>Partner- ship</i>	<i>Co-operative</i>	<i>Others</i>	<i>NA</i>	<i>Total</i>
Trivandrum	19	2	1	..	..	22
Quilon	28	3	..	..	3	34
Alleppey	19	9	2	..	..	30
Kottayam	11	1	..	..	..	12
Ernakulam	15	15	..	..	..	30
Idukki	16	5	1	..	..	22
Trichur	4	3	..	..	..	7
Palghat	16	4	..	..	5	25
Malappuram	17	1	..	..	1	19
Kozhikode	14	5	1	..	1	21
Cannanore	20	3	..	..	..	23
Total	179	51	5	..	10	245

TABLE III
 MINI INDUSTRIAL ESTATES—CLASSIFICATION OF UNITS ON THE BASIS OF ITEMS OF PRODUCTS

Sl. No.	Name of Products	No. of units in each District													
		(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)		
(1)	(2)	Trivani- drum	Quilom	Alle- ppay	Kottai- yom	Ervas- kulam	Idukki	Trichur	Palghat	Malai- ppuram	Kochi- koda	Cannur- nore	Total		
1.	Aluminium and allied products	1	3	3	..	1	2	..	..	..	2	1	13
2.	Coconut Oil/Cakes	2	7	3	1	1	1	1	..	3	..	2	21		
3.	Wooden furniture and others	..	5	1	..	2	1	..	..	2	2	2	15
4.	Fabrication works	..	..	2	..	..	..	1	2	1	..	..	6
5.	Printing Presses	2	2	1	1	1	2	..	2	..	..	..	11
6.	Paper Products	..	..	1	1	2	..	..	1	..	1	..	6
7.	Hosiery & Knitting products including ready-made garments	4	4	3	2	8	6	..	3	5	1	2	38		
8.	Others	2	5	5	1	3	2	..	1	1	5	9	34		
9.	Food materials	..	1	..	..	1	2	1	2	2	3	..	12
10.	Rolling Shutters/grills	..	..	1	..	..	3	..	1	2	..	..	7
11.	Plastic materials	3	2	4	1	1	1	..	3	..	3	..	18		
12.	Fibre glasses and glass products	..	..	2	..	..	..	1	1	..	..	..	6
13.	Electrical goods and equipments	2	..	2	..	..	..	1	1	..	..	..	6
14.	Mosaic tiles	..	..	..	..	1	1	..	1	1	..	..	4
15.	Cutlery	..	..	..	..	..	..	..	1	..	..	..	1
16.	Ceramics	..	..	..	..	..	..	..	1	..	..	..	1
17.	Medicines and allied products including chemicals	1	..	2	..	..	..	1	2	..	..	..	6
18.	Textile spares	..	..	..	2	4	..	..	1	..	..	..	1
19.	Machine parts and engineering goods	..	..	..	2	4	..	..	1	..	1	2	10
20.	Chappals and other rubber goods	..	3	2	3	3	1	..	1	2	2	4	21		
21.	Electroplatings and allied goods	1	1	..	..	..	..	..	..	..	..	..	2
22.	Agricultural implements	2	1	..	..	2	..	1	..	..	..	..	6
23.	Cattle feed	2	..	..	..	..	..	..	..	..	1	1	4
	Total	22	34	30	12	30	22	7	25	19	21	23	..		

TABLE IV
AGE OF ENTREPRENEURS
Number of Persons in

Age group	Trichambur	Quilim	Alleppey	Kollayam	Expakulam	Idukki	Trichur	Palghat	Malappuram	Kochi	Cannanore	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Less than 20 years												
20-25	..	3	3	1	2	5	..	..	3	4	1	22
25-30	8	11	6	5	12	7	1	3	3	2	4	62
30-35	2	9	7	2	4	3	2	5	3	2	8	47
35-40	5	2	3	3	3	..	1	4	5	5	2	33
40-45	1	2	1	..	2	3	..	3	2	2	4	20
45-50	3	..	1	..	3	..	2	5	6	1	1	22
Above 50	1	5	3	1	2	3	..	1	..	2	2	20
Details not available	2	2	6	..	2	1	1	4	..	3	1	22
Total	22	34	30	12	30	22	7	25	22	21	23	243

TABLE V
Educational Status of the Entrepreneurs

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Trivandrum	Quilon	Alleppey	Kottayam	Ernakulam	Idiikki	Trichur	Palghat	Malappuram	Kozhikode	Cannanore	Total
1. General Education												
Primary	..	1	..	..	2	..	..	..	2	1	1	7
Upper Primary	..	2	..	1	5	1	..	2	7	1	..	19
Secondary	1	2	3	2	4	2	..	6	6	..	3	29
S.S.L.C. Passed	8	16	12	4	21	15	..	8	4	12	4	104
Pre-Degree	2	5	2	..	1	3	1	2	2	1	..	19
B.A./B.Sc./B.Com.	5	4	10	4	2	2	..	5	..	2	..	34
M.A./M.Sc.	..	..	1	1	..	..	1	..	..	..	..	3
2. Technical Education												
Technical Certificate	5	3	..	..	..	1	1	1	1	..	..	12
Technical Degree	..	..	1	..	3	2	..	1	1	..	3	10
Technical Diploma	1	2	4	..	5	..	..	..	..	1	3	17
3. Others												
MBA	..	..	..	..	..	..	1	..	..	..	..	1
LLB	..	..	..	..	1	..	..	..	..	..	..	1
LME	..	..	..	1	..	..	..	..	..	..	..	1
4. Not stated												
Totals	24	36	34	15	44	27	9	28	23	26	21	28

TABLE VI
Experience particulars of the Entrepreneurs

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	No. of persons	Experience	Trained in industry	Having other units	Concerned business	Running on Profit	Loss	Not Available
Trivandrum	24	11	7	1	..	15	1	6
Quilon	36	17	8	1	..	23	1	10
Alleppey	34	18	7	5	..	18	3	9
Kottayam	15	7	1	..	..	9	..	3
Ernakulam	44	16	..	..	..	11	8	11
Idukki	27	3	..	..	1	8	1	13
Trichur	9	2	..	..	..	1	1	5
Palghat	28	19	1	..	1	5	6	14
Malappuram	23	6	5	..	2	9	10	..
Kozhikode	26	14	5	..	..	14	7	..
Cananore	23	19	2	4	2	10	3	10
Total	289	132	36	11	6	123	41	81

TABLE VII

Monthly Income in Rs.	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Trivandrum	Alleppey	Quilon	Kottayam	Ernakulam	Idukki	Trichur	Pelghat	Malappuram	Kochi-kode	Canjannur	Total	%
100	..	..	1	..	..	..	5	..	..	1	..	2	1
100-200	1	1	1	..	1	..	3	..	2	5	2	13	4
200-300	4	1	4	1	4	1	1	2	1	2	3	24	10
300-400	3	4	7	1	2	..	..	1	1	4	1	24	10
400-500	2	1	1	1	..	1	..	..	..	1	2	9	3
500-600	3	4	8	4	..	1	..	..	2	..	2	24	10
600-700	1	1	1	2	..	..	..	..	..	..	..	5	2
700-800	1	6	..	3	4	5	..	2	3	1	..	25	11
N.A.	6	12	10	..	11	13	6	20	10	7	13	108	45
Reporting no income	1	..	1	..	8	1	..	..	..	..	..	11	4
Total	22	30	34	12	30	22	7	25	19	21	23	245	100

TABLE VIII
Types of Workers

	<i>Temporary</i>		<i>Permanent</i>		<i>Locally recruited</i>		<i>Outsiders</i>	
	<i>M.</i>	<i>F.</i>	<i>M.</i>	<i>F.</i>	<i>M.</i>	<i>F.</i>	<i>M.</i>	<i>F.</i>
Trivandrum	33	33	35	29	43	13	25	49
Alleppey	79	34	87	11	104	44	62	1
Quilon	57	9	85	16	107	24	35	1
Kottayam	27	5	36	7	37	12	26	..
Ernakulam	48	2	105	24	115	23	38	3
Idukki	30	13	51	8	38	19	43	2
Trichur	6	2	6	8	11	10	1	..
Palghat	30	10	81	17	82	24	29	3
Malappuram	69	8	29	8	43	4	55	12
Kozhikode	43	29	52	8	62	47	33	..
Cannanore	61	36	22	18	65	36	18	..
Total	483	181	589	146	707	256	365	71

TABLE No. IX
Educational Qualifications of the workers of the MIEs.

Qualifications	Male		Trivandrum Female		Male		Quilon Female		Male		Alleppey Female	
	Trained		Untrained		Trained		Untrained		Trained		Untrained	
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. General qualifications												
Primary	..	..	..	..	..	..	..	..	..	1	..	..
Upper Primary	1	3	..	..	..	..	..	..	4	..	..	..
Secondary	4	13	27	13	29	14	2	8	18	11	26	3
S.S.L.C. (Pass)	7	3	8	..	..	..	..	..	18	26	..	6
P.D.C.	..	..	..	..	1	..	..	..	..	..	..	..
B.A. /B.Sc.	..	..	..	..	..	..	..	..	1	3	..	2
M.A./M.Sc.	..	..	..	..	..	..	..	..	..	..	..	..
2. Technical qualifications												
Technical Certificate	3	..	2	1	1	..	..	..	5	..	..	..
Technical Diploma	..	..	..	..	1	..	..	..	..	..	..	..
Technical Degree	..	..	..	..	..	..	..	..	..	..	..	..
3. Qualifications not mentioned												
16	16	5	5	6	53	26	..	8	10	20	..	..
2	..	..	..	..	5	12	7	..	30	19	1	7
33	35	42	20	90	52	9	16	86	80	27	18	18

Qualifications	Kottayam		Ernakulam		Idukki		Trichur									
	Male	Female	Male	Female	Male	Female	Male	Female								
	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained								
(1)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)
1. General qualification																
Primary	..	..	..	..	5	..	..	..	..	..	..	1	..	..	..	..
Upper Primary	..	..	..	..	1	..	..	..	..	3	..	..	..	..	..	..
Secondary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
S.S.L.C. (Pass)	..	..	..	..	10	..	..	..	..	2	..	..	..	..	..	..
P.D.C.	2	2	..	..	15	4	2	7	..	18	..	..	..	..	..	..
B.A./B.Sc.	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..
M.A./M.Sc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Technical Qualification																
Technical Certificate	5	..	..	..	..	..	..	..	3	..	..	..	..	1	..	..
Technical Diploma	..	..	..	..	3	..	..	..	7	..	..	..	..	..	..	..
Technical Degree	1	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..
3. Qualifications not mentioned																
	15	5	..	..	..	18	..	9	20	25	..	19	3	5	10	..
4. Others	27	6	9	3	74	21	4	4	..	..	..	..	2	1	..	..
	50	13	9	3	110	43	6	20	32	49	1	20	6	6	10	..

Qualifications	Palghat		Kozhikode		Cannanore		Malappuram										
	Male	Female	Male	Female	Male	Female	Male	Female									
	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained	Trained Un- trained									
(1)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)	(44)	(45)	
1. General Qualification																	
Primary	..	..	..	..	..	..	..	..	3	12	..	..	5	7	58	2	2
Upper Primary	..	..	..	..	..	..	..	..	..	1	..	..	10	..	..	..	..
Secondary	3	..	..	..	..	3	..	..	4	6	..	..	11	..	..	..	..
S.S.L.C. (Pass)	..	..	..	..	12	37	..	29	..	4	..	..	2	..	..	..	..
P.D.C.	..	..	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..
B.A./B.Sc.	..	1	..	..	1	1	..	..	..	2	..	..	..	..	..	..	..
M.A./MSc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2. Technical Qualification																	
Technical Certificate...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Technical Diploma	2	..	2	..	1	5	..	..	5	3	..	..	..	2	10	..	..
Technical Degree	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3. Qualifications not mentioned																	
	7	97	..	25	..	2	..	..	7	4	6	..	9	12	3	9	..
4. Others	..	..	..	..	12	20	..	18	3	21	..	9	..	..	..	..	..
	10	101	2	25	27	68	47	22	54	6	37	18	80	5	11	..	..

TABLE 10

Number of workers according to Age

	Less than 15		15-20		20-30		30-40		40-50		50 and above		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Trivandrum	..	..	4	17	57	41	7	2	..	2	..	..	68	62
Quilon	2	..	10	5	102	18	20	1	4	1	4	..	142	25
Alleppey	4	..	12	2	113	36	20	5	10	2	7	..	166	45
Kottayam	..	..	9	1	45	10	7	1	..	..	2	..	63	12
Ernakulam	..	..	12	11	118	15	22	..	1	..	..	..	153	26
Trichur	..	..	..	1	9	9	3	..	..	..	..	..	12	10
Palghat	1	..	26	8	57	18	16	1	8	..	1	..	111	27
Idukki	..	..	15	5	42	16	19	..	5	..	..	..	81	21
Malappuram	1	..	26	..	43	10	9	2	..	..	19	4	98	16
Kozhikode	..	..	1	6	9	70	36	11	1	2	..	..	95	47
Cannanore	2	..	4	9	8	53	23	17	2	1	..	..	83	36
Total	10	5	131	67	709	232	151	13	32	6	39	4	1072	327

TABLE 11

Distribution of workers according to the length of Service

	Less than one month		Less than one year		One or more		Details Not available		Total	
	M	F	M	F	M	F	M	F	M	F
	Trivandrum	4	2	46	24	18	36	68	62
Quilon	18	1	85	17	33	7	6	..	142	25
Alleppey	21	1	90	40	44	3	11	1	166	45
Kottayam	2	..	38	10	23	2	..	..	63	12
Ernakulam	19	..	89	16	45	10	..	..	153	26
Trichur	..	..	8	2	4	8	..	..	12	10
Palghat	3	..	62	12	46	15	..	..	111	27
Idukki	1	..	70	20	9	1	..	..	81	21
Malappuram	10	2	82	13	6	1	..	..	98	16
Kozhikode	3	2	36	2	51	43	5	..	95	47
Cannanore	16	5	52	20	15	11	..	..	83	36
Total	97	13	658	176	294	137	22	1	1072	327

TABLE 12
Number of workers based on Enrolment

	No. of daily paid workers		No. of weekly paid workers		No. of monthly paid workers		Apprentices		Others	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Trivandrum	27	8	22	36	19	18	..	..	..	..
Quilon	69	5	33	2	36	18	..	..	4	..
Alleppey	77	4	14	..	75	41	..	..	..	..
Kottayam	8	4	17	..	38	8	..	..	..	..
Ernakulam	21	9	36	2	96	15	..	..	..	..
Trichur	9	2	1	8	2	..	..	..	..	..
Palghat	13	5	21	5	73	17	1	3	3	3
Idukki	40	9	15	12	25	..	1	..	..	..
Malappuram	41	6	32	8	8	..	..	..	17	2
Kozhikode	46	17	17	24	26	1	..	..	..	5
Cannanore	42	12	25	13	16	1	..	10	..	..
Total	393	81	233	110	414	119	2	13	24	10

TABLE 13

Distribution of monthly paid workers according to income

	Less than Rs. 100		Rs. 100-200		Rs. 200-300		Rs. 300-400		Rs. 400-500		Above Rs. 500		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Trivandrum	1	6	12	12	6	..	..	..	..	..	..	..	19	18
Quilon	..	..	11	15	12	3	6	..	5	..	2	..	36	18
Alleppey	2	4	39	32	26	3	2	2	4	..	2	..	75	41
Idukki	1	..	4	..	11	..	4	..	1	..	4	..	25	..
Kottayam	..	8	23	..	8	..	5	..	..	..	2	..	38	8
Ernakulam	3	2	40	8	30	5	14	..	8	..	1	..	96	15
Palghat	8	3	35	13	25	1	4	..	1	..	1	..	74	17
Malappuram	..	..	1	..	4	..	1	..	1	..	1	..	8	..
Kozhikode	..	..	15	1	6	..	4	..	1	..	..	..	26	1
Cannanore	..	..	5	..	5	..	4	..	2	..	..	..	16	1
Trichur	..	..	..	..	1	..	..	..	1	..	..	..	2	..
Total	15	23	185	81	134	12	44	2	24	..	13	..	415	119

TABLE 14
Distribution of weekly paid workers according to income

	Less than Rs. 30		30-45		45-60		60-80		Above Rs. 90		Total	
	M	F	M	F	M	F	M	F	M	F	M	F
Trivandrum	1	35	10	1	9	..	1	..	1	..	22	36
Quilon	5	5	1	1	21	..	6	..	..	..	33	6
Alleppey	4	..	4	..	5	..	1	..	..	..	14	..
Kottayam	2	..	3	..	7	..	2	..	3	..	17	..
Ernakulam	9	2	7	..	18	..	..	..	2	..	36	2
Trichur	..	8	1	..	..	..	..	..	..	..	1	8
Idokki	..	..	10	..	2	..	1	..	2	..	15	..
Palghat	19	5	2	..	..	..	..	..	..	..	21	5
Malappuram	17	9	7	2	5	..	..	..	3	..	32	16
Kozhikode	..	..	5	24	7	5	1	..	4	..	17	24
Cannanore	8	13	14	..	2	..	..	..	1	..	25	13
Total	65	77	64	28	76	5	12	..	16	..	233	110

TABLE 15
Distribution of daily paid workers according to income

	Less than Rs. 5		Rs. 5-10		Rs. 10-15		Above Rs. 15		Total	
	M	F	M	F	M	F	M	F	M	F
Trivandrum	..	2	25	6	..	..	1	..	27	8
Alleppey	2	2	47	2	25	..	3	..	77	4
Kottayam	..	..	7	4	1	..	..	..	8	4
Ernakulam	3	7	14	2	4	..	..	..	21	9
Palghat	10	5	3	..	..	..	..	..	13	5
Malappuram	..	2	27	4	12	..	2	..	41	6
Kozhikode	9	17	25	..	8	..	4	..	46	17
Cannanore	10	8	25	4	7	..	..	..	42	12
Quilon	11	3	33	2	25	..	..	..	69	5
Trichur	5	..	2	2	2	..	..	..	9	2
Idukki	13	3	18	6	9	..	..	..	40	9
Total	63	49	227	32	93	..	10	..	393	81

TABLE XVI

Future Requirements of Workers

Title	Trivandrum		Alleppey		Kottayam		Ernakulam		Palghat		Malappuram		Kozhikode		Cannanore		Trichur		Idukki		Quilon	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Technical Certificate	19	1	9	...	11	2	4	...	9	2	3	...	20	10	...	...	...	...	...	...	...	...
" Diploma	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Degree	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Primary	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Upper Primary	..	..	16	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Secondary	..	..	..	..	..	..	..	..	..	..	..	..	6	12	..	4	1	10	2	11	2	..
P.D.C.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
B.A./B.Sc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
M.A./M.Sc.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Trained	17	1	36	..	13	2	14	3	19	4	2	3	..	..	..	..	..	..	..	9	5	12
Untrained	..	1	12	..	8	7	1	..	11	..	..	..	..	..	..	7	..	..	..	3	..	86
Diploma in Business Management	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Others	..	..	21	..	..	..	..	..	..	..	..	..	15	..	12	..	6	..	4	..	13	..
Total	44	3	94	..	32	11	19	3	39	6	5	3	48	22	12	..	11	..	27	7	122	3

Distribution of units according to the No. of People Employed

No. of workers	No. of Units in										Total	21	23
	Trivandrum	Quilon	Allephey	Kottayam	Erna- kulam	Idukki	Trichur	Palghat	Malap- param	Kozhikode				Cannur
1	1	..	1	..	1	..	3	1	1	2	..	4	
2	4	3	1	1	1	..	2	1	5	2	..	7	
3	6	8	5	2	3	7	2	3	4	5	..	7	
4	1	4	2	3	9	8	..	..	1	3	..	..
5	4	8	3	2	5	2	..	3	1	1	..	2	
6	3	3	6	..	2	..	..	1	..	3	..	3
7	1	5	2	..	1	..	..	4	..	1	..	2
8	..	2	4	2	3	..	..	4	3	2	..	2
9	..	..	1	1	..	..	..	2	1	1	..	1
10	..	..	2	..	1	..	..	..	..	..	..	1
11	..	..	..	..	1	..	..	..	..	..	..	2
12	..	1	..	..	..	..	..	..	..	..	..	..
13	..	..	..	..	1	..	..	..	..	..	..	..
14	..	..	2	..	1	1	..	1	..	..	..	..
15	..	..	..	..	1	..	..	1	..	1	..	..
16	..	..	..	..	..	..	..	..	..	..	..	..
17	1	..	..	..	..	..	..	..	..	..	..	..
18	..	..	..	..	..	..	..	..	..	..	..	..
19	..	..	..	1	..	..	..	..	..	..	..	..
20	..	..	..	..	..	..	..	..	..	..	..	..
21	1	..	1	..	..	..	..	..	2	..	..	..
NA	..	..	..	..	..	..	..	4	..	..	..	..
Total	22	94	30	12	30	22	6	25	19	21	..	23	

MANPOWER INVOLVEMENT IN
PRIVATE MEDICAL CARE IN KERALA
SOME HIGH LIGHTS

MANPOWER INVOLVEMENT IN
PRIVATE MEDICAL CARE IN KERALA
KORR HIGH LIGHTS

"A healthy people is a nation's pride, its economic potential, and thread of social fabric. Private sector contributes significantly in the medical care of the health totality in Kerala. Kerala has one private doctor for every 3675 of the population. In the state the Districts of Kottayam and Ernakulam have the highest private doctor participation rate. The study reveals that the private practice preference is mainly due to reasons of service orientation achievement orientation, profit orientation and treatment orientation. It is found that there is unemployment among doctors and there is a dearth of paramedical personnel, in the state of Kerala. There is urgent need for increased governmental participation in the medical sector. Medical sector projects considerable employment potential in Kerala".

CONTENTS

	<i>Page</i>
1. Introduction ..	123
2. Medical facility available at present and employment absorpton ..	123
3. Private participation—A Closer look. ..	124
4. District-wise variations ..	125
5. The Unemployment paradox ..	127
6. Conclusion ..	128

CONTENTS

121	1. The first part of the book
122	2. The second part of the book
123	3. The third part of the book
124	4. The fourth part of the book
125	5. The fifth part of the book
126	6. The sixth part of the book
127	7. The seventh part of the book
128	8. The eighth part of the book
129	9. The ninth part of the book
130	10. The tenth part of the book

1. Introduction

Health has an ephemeral quality when we try to define it. Like salt, it is something we notice when it is not there. Usually we take our health for granted and bother only when we fall sick. Disease is the whole consequence of a conflict between man (or animal) and the noxious agent in his environment. A healthy people is a nation's pride, its economic potential and thread of social fabric. Investment in human capital is crucial in economic transition. Medical care is an important determinant of human capital formation. Private sector contributes significantly in the medical care of the health totality in Kerala. It is a flourishing ground of 'own account' enterprise in the Kerala economy.

Kerala is a problem State with the highest density of population in India. The State confronts many problems, the problem of health and medical care being one among them. With many far below the poverty line, hunger and malnutrition breed disease. Health cannot be viewed in isolation from its economic, social and environmental components. Many people who are not getting primary medical care do not know that they are not getting it, because they do not know that they need it.

This paper tries to draw attention to the problem of inadequate medical facility in the light of unemployment among medical personnel and stresses the need of efficient manpower planning in this sector.

2. Medical Facility Available at Present and Employment Absorption

There were 2130 medical institutions in the State in 1977, 881 in the public sector and 1249 in the private sector. The latest registration (figures of the Medical council) showed that there were 9365 Allopathic, 3842 Ayurvedic and 1572 Homoeopathic Doctors readily serving the ailing ones in Kerala. Apart from this a large number of traditional "Vaidyans" are serving the rural Keralites in prevention and cure of disease. Kerala is a land of "Hortus Indicus Malabaricus". Paradoxically Allopathy is the main component of medical care in this land of herbs. Hence this study is limited to Allopathy sector alone.

In Kerala during 1977 there were 881 public and 1249 private allopathic hospitals and dispensaries with a total bed strength of 46283. There was one medical institution, public or private, for every 18 sq. kms. in Kerala. In this sector there were 2700 Government Medical Officers and 4600 private Medical Practitioners working in the State as on date of survey. It may here be pointed out that medical council registration data usually do not take into account depletion due to migration and death. There were 3438 Nurses working in the public sector and 1924 working in the private sector institutions. In addition to this 4484 A.N.Ms' are also employed in the

medical segment. The availability of beds in public institutions stood at 25576 and that of private institutions at 20707, making a total of 46283 for the state. It reveals that Government medical care units provide the maximum inpatient facility. Ernakulam district has the highest number of doctors and hospital beds. Idukki, lags behind in all these respects. It seems that doctors are having a "rural indifference". The young doctor contemplating an inner city vacancy forcees a heavy patient demand, many of them requiring an 'across-the-service' approach for which there is no basic structure. He has to work in inadequate premises and has to live in an area where housing, school and the community may be unattractive to his social built and status complex.

Considering the medical sector as a whole there is one doctor for 1871 of population in Kerala. There is only one allopathic doctor for every 2816 of population. To keep up the accepted standard of one nurse and one A. N. M. for every 5000 population respectively there should be 7930 nurses and 4760 A.N.Ms in the state. Kerala is facing a dearth of para medical personnel. It is of special interest, for us, to note that Kerala has one private doctor for every 3675 of population, while Government doctor availability is one for every 6260. The bed population ratio is a pointer to the inadequacy of the inpatient facility in the State. More than 50% of the Government medical institutions do not have inpatient facility. But the private sector is more developed in this regard. 69% of the private institutions do possess inpatient facility, though not to the full requirement. The distribution of the medical institutions in Kerala according to bed availability is given in Table III. From the details furnished in table II it may be noted that Idukki and Malappuram have one doctor for 4128 and 3111 of population respectively, while Kottayam has one doctor for 1485 of population.

3. Private participation—A closer look

Private sector is a vital component of medical care in Kerala. It is a progressive sector. There is an expansionist trend in private initiative to serve the sick (see table IV) as evidenced by the general increase in the number of private institutions. During the period under reference there were 240 hospitals and 94 dispensaries in the private voluntary sector with the highest regional concentration in the Districts of Kottayam and Ernakulam. Palghat and Malappuram have the lowest number of private institutions. A high degree of private doctor participation is observed in the Districts of Ernakulam and Kottayam. The service of private paramedical personnel is also more in the above districts. The voluntary hospitals alone provided a total of 12804 beds for inpatients. They treated 5111968 patients during the reference period. This depicts a high rate of doctor demand in Kerala. In the same period 48293 births took place in the voluntary hospitals. Private hospital use is more in the districts of Ernakulam and Kottayam. In Trivandrum it is less, because of the free availability of medical expertise in the Medical College situated in the capital.

Another field of "Private concentration" is the Dental care segment of the medical branch. As per the recommendations of Health survey and Planning committees of India there should be one dentist for every 4000 of population. Kerala stands below this standard. Kerala has only 274 dental care institutions of which 56 are in the public sector and 218 in the private sector. As per the norms of the Bhoré Committee there should be a minimum of 6041 dentists. Kerala has less than 400 qualified Dentists. About 45% of the people in Kerala suffer from Dental disease. In a study conducted by the Dental College (see table VI) it was noted that 26% of the Dental patients were below 12 years of age, and 57% were below the age group of 20. Table VII provides a rural urban distribution of private dental institutions. The districts of Ernakulam, Kottayam and Quilon are the major beneficiaries of private Dental care. There is acute shortage as we have observed already, of Dentists in Kerala. Government must adopt a perspective planning in this sector. The intake capacity of Dental Course should be increased to ensure adequate supply of Dentists in the wake of growing demand. Governments active participation may be an economic relief to the users of private Dental care.

4. District-wise Variations

The districts of Kottayam, Ernakulam, Trichur, Kozhikode, Alleppey and Trivandrum are almost well placed both in respect of the population—Doctor ratio and population—bed ratio. The recommendation of the Mudaliar Committee is one Doctor for 3000-3500 of population, one Nurse for 2000 of population and 1 bed for every 1000 of population. Those criteria have more or less been achieved in our State. When we take the Public and Private Sector together, population Doctor ratio is the least in Kottayam District (1485) and Population bed ratio is the least in Ernakulam District (234). Both are greatest in Idukki District (4128 and 1354 respectively). The total number of Hospitals and Doctors are more in the private sector than in the Public Sector but regarding the availability of Nurses and Midwives of beds giving inpatient facility it is more in the public sector.

The ranking of the Various Districts according to the availability of Hospitals and Dispensaries, Medical Offices, Nurses and number of beds is given in the following Table for Private Sector, Public Sector and total separately.

Cannanore district stands first in the State with regard to the total number of Hospitals and Dispensaries both in the public and private sector. In respect of the total number of Doctors, Nurses and No. of beds giving inpatient facility, Trivandrum District stands first in the public Sector and Ernakulam District in the Private Sector. Idukki District takes the last place for all the above items, closely followed by Malappuram and Palghat. The districts Trivandrum, Kozhikode and Alleppey take the first three places in respect of the availability of Doctors in the Public Sector because of the Medical Colleges situated there. In the private sector the first three places are for Ernakulam, Kottayam and Cannanore Districts. The availability of doctors in the private sector is more in Ernakulam District.

Ranking of various districts according to the availability of Hospitals, Dispensaries,
Medical Officers, Nurses and number of beds

District	Hospitals and dispensaries			Doctors			Nurses			No. of beds		
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Trivandrum	3	5	4	1	10	6	1	10	1	1	5	2
Quilon	2	3	3	4	6	8	7	6	8	8	3	7
Alleppey	5	6	7	3	5	4	5	5	6	3	4	4
Kottayam	9	8	8	5	2	2	4	2	3	6	2	3
Idukki	10	11	11	10	11	11	11	11	11	11	11	11
Ernakulam	3	2	2	6	1	1	3	1	2	5	1	1
Trichur	4	7	6	8	4	5	6	4	5	4	7	5
Palghat	7	9	9	9	7	9	9	7	9	9	10	9
Malappuram	8	10	10	9	8	10	10	8	10	10	9	10
Kozhikode	6	4	5	2	9	7	2	9	4	2	8	6
Cannanore	1	1	1	7	3	3	8	3	7	7	6	8

5. The Unemployment Paradox

The supply in elasticity of medical personnel is evident from the foregoing analysis. It is a paradox that medical men, though not in large number, remain unemployed in Kerala. As per the Employment Exchange Register 529 males and 268 females, having medical qualification were unemployed in the State. For obvious reasons our young doctors prefer private Practice to Government service. As A.L. Srivastava in his study "Professional identification of Medical Doctor" observed private practice preference may be due to reasons of service orientation, achievement orientation, profit orientation and treatment orientation. But the rural poor can illafford private doctor service. The extent of unemployment among paramedical personnel is less acute. The existing threat of unemployment is a matter of concern. The paradox of overall shortage of paramedical staff is the logical concomitant of the Malthusian devil of unemployment jeopardising the Kerala economy. The skills drain for want of job opportunities in the State. But our Nurse community working abroad is serving a National purpose. They are the principal Foreign Exchange Mint of our country. The Doctors or paramedical personnel who seek for abroad fascinated by the Petro-Dollar affluence contribute unfavourably to the vulnerable economy of Kerala. The foreign money influx inflates the economy beyond all proportions. Governmental aids in the way of medical infrastructure and operational finance may go a long way in routing out the unemployment among our medical personnel. Hospitals can be started in the Co-operative sector in areas of medical care deficiency. The inequitable distribution and geographical spread of medical institutions should be minimised.

6. Conclusion

There is urgent need for increased Governmental participation in the medical sector. Prevention is better than cure. As Dr. Mahler observed medical science is paradoxically advancing for the cure of disease and not for prevention of disease. A comprehensive health education programme must be given adequate place in the revised education structure. The high rate of Doctor demand, the high rate of private concentration and the increasing rate of medical applicants necessarily strengthen the demand for an additional Medical College in Kerala to train efficient and dedicated doctors to serve the sick.

Medical sector in Kerala projects considerable employment potential. Private participation is more in the sector. Governmental participation is inadequate. Revitalisation of the medical care component of the health sector is an inevitable necessity. Brain drain should be prevented by providing employment facilities to qualified medical men at Governments initiative. Health service alone in the long run does not hold the key of human happiness. A public health campaign cannot make progress without recognising the social component of the programme.

TABLE
**District-wise distribution of Hospitals
 Personnel and No. of beds**

Name of district	No. of Hospitals and dispensaries			No. of medical officers		
	Govt.	Private	Total	Govt.	Private	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trivandrum	88	126	214	463	270	733
Quilon	92	131	223	276	313	589
Alleppey	82	115	197	291	482	773
Kottayam	61	106	167	268	621	889
Idukki	42	20	62	56	87	143
Ernakulam	88	181	269	241	833	1079
Trichur	85	114	199	209	543	752
Malappuram	69	60	129	141	305	446
Palghat	72	85	157	141	309	450
Kozhikode	74	128	202	396	274	670
Cannanore	128	183	311	218	558	776
Total	881	1249	2130	2700	4600	7300

TABLE Ia

Registered Allopathic Doctor

Period	No. of Doctors
31-12-1945	395
31-12-1950	618
25-9-1953	725
24-6-1957 to 60	1041
31-12-1965	2181
31-12-1970	4547
31-12-1975	7870
29-3-1978	9365

I
**(Government and Private) Medical
 in Kerala as on 31-12-1977**

<i>Nursing staff</i>			<i>Auxiliary Nurse Midwives</i>			<i>No. of beds</i>		
<i>Govt.</i>	<i>Private</i>	<i>Total</i>	<i>Govt.</i>	<i>Private</i>	<i>Total</i>	<i>Govt.</i>	<i>Private</i>	<i>Total</i>
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
721	111	832	281	102	383	4904	2032	6936
224	130	354	319	116	438	1761	2506	4267
327	202	529	267	166	453	3134	2246	5380
407	261	668	209	240	449	2314	3676	5990
26	37	63	117	34	151	261	175	436
445	354	799	241	187	428	2460	5221	7681
317	228	545	222	209	431	3072	1487	4559
99	126	225	232	116	348	796	299	1095
171	128	299	217	117	334	1242	424	1666
480	113	593	230	104	334	3416	858	4274
221	234	455	330	215	545	2216	1783	3999
3438	1924	5362	2715	1769	4484	25576	20707	46283

TABLE II
Population Doctor ratio and population bed ratio district-wise as on 31-12-1977

Name of District	Population Doctor's ratio			Population bed ratio			Average no of beds per area of Total one hospital or dispensary (Sq. Kms.)
	Govt.	Private	Total	Govt.	Private	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Trivandrum	3768	6461	2380	355	858	251	10
Quilon	7054	6220	3306	1105	776	456	21
Alleppey	6205	3746	2336	576	1210	390	10
Kottayam	4927	2126	1485	570	458	254	13
Idukki	10542	6785	4128	2262	3373	1354	82
Ernakulam	6979	2007	1560	684	356	234	9
Trichur	8719	3109	2245	549	1363	391	15
Malappuram	9839	4549	3111	1742	5505	1928	28
Palghat	9713	4490	3070	1103	3869	658	34
Kozhikode	4011	5798	2371	465	2227	384	18
Cannanore	8166	3190	2294	803	1157	474	18
Total	6260	3675	2816	661	944	389	18

TABLE III
Distribution of Medical Institutions according to availability of beds as on 31-12-1977

Type of institutions	Number of beds								
	Below-30	30-100	100-200	200-500	500-1000	1000-2000	without beds	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Government	261	68	33	18	11	2	488	881	
Private	562	155	23	15	1	..	493	1249	
Total	823	223	56	33	12	2	981	2130	

TABLE IV
Number of Government and Private Medical Institutions commenced in 1975, 1976, 1977

Name of District	Private Institutions			Government Institutions		
	1975	1976	1977	1975	1976	1977
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trivandrum	6	5	5	..	..	..
Quilon	5	13	5	..	..	..
Alleppey	10	13	10	..	..	..
Kottayam	13	20	16	..	..	..
Idukki	2	2	1	..	..	..
Ernakulam	7	13	11	..	..	..
Trichur	5	6	7	..	..	..
Malappuram	4	4	2	..	..	..
Palghat	12	14	12	..	..	..
Kozhikode	24	25	24	..	..	..
Cannanore	20	29	20	..	..	..
Total	108	145	113	2	6	5

TABLE V
 Details relating to the Voluntary Hospitals as on 31-12-1977

District	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	No. of Hospitals	No. of Dispensaries	No. of Doctors	No. of Nurses	Other Personnel	No. of beds	No. of births	Out-patients	In-Patients	
Trivandrum	17	16	15	35	94	742	815	15702	13646	
Quilon	18	5	47	126	478	1203	6117	349945	40053	
Alleppey	38	7	71	140	545	2243	5936	530336	64100	
Kottayam	50	4	111	277	1134	2814	12288	1145340	157693	
Idukki	15	5	26	74	277	488	2021	175352	20341	
Ernakulam	46	25	125	303	1211	2848	14516	1176319	208262	
Trichur	19	15	60	164	382	1118	2206	394978	39987	
Palghat	6	3	7	20	49	97	51	52453	4740	
Malappuram	8	2	25	31	101	139	348	170867	5435	
Kozhikode	15	4	27	74	243	750	2229	290250	25596	
Cannanore	8	8	15	28	121	362	1301	158540	11933	
Total	240	94	529	1272	4635	12804	48293	4460182	651786	

TABLE VI
 Age group and percentage of population suffering from Dental diseases

Age group	Percentage of Population suffering from Dental diseases
12 years and below	26
13-20	31
21-30	24
31-40	17

TABLE VII

District-wise distribution of private Dental Institutions as on 31-12-1976

District	No. of Dental Institutions (Private)			Total	No. of Dentists (private)	Para-medical personnel	No. of patients attended in 1976
	Rural	Urban	(3)					(4)	(5)	(6)	(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Trivandrum	4	21	25	28	9	17,483	
Quilon	31	1	32	29	11	99,589	
Alleppey	13	5	18	16	5	18,827	
Kottayam	20	16	36	35	14	1,13,825	
Idukki	21	..	21	24	5	24,635	
Ernakulam	26	6	32	30	17	63,046	
Trichur	7	2	9	10	..	N.A.	
Palghat	4	7	11	10	4	17,000	
Mahappuram	3	5	8	10	4	16,190	
Cananore	11	8	19	20	9	53,835	
Kozhikode	5	2	7	9	6	12,400	
Total	145	73	218	221	84	4,33,806	

INSERVICE TRAINING
OF
MEDICAL AND PARA MEDICAL PERSONNEL
IN HEALTH SERVICES

1971

10

RESIDUAL AND PARASITIC PERSONNEL
OF HEALTH SERVICES

"Many people who are not getting primary medical care do not know that they are not getting it, because they do not know that they need it. Health is an asset. Medical care is a must to protect this asset. Qualified and trained personnel is a Sine qua non for efficient extension of medical care. Inservice training is necessary to equip the medical personnel to suit the changing pattern of diseases and health care. True, health manpower planning is an integral part of a comprehensive health planning. The study aims at assessing the inservice facilities available for our medical men in the state and also looks at the trend of demand and supply for trained medical personnel. Family welfare includes education, health, childcare, family planning, nutrition etc., and the training programmes should cover all these related aspects in a Co-ordinated manner."

CONTENTS

		page
1. Introduction	..	141
2. Objectives of the study	..	141
3. Training facilities available	..	142
4. Multipurpose workers scheme	..	143
5. Health Education Training Programme	..	146
6. Nutrition Training and Education	..	151
7. Utilization of Trained hands	..	152
8. Summary and Conclusion	..	152

CONTENTS

141	Introduction
141	Objectives of the work
142	Terminology and abbreviations
143	Methodology and survey design
143	Health assessment of the program
144	Summary, findings and discussion
145	Discussion of the study results
145	Summary and conclusions

Introduction

Access to health is a basic human right and health is an asset. Health is an essential means to socio-economic development and therefore planning of health services assumes a major role in national planning.

For the development of a country there should be adequate provision for health care which is dependent on 3 factors—personnel, capital and technology. There must be adequate qualified persons and sufficient funds.

In a developing country like India the health care system has 4 components—Promotive, Preventive, Curative and Rehabilitative. Within the health system naturally the manpower component accounts for the major part of the budget.

It is obvious that there should be a sound organization and that the personnel responsible for delivery of health care should have the prescribed qualification and training. Their skills and knowledge should be fully utilised with necessary inservice training to suit the changing pattern of diseases and health care.

Therefore there should be close co-ordination between health, manpower and health care development. Health manpower planning is an integral part of comprehensive health planning.

The objective of health manpower planning is to provide the right type of education and training for the right number and type of people needed to render effectively and safely the services required by the population.

Kerala with the highest density of population in India has to fight against epidemics, malnutrition, diseases and over population. By giving emphasis to preventive and curative services and family planning in the health plans, spectacular results have been achieved. Now health care is available in the remotest part of the State.

The various categories of medical and para-medical staff in Health Services and their necessary qualifications are given in Appendix I.

Specialists, Medical Officers and Dentists constitute medical personnel and the rest are paramedical personnel. Of the paramedical staff those working in Hospitals and those engaged on field work require in service training of various types so as to instill into there new ideas of Health Services.

2. Object of the study.—

The object of this study is to asses the facilities of inservice training in Health Services, and the demand and supply of trained personnel. The study also takes into account, the feasibility of increasing the enrolments, if it becomes necessary to increase the manpower supply.

The data have been collected from all—D.M.O. Offices and training institutions.

3. Training facilities available.

Inservice training is conducted by the Health Services Department at the Health and Family Welfare Training Centre, Calicut, Health and Family Welfare Training Centre, Trivandrum, Public Health Training School, Trivandrum, Field study demonstration and Training Centre, Neyyattinkara in Medical Colleges and at times in other institutions.

In the Health and Family Welfare Training Centres at Trivandrum and Calicut the training relating to Family Welfare was imparted till recently. Now since the M.P.W's scheme has been introduced the Multipurpose workers' training is imparted. In the Public Health Training School at Trivandrum usually training relating to Public Health is conducted. Besides training required by other departments are also organised there. The field study demonstration and training Units was engaged in the organisation of demonstration and study projects and the conduct of in service training programmes. Table I below gives the number of medical personnel trained. The number of Medical and para medical personnel trained in Family Welfare in the various Medical discipline is given in Table II.

TABLE I

Number of Medical Officers who have undergone inservice training till the end of 1978-79.

<i>Name of Training Course</i>	<i>No. Trained</i>
1. Family Welfare	1077
2. MTP (Family Welfare)	
3. Orientation	268
4. Filariology	3
5. F.P. Orientation	3
6. Nutrition	23
7. Blood Bank	4
8. Leprosy	479
9. Ophthalmology	4
10. Public Health	13
11. Multipurpose	221
12. Paediatrics	16

TABLE II

The number of medical and para medical staff who have undergone training in Family Welfare till the end of 1978-79.

<i>Category</i>	<i>No. of trained hands</i>	<i>Total No. in the Dept.</i>	<i>No. of Staff to be trained</i>
Medical Officers	1077	2167	1090
Block Extension Educators/H.Is.	426	521	95
P.H. Nurse/Health Visitors	338	446	108
A.N. Ms.	3151	3151	..
Staff Nurses	1703	2948	1245
Health Assistants (F.P.)	875	875	..
Head Nurses	102	556	454
Workshop for Sister Tutor	25	60	35
Sister Tutor/Nursing Supdt.	60	60	..
Administrative Asst./Lay. Secretary	18	63	45
Health Educators	15	15	..
Dist. Extension Educators / Urban Extension Educators	64	64	..
Family Planning Welfare Workers	895	895	..
Workshop for M.E.I.O., D.E.E.	30	30	..
Workshop for D.F.W.M.O.	9	10	1
Dist. Public Health Nurse	5	10	5
Workshop for B.E.E. & U.E.E.	15	15	..

Regarding Family Planning training about half of the medical officers, and about 1/3 of staff nurses have not undergone the training.

The details of training programmes in vogue are given below:

4. Multipurpose Workers' Scheme

This is a scheme of Govt. of India according to the Karthar Sing Committee recommendations for meeting the basic health needs of the community. Uni purpose workers of Malaria, Smallpox and Family Welfare are given multipurpose training. After the training, instead of working as family Welfare Health Assistant, Health Assistant and Basic Health Workers separately they can work as multipurpose workers. That is they can work for many of the programmes such as Smallpox, Malaria, Family Welfare, T.B., Leprosy etc. According to the multipurpose work there will be only two categories of staff—health worker and supervisory both male and female.

A.N.Ms. will be female health workers. Health Visitors and P.H. Nurses will be female health supervisors. Family Welfare Health Assistant, Health Assistant and Basic Health Worker will be male health workers and Health Inspectors, Block Extension Educators and Vaccination supervisors will be male health supervisors. For the training and implementation of the programme, Government of India is providing aid. For every four Health Worker there will be one Health Supervisor. One Male Health Worker and one female health worker will form a team for a sub-centre. The population prescribed for a sub-centre according to the scheme is 5000.

The syllabus for the training course is given below.

Science I	Anatom. and Physiology, Microbiology, Psychology, Sociology, Hygiene, Nutrition
Foundamentals of Nursing I	Introduction to Nursing Nursing procedures and techniques First aid and emergency Nursing-
Fundamentals of Nursing II	Introduction to Child Health. Introduction to Maternal Health Introduction to Family Health and Community Health
Community Health Nursing I	Domiciliary Midwifery Midwifery and Maternity Nursing, Family Planning and Welfare
Community Health Nursing II	Nutrition Education, Health Education Communications skills and Audiovisual aids.
Community Health Nursing III	Basic Medicine and Pharmacology Health Problems and Plans communicable diseases, Mental diseases
Community Health Nursing I(ii) for Health Worker male	Environmental Sanitation, Health Statistics, Family Planning Welfare

The syllabus for the training is designed with the specific objectives that the student health workers on completion of training should have ability to:

1. Explain the principles of healthful living related to all age groups in the community.
2. Perform basic health care activities on community and institution settings.
3. Plan and carry out nutrition and health education activities in the home clinic and community.
4. Provide basic maternal and child health care including immunization services, family Health care and family planning services.

5. (i) Perform basic midwifery procedures and basic nursing techniques with special emphasis on domiciliary and home nursing procedures (Health worker—female)
- (ii) Participate in prevention and control of communicable diseases; assist in execution of nationed health programmes; promote village and environmental sanitation; perform basic nursing techniques (Health worker—male)
6. Provide first aid and emergency nursing care, elementary medical care including treatment of minor ailments.
7. Participate as a responsible member of the health team.
8. Identify community resources which could be utilised for health promotion, health maintenance and prevention of disease.
9. Assist in the training of community village level health workers/
10. Promote community development activities.

In order to implement the multipurpose workers scheme in Trivandrum and Kozhikode Districts with effect from 1-4-1978, Training to various categories of staff was imparted in RFWTC at Kozhikode and Trivandrum. A statement showing various categories of persons trained under MPW scheme as on 31-12-1978 is given below.

<i>Centre</i>	<i>No. of P.H.Cs.</i>	<i>Medical Officers</i>	<i>Block Extension Educa-tors.</i>	<i>Health Assistants</i>	<i>Multipurpose workers.</i>
Trivandrum	18	175	75	120	52
Kozhikode	15	26	25	59	44

Quilon and Cannanore Districts have been selected for MPW scheme in the second phase.

Community Health Workers Scheme has not yet been implemented.

Requirement of staff for the implementation of multipurpose workers scheme from 1978 to 1982 are given below. It is calculated on the basis of projected population.

<i>Year</i>	<i>Female workers</i>	<i>Female supervisors</i>	<i>Male workers</i>	<i>Male supervisors</i>
1978	4917	1229	4917	1229
1979	4998	1249	4998	1249
1980	5077	1269	5077	1269
1981	5153	1288	5153	1288
1982	5306	1326	5306	1326

The availability of staff as on 1-4-1979 in the Health Services Department is given below:—

<i>Female workers</i>	<i>Female Supervisors</i>	<i>Male workers</i>	<i>Male Supervisors</i>
3151	446	2852	569

The deficiency of Female Workers, Female Supervisors Male Workers and Male supervisors are 1847, 803, 2146 and 680 respectively in the year 1979.

As such it seems that the training centres will not be available for Family Welfare training for a reasonable period.

Government have been requested for sanction for starting four A.N.M. training centres—one each at Quilon, Kottayam Trichur and Malappuram. The duration of the course is one and a half years. The first batch of students is to be admitted in January 1980. 140 Female candidates (S.S.L.C. passed) will be admitted at a stipend of Rs. 100/month. Training of Health Supervisors under Multipurpose programme is proposed to be started at the P.H. Training School, Trivandrum. As per multipurpose programme, the senior A.N.Ms. will have been given one promotional training for six months. All Health visitors in service above the age of 45 years have been given one months training. 51 Health visitors below the age of 45 years are given six months training in two batches and the 3rd batch of 24 Health visitors are undergoing training at the College of Nursing, Trivandrum.

Government have accorded sanction for intensive training programme in maternity and child health for Medical Officers working in Primary Health Centres. The duration of the course is 8 weeks.

5. Health Education Training Programme

Training in Health Education for inservice personnel is going at Field Study Demonstration and Training Unit, Neyyattinkara. Para Medical staff working in P.H. Centres are deputed for training here. 70 batches of health personnel have so far completed training. The duration of the course is 4 weeks providing both theoretical and practical sessions.

Field study Demonstration and Training Centre located at Neyyattinkara works as a field lab. of the State Health Education Bureau. Assistant Health Education Officer is in charge of the Unit. This Unit has taken up several projects in the Field area with the co-operation of voluntary agencies.

The unit continued its work connected with the 3 important programmes under operation namely (1) Health Education Demonstration Project on environmental sanitation (2) Health Education demonstration on M.C.H. F.P. and Immunisation and (3) Integration Health Education Programme. The evaluation of the 1st Project was completed and that of the 2nd taken up.

The unit also organised regular Health Education Programmes like group discussions, film shows etc. as well as participated in important celebrations like World Health Day, Anti Leprosy Day, etc.

The training Unit continued to organize regular 4 weeks, training programmes in Health Education to Public Health Workers.

The major items of work of the Public Health Training School started on 20th May 1964 can be categorised as

1. Refresher training course in Public Health for Health Inspectors
2. Environmental sanitation project.
3. Other training programme.

Refresher training in Public Health consists the following subject:-

1. Environmental sanitation.
2. Communicable diseases.
3. Public Health Administration.
4. Health Education
5. Vaccine preparation.
6. Immunisation.
7. Food Sanitation.
8. Family Planning
9. Applied Nutrition Programme.
10. Supervision, records and reports.
11. Vital Statistics.
12. National Health Programmes.

At the beginning of the year 1965-66 there was a Regional F.P. training Centre attached to the S.A.T. Hospital, Trivandrum which was under the control of the Principal, Medical College, Trivandrum. This training centre was detached from the S.A.T Hospital upgraded and brought under the control of the Health Services Department and another training centre at Calicut has also been started. There are at present 2 training centres. The training centre at Trivandrum started functioning during January 1966.

The Principal and Medical Lecturer-cum-Demonstrator of the Trivandrum Training Centre and the Health Education Instructors and P.H. Nurse Instructors of the 2 Training Centres were deputed for a course for the trainees at the Central Family Planning Institute, New Delhi. The District Family Planning Medical Officers, Quilon and Palghat were deputed to the All India Institute of Hygiene and Public Health, Calcutta for the certificate course in Family Planning Administration and Education.

TABLE III
**Details of Inservice Training Courses Conducted at the Health and Family Welfare Training
 Centre, Calicut till the end of 1978-79**

Sl. No.	Name of Inservice training	Category of paramedical personnel trained	No. of personnel trained	Duration of the course	Period of training	No. of batches trained
1	Orientation Training in FP	A.N.M.	20	one month	1966	1
2	Do.	A.N.M.	1675	one week	1966-69	79
3	Do.	Staff Nurse	784	4 days	1969, 70, 71, 74, 75	94
4	Do.	B.E.Es.	195	1 week	1972, 73, 74, 75,	12
5	Workshop for Health Education	Health Educators	16	1 week	1971	1
6	Orientation in FP	Health Assistants	543	10 days	1969, 70, 71, 72, 73 and 74	30
7	Workshop in FP	P.H.N. & Health Visitors	214	1 week to 2 weeks	1969, 70, 71, 72, 73 & 74	12
8	Job Orientation Training in F.P.	F.P.H.A.	55	2 weeks	1973	2
9	Do.	BEE & HI	81	2 weeks	1973, 74, & 75	4
10	Do.	P.H.N. & HV	34	2 weeks	1973, 75	2
11	Do.	Head Nurses	28	2 weeks	1974	2
12	Do.	Staff Nurse	104	2 weeks	1974, 75	4
13	Workshop in MPW Programme	Dist. level supervisors	19	10 days	1976	1
14	M. P. Training	Health Supervisors and Health workers	50	30 days for HS & HW (F) 35 days for H.S. & HW (M)	1976	2
15	Training for Supervisors under MPW Scheme	Health Supervisors	54	15 days	1977	3
16	Multipurpose workers training (along with Ms. of PHCs)	B.E.Es.	46	1 month	1977 & 78	7

TABLE IV

Details of various personnel trained in the family welfare training Institutions from the starting of the programme till the end of 1978-79

Category	No. of personnel trained at		Total
	Regional F.P. Training Centre Trivandrum	Regional F. P. Training Centre Calicut	
Medical Officers	785	147	902
B. E. Es./H. Is.	156	195	351
P. H. Nurses/Health Visitors	244	94	338
Health Assistant (F. P.)	419	428	847
Aux. Nurse Midwives	1592	1696	3288
Staff Nurses	1017	686	1703
Head Nurses	36	66	102
Sister Tutor/Nursing Supdt.	57	25	82
Administrative Assistant/Lay Secy.	..	18	18
Workshop Sister Tutors	25	..	25
Health Educators	..	16	16
Statistician/Statistical Asst.	116	6	122
Dist. P. H. Nurses	5	27	32
Dist. Extension Educators/U. E. E.	64	..	64
F. P. Welfare Workers	1045	15	1060
P. H. Nurse students	14	..	14
A. N. M. students	14	..	14
Social Workers	19	..	19
Workshop for Lay Secretary and Administrative Asst.	18	..	18
B. D. Os.	101	..	101
Computer	75	..	75
Homocopathic Practitioners	67	..	67
Dist. level workers	101	..	101
Workshop MEIO, BEE	30	..	30
Information Assistant	5	..	5
Workshop D. E. W. M. O.	9	..	9
Workshop B. E. E. & U. E. E.	21	..	21

TABLE V

Details of Training Programmes Conducted at the Public Health Training School, Trivandrum

<i>Name of the inservice training</i>	<i>Total No. of para medical personnel who have undergone training</i>	<i>Duration of the training</i>
Para Medical Training for C & Malaria and E & NSEP Personnel	1855	15 days
Para Medical training for Municipal health staff	141	14 days
P.H. Refresher Course for Health Inspectors	702	14 days

TABLE VI

**Health & Family Welfare Training Centre, Trivandrum
Multipurpose Workers' Training (District-wise)**

No. of Medical and para medical personnel trained

<i>Name of District</i>	<i>Medical Officers</i>	<i>No. of Block Extension Educators</i>	<i>Health Assistants</i>	<i>Health Workers</i>
Trivandrum	47	17	120	52
Quilon	32	18	..	..
Alleppey	43	17	..	..
Ernakulam & Idukki	43	16	..	..
Kottayam	10	7	..	..
Total	175	75	120	52

Usually 20 trainees are admitted at Calicut F.W. Training Centre, 30 at the Family Welfare Training Centre, Trivandrum, 20 at the Public Health Training School, Trivandrum and some 11 at the Orientation Training Centre Neyyattinkara.

The staff pattern of the institutions is given in Appendix II. In all the four institutions 30 technical staff and 46 other staff are working. Besides the technical staff, other technical persons are also taking classes and they are paid only T.A. and D.A. Trainees are also given only T.A. and D.A.

The duration of the training courses are given below:

<i>Name of Training</i>	<i>Duration</i>
F.P. Course	1 week
F.P. Training	7 weeks
F.D. Orientation	10 days
Leprosy Training	2 weeks
M.T.P. Training	4 weeks
Nutrition Training	6 months
Orientation Training	7 weeks
A.N.P. Training	5 days
Health Inspectors training	6 months

Further on the job training is given to categories of para medical staff—Health Assistant/Basic Health Workers and Health Visitors.

Health Inspectors' Training is conducted in 3 Medical Colleges (Trivandrum, Kozhikode and Kottayam) for Health Assistants and Basic Health Workers to promote and post them as Health Inspectors. The Number of seats in each college is given below:

	<i>No. of seats</i>
Medical College, Trivandrum	70
Do. Calicut	70
Do. Kottayam	60

Examination is conducted after the training by the Board of Examiners, H.I. Training Course. The training is imparted for departmental candidates only. Those who are below 45 are given 6 months training and those who are above 45 are given only one month's training.

Besides on the job training has been imparted to Health Visitors for posting them as Public Health Nurse. The duration of the training is 6 months. The training is conducted as per requirement.

6. Nutrition Training and Education

Nutrition Training was given to different categories of people like B.D.O's, Extension Officers, B.D.C. Members, Panchayat President, Mahila Samajam representatives, etc., at the various extension training centres in 15 batches in

which the State Nutrition Officer participated and conducted classes. Special talk (20) on ANP was also given to Medical Officers and para medical personnel who attended refresher courses at the Orientation Training Centre, Neyyattinkara and the Public Health Training School, Trivandrum. At the request of the Principal, Avenasalingam Home Science College, Coimbatore and the Administrator, CARE Kerala, a special lecture on A.N.P. in Kerala was given. CARE Supervisor Trainee attended a 4 weeks course at Coimbatore.

Two R.Os. were deputed for 2 months' training in Central Public Health Engineering Research Institute, Nagpur.

Medical Officers in service are deputed for special training in Blood Bank, D.M.R. etc. 50 candidates are admitted for training as Leprosy Health Visitors.

Some 20% of the medical officers have undergone training in Leprosy and M.T.P. 12% of the Medical personnel have undergone training in orientation. Those who have undergone training in Multipurpose Workers' Scheme is 221. The Medical personnel who have undergone training in Nutrition, are only few.

In the Public Health Training school 1855 para medical personnel have undergone training in C & Malaria and E & NSEP. All Health Inspectors have undergone Public Health Refresher course.

7. Utilisation of trained hands

After training the Medical Officers are posted usually in their respective fields so that the ideas gained in training can be effectively utilised. But it may not be possible for their whole service owing to promotions. Hence it is desirable that all medical Officers may be trained in all important items of training so that the same may be utilised at one time or another. Regarding paramedical staff usually such cases do not occur.

8. Summary and conclusion

Inservice Training to staff is highly necessary for the efficient discharge and implementation of their duties. This is more important in the case of health service staff. Since they are dealing with human lives. Disease is a curse to humanity. The achievement of Modern medicine is such that today most of the diseases can either be controlled or cured if timely and proper treatment is given.

Timely and proper treatment of diseases call for proper training to the personnel in order to increase the efficiency of their working. Moreover it is quite essential that they should have adequate knowledge about the latest achievement and change in treatment pattern in the field of modern medicine which is possible only through periodical inservice training.

An attempt has been made in this paper to assess the facilities for inservice training and demand & supply of trained personnel in the Health Services Department.

There are at present 888 medical institutions in the State in the public sector with a total bed capacity (which gives inpatient facility) 27897. Out of the 2167 Medical Officers the State in the Health Services Department, nearly 50% have been given inservice training. A good percentage of the para medical personnel also has been trained. Most of the Health Assistants and Auxiliary Nurse Midwives are also trained. Among Nursing staff it is seen that 58% has been trained.

After training, as far as possible, the Medical Officers are posted in the respective field in which they are trained, so that the ideas gained in training can be effectively utilised. But this may not be possible always due to promotions and other reasons. Therefore it is necessary that the Medical officers should be trained in all important items.

Since family welfare cover, education health, maternity, child care, family planning & Nutrition, the training programme should be continued in all years with the ultimate aims of getting all the personnel trained.

APPENDIX I

**Medical and Para Medical posts in Health Services
and the required Qualifications**

1. Specialists	Post Graduate Degree or Diploma in Medicine
2. Medical Officers	MBBS
3. Dentists	B. D. S.
4. Public Health Nursing Tutors or Dist. P.H. Nurse	Diploma or B.Sc. Nursing and Public Health Training
5. Nursing Tutors	Degree in Nursing Post-graduate studies in the various branches or teaching
6. Nursing Superintendent (Gazetted)	Diploma in B. Sc. Nursing
7. Nursing Superintendent (Non-Gazetted)	By promotion from Head Nurses.
8. Head Nurse	do. Staff Nurse
9. Staff Nurse	1. S.S.L.C. 2. General Nursing & Midwifery 3. Registration with Kerala Govt. Nurses and Midwives Council.
10. P.H. Nurse and Health Visitors	General Nursing and 9 months, Training in P. H. Nursing
11. Pharmacists	1. S.S.L.C. 2. Diploma in Pharmacy 3. Registration with the Kerala State Pharmacy Council
12. Dental Hygienist	1. S.S.L.C. 2. Dental Hygienist Course
13. Refractionist	1. S.S.L.C. 2. Diploma for opticians & Refractionists Assistants.
14. Orthoptist	1. S.S.L.C. 2. Diploma in Orthopaedics
15. ANMS	S.S.L.C. and A.NMs'. Training.
16. B.C.G. Technician	S.S.L.C. and H.Is. Course
17. X-ray Technician	1. S.S.L.C. 2. Radiological Assistants' Course
18. Lab. Technicians	1. S.S.L.C. 2. Lab. Technicians' Course

19. Radiographer	1. Pre-degree 2. Diploma in Radiology
20. Non Medical Supervisor (Leprosy)	Promotion from Health Visitors (Leprosy)
21. Treatment Organiser	1. S.S.L.C. 2. T.B. Health Visitors Training
22. Leprosy Physiotherapist	1. S.S.L.C. 2. Leprosy Health Visitors and Leprosy Physiotherapists, Training
23. Maistry	Promotion from field workers
24. Insect Collectors	} 1. S.S.L.C.
25. Field Assistants	
26. Health Assistants	
27. Basic Health Worker	
28. Health Inspectors	} 1. S.S.L.C. Health Inspectors, Training
29. Vaccination Supervisor	
30. Health Supervisor	
31. Health Educator	
32. Food Inspector	} S.S.L.C. Health Inspectors' training
33. B.C.G. Team leader	
34. Filaria Inspector	
35. P.H.N. Instructor	} Promotion from Staff Nurse with P.H. Nurses' Training
36. P.H. Nurse/Tutors	
37. F.P. Health Assistant	1. S.S.L.C. 2. Health Inspector's Course
38. Blood Bank Technician	1. S.S.L.C. 2. Lab. Technician Course
39. F.P. Welfare Worker	1. S.S.L.C. 2. E.P.S.Ws. Training
40. Leprosy Health Visitor	1. S.S.L.C. 2. L.H. Visitors' Training

APPENDIX II
Staff Pattern of Training Institutions

<i>Health and Family Welfare Training Centre, Trivandrum</i>	<i>Public Health Training School, Trivandrum</i>	<i>Health & Family Welfare, Calicut</i>	<i>Orientation Training Centre, Neyyattinkara</i>	<i>Total No. of posts</i>	
Category of post	Scale of pay	No. of post	No. of post	No. of post	
(1)	(2)	(3)	(4)	(5)	
Principal	1125-1725	1	1	1	3
Medical Lecturer—					
Demonstrator	800-1550	1	..	1	2
Do. (M.C.H.)	800-1550	1	..	..	1
Home Science Assistant	420-720	..	..	..	1
Health Education Instructor	800-1550	1	..	1	2
Senior Training Officer Nursing	700-1270	1	..	1	2
Health Educator	520-900	..	..	..	1
Do. Sanitarian	700-1270	1	..	1	2
Health Education Officer (Nursing)	650-1150	..	..	..	1
Statistician	700-1270	1	..	..	1
Confidential Assistant	325-660	..	..	1	1
Social Science Instructor	650-1150	1	..	1	2
Health Inspector	420-720	..	3	..	3
Health Education Extn. Officer	650-1150	4	..	3	7
Health Education Officer	650-1150	..	1	..	2
Junior Superintendent	520-900	1	..	1	2
U. D. Clerk	390-685	2	1	2	5
Confidential Assistant	450-785	1	..	..	1
Clerk Typist	330-515	1	1	1	4
Artist-cum-D'man	420-720	1	..	1	2
P. H. Nurse Instructor	650-1150	1	..	1	2
Driver Grade II	310-490	3	1	2	7
Driver-cum-Projectionist	420-720	1	..	..	1
Peons	280-400	1	1	1	4
Hospital Attd. Gr. I	280-400	2	1	..	3
Do. Grade II	280-400	3	..	4	7
Cook Grade II	280-400	1	..	1	2
L. D. Accountant	330-515	..	1	..	1
Night Watcher	280-400	..	..	1	1
Watcher-cum-Sweeper	280-400	..	1	..	1
P. T. Sweeper	128	..	1	..	1
Driver-cum-Operator	370-600	..	..	..	1
Total		30	15	24	8
					77

TABLE II B

**Percentage distribution of Medical, para-medical staff
who have undergone training in Family Welfare**

<i>Category</i>	<i>% trained hands</i>
Medical Officers	50
Block Extn. Educators/H. Inspectors	82
P.H. Nurse/Health Visitors	76
Health Assistants (F.P.)	100
Auxiliary Nurse Midwives	100
Staff Nurses	58
Head Nurses	18
Workshop Sister Tutor	42
Sister Tutor/Nursing Superintendent	100
Administrative Assistant/Secretary	29
Health Educators	100
Dist. Extn. Educators/Urban Extn. Educators	100
Family Planning Welfare Workers	100
Workshop M.E.I.O.-DEE	100
Workshop D.F.W.M.O.	90
Workshop BEE-U.E.E.	100
District Public Health Nurse	50

**Number of Government Medical Institutions as on 1-4-1979 and
Number of beds**

Public Sector—(Districtwise)

<i>Name of District</i>	<i>No. of Allopathic Institutions</i>	<i>No. of beds</i>
Trivandrum	89	5126
Quilon	92	2012
Alleppey	83	3365
Kottayam	62	2486
Idukki	43	376
Ernakulam	89	2748
Trichur	85	3285
Palghat	74	1313
Malappuram	70	1015
Kozhikode	74	3631
Cannanore	127	2540
Total	888	27897

EMPLOYMENT IN
FISH MARKETING IN KERALA

EMPLOYMENT IN
FISH MARKETING IN KERALA

"Kerala is a leading maritime State in India. Fishing is a labour intensive sector too. Internal increase in the demand for fish and expansion of the export market of fish have made significant impact on the extent and pattern of employment generation at various stages. A chain of activities allied to fishing like procurement, distribution, processing and marketing extend employment to many of our rural poor. The study reviews the general structure of fish marketing process in Kerala and also tries to identify the different participants involved in the process. It is revealed that though the marine sector needs quick diversification to exploit the deep sea and other oceanic resources, there is need for prevention of over exploitation of the inshore resources. It is observed that there is only a dim scope for a leap forward in fish production and employment generation in the sector. The manpower demand would remain steady over a few more years."

CONTENTS

	<i>Pages</i>
1. Introduction ..	165
2. Limitations of the study ..	165
3. A brief history of the evolutionary process. ..	166
4. The distribution and marketing of marine landings ..	167
5. Distribution of marine production ..	169
6. Disposition of marine production ..	170
7. Marketing of marine products ..	171
8. Employment in the procurement, distribution processing and marketing of marine products ..	175
9. Estimate of employment in the forward linkage activities ..	175
10. Production trends and future demand for manpower in the forward linkage activities ..	177
11. Conclusion ..	177

CONTENTS

162	1. Introduction
163	2. Functions of the text
164	3. A brief survey of the communicative process
165	4. The distribution and marking of main clauses
168	5. Distribution of main clauses
170	6. Distribution of finite clauses
171	7. Marking of finite clauses
173	8. Marking of the communicative distribution process and marking of main clauses
173	9. Marking of syntactic structure in dependent clause systems
177	10. Production means and their marking for syntactic structure in the formal language systems
177	11. Conclusion

1. Introduction

General changes in the pattern of demand and product preferences among a section of the population—a consequence of increased cash incomes and growth of urbanisation in India during the last few decades—reflected in the demand for fish also. At the same time global shortage of high value marine crustacea like prawns has generated fresh demand from foreign consumers for the prawn resources of the potential seas of India. This has set in motion a series of modernisation or mechanisation programmes for a fresh assault on the marine resources suited to foreign markets. Consequently the emergence of a two sector activity became noticeable in the marketing of marine products in the country. The first is linked with the activities associated with the distribution and marketing of fish within the country and the second, with the development of an exclusively export oriented efforts projected to foreign markets. The whole process as made some significant impact on the extent and pattern of employment generation at different levels.

Our present task is to examine the employment generated in the numerous activities connected with fish marketing in Kerala. Since marketing is closely linked to production, distribution, processing etc. these also need to be examined for presenting a full picture of the whole problem.

Besides attempting to present the general structure of the fish marketing process in Kerala the objectives of the paper are—

1. To identify the different participants involved in the marketing process of fish and crustacea.
2. To estimate the employment content in the activities connected with fish marketing in Kerala by fixing some norms.

Fish is primarily a product intended for a market either in fresh, dry or processed form. It may be mentioned that though the topic provides ample scope for a deep study, paucity of data is a major hindrance for such an attempt. Except for production and export, hardly any scientific information is available in the State on the demand and supply of fish, consumer preferences, distribution or the extend of price spread.

2. Limitations of the study

The study is based on secondary information available and estimates have been made on the basis of certain assumptions. The correctness of the observations largely depends on how far the assumptions are close to reality.

3. A Brief History of the Evolutionary Process

The fisherfolk of Kerala estimated at 0.78 million are spread over 265 fishing villages along the 590 km. coastline. They mainly belong to three major communities—Hindu, Muslim and X'ian— characterised by a number of sub-castes. They have been pursuing fishing from time immemorial with predominantly traditional or crude form of crafts and gears that they have evolved through centuries of trial and error and is perfectly suited to their local conditions. However, capacity limitations and poor productivity of these traditional crafts forced them to restrict their fishing operations on shallow waters close to the shore. Low capacity also prevented them from over exploiting the marine resources and the biological balance of the sea was seldom disturbed. However, even at low levels of productivity, the traditional crafts generated sufficient surpluses for catering to the needs of the local markets. Marketing was mainly carried out by headload fisher women or men and their clientele consisted mainly the population that lived adjacent to the coastal belt. Barter or trade was the usual form of exchange. The degree of human involvement was at a low pitch at this stage of fish marketing. Proneness of fish to high perishability and the lack of preservation techniques prevented the expansion of fish markets to distant places.

However, the introduction of new methods like salting and drying widened the marketing horizons. The manufacture and use of ice revolutionised the marketing potentials still further. This may be considered as a turning point in the history of fish marketing. A spectrum of activities from on the beach operations down to the final sale of fish like salting, drying, icing, packings transportation etc., began to appear. These developments provided ample scope for more human involvement at different levels in the fish marketing process and the degree of intermediation between the initial production and final consumption has vastly increased. The major formal as well as informal participants in fish marketing process at this stage are middlemen, financiers, merchants, agents, traders and retailers. They created new areas of exploitation, and manipulation proportionate to the extent of control they were able to wield in the marketing of fish. With this, the fish markets that were originally confined to the numerous coastal trading centres were gradually expanded to the hinterland areas of the country. This in turn triggered the activities of the numerous participants also.

Post independence period witnessed significant changes in the conditions and relations of fish production in the country. The development policy of the Government was aimed at helping the fishermen to overcome their age long productivity problem that was at a low key till then. The remedy pursued was the introduction of mechanised boats into fishing. The larger trun out by the mechanised boats, glutted the fish markets giving a further fillip to the marketing participants other than producers. At the same time, the low price of fish and the larger chain of recurring costs inherent in the mechanised

tishing increased the burdens of the already indebted fishermen who could not maintain a favourable cost and earning relationship compared to their traditional crafts. But gradually events took a different shape. There appeared a new source of demand for a thereto much neglected but abundant crustaceans viz., prawns from foreign markets especially from the affluent U. S. and Japanese markets. This gave wide scope for the lucrative utilisation of mechanised boats in the State that have become full-time "prawn trawlers."—Thus "with one stroke, they have discovered the way to avoid the self-defeating internal logic of a costly technology superimposed on poor consumer....." —John Kurian.

The emergence of 'prawn trawling' in a massive way created certain far-reaching changes in the handling, distribution and marketing of fish. Prawn trawling by increased number of mechanised boats with bottom trawl nets, setting up of a chain of freezing plants and cold storages, springing up of a large number of export firms and establishment of new trade contacts and business connections—all projected for the export market—created a distinct and bifurcated pattern of activities in the fisheries sector with definite impact on the distribution and sharing of incomes within and between different sections of the fishery economy.

CHAPTER 2

4. The Distribution and Marketing of Marine Landings

Kerala is the leading maritime state in India with the highest annual fish production. The average annual fish production during the period 1975 to 1979 was 360000 tonnes valued at Rs. 705 million. Annual inland Fish Production in the same period was 24000 tonnes valued at Rs. 83 million.

The growth in marine production for the traditional and motorised sectors is indicated in Table.1

TABLE I
Marine Fisheries Production by traditional and
Motorised sectors (1970-79)

<i>Yearly average</i>	<i>Total landings</i>	<i>Traditional (in tonnes)</i>	<i>Motorised (in tonnes)</i>	<i>Motorised of % of total</i>
1970-71	419	369	50	12
1972-73	372	305	67	18
1974-75	421	280	141	33
1976-77	338	255	83	25
1978-79	352	246	106	30

Of the total fish production in the State, nearly 75% is contributed by the traditional sector.

In 1978-79 about two third of marine landings consisted of pelagic fishes (eg. Sardines, Mackerels, Anchovicellas etc.) and one third of demersal species (eg. perches, ribbon-fish, prawn etc.). Out of which one-third was crustacea, mainly prawns.

Table II shows the contribution of important fish species to total marine landings in 1978-79.

TABLE II

Important Pelagic and Demersal species of Kerala and their contribution to total marine fish landings in 1978-1979

<i>Species</i>	<i>Quantity (in tonnes)</i>	<i>As % of total marine landings</i>
<i>Pelagic</i>		
Sardines	126698	34.4
Mackerels	23296	6.3
Anchovicellas	18781	5.1
<i>Demersal</i>		
Prawns	47537	13.0
Perches	27565	7.5
Ribbon—fish	23232	6.3
Others	100757	27.4
Total	367866	100.0

The six species sardine, mackerels, anchovicellas, prawns, perches and ribbon fish account for 73% of the total marine landings and for 82% in terms of value. Detailed species-wise figures of marine fish landings are provided in appendix

Zone-wise distribution of marine fish production is shown in Table. Nearly 50% of the total catch in 1978-79 has been landed in the two southern districts Trivandrum and Quilon. In these districts, the demersal species—prawn, perches and ribbon fish dominate while for the central and northern zones the small pelagic species—sardines and mackerels—are more important

TABLE III

Zone-wise contributions of important pelagic and demersal Species during 1978-79 in percentages

<i>Species</i>	<i>South Zone</i>	<i>Central Zone</i>	<i>North Zone</i>
	(in percentage)		
<i>Pelagic:</i>			
Sardine	19	50	31
Mackerel	8	28	64
Anchovilla	N.A.	N.A.	N.A.
<i>Demersal:</i>			
Prawns	72	12	16
Perches	88	11	1
Ribbon Fish	96	2	2
Total	48	31	21

South Zone: Trivandrum and Quilon.

Central Zone: Alleppey, Ernakulam and Trichur

North Zone: Malappuram, Kozhikode and Cannanore

The bulk of prawn catches (70%) is concentrated at two centres at Neendakara and Sakthikulangara in Quilon District, which shows the over concentration of mechanised fishing in Quilon District.

5. Distribution of Marine Production

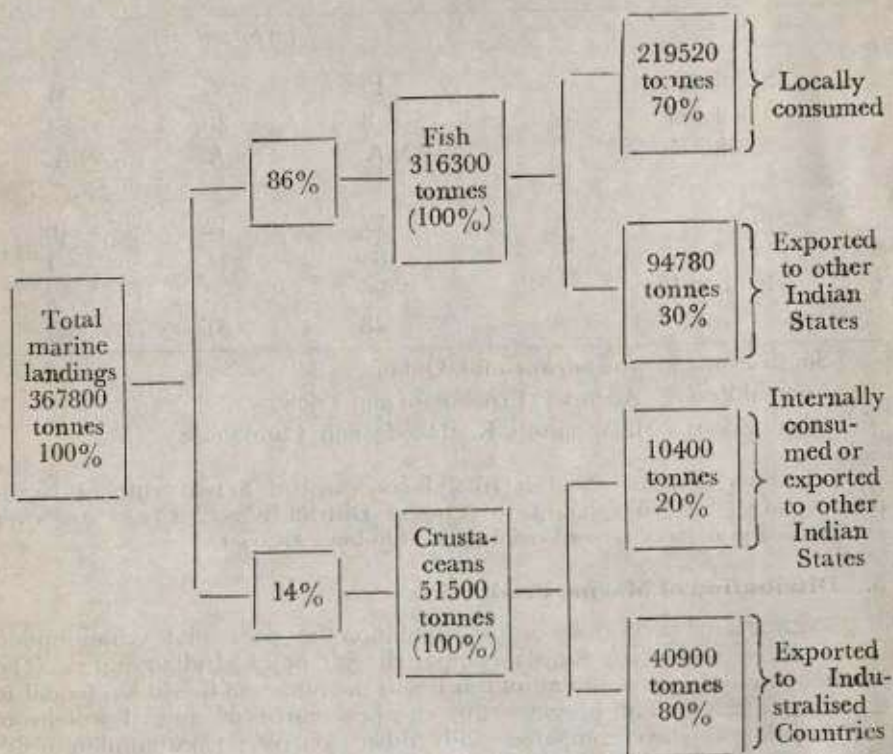
With a large avid fish eating population the per capita consumption of fish is the highest in Kerala compared with other Indian States. The average annual consumption of fish lies in the range of 8-10 kg. (equal to 22-28 gm./day). Fish provides the cheapest source of animal protein to the population when compared with other sources. Consumption of fish also varies from region to region, it is the highest in the coastal belt and lowest in the hilly areas. Distinct consumer preferences are also noticed in the pattern of demand for fish. The upper and middle income groups usually prefer larger species like seer, prinfret, mackerels, carangids etc., that are available in smaller quantities. The smaller species like oil sardines, anchovies etc., that are available in larger quantities are usually consumed by lower income groups like agricultural labourers. Consumers normally prefer fresh fish to iced fish and iced fish to dried fish.

The bulk of the fish produced in the State (nearly 70%) is locally consumed and about 30% are marketed in other Indian States or exported to other countries and the lions share (nearly 80%) of the expensive crustacea (mainly prawns) are exported to the rich industrialized countries.

The approximate distribution of marine fish production in 1978-79 is show in Table.

TABLE IV

**Approximate distribution of marine fish production in
Kerala-1978-79**



6. Disposition of Marine Production

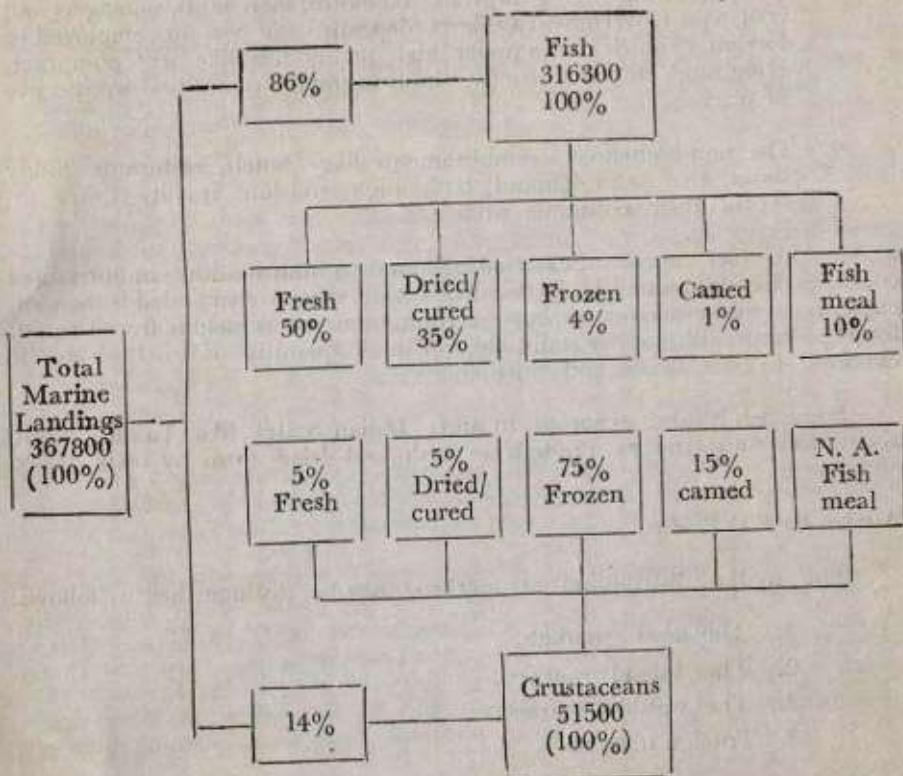
About 50% of the marine fish production in Kerala is consumed in fresh form and 35% is either dried or cured. The rest is either frozen or converted into fish meal. Only a negligible quantity of fish is canned in the State. The bulk of the crustaceans—mostly prawns—are frozen and exported. A small quantity of prawns is canned or dried and the low value items of prawns are consumed fresh within the State.

The approximate disposition of marine production is shown in Table V.

TABLE V

Approximate Disposition of Marine Production during 1978-79

(Units in tonnes)



7. Marketing of Marine Products

Demand for Fish Marine Products—Internal Demand

Nearly 70% of the fish landed is consumed within the State. The internal demand for fish emanate chiefly emanate from four sources. These may be distinguished as follows:

1. The lower income groups comprising mainly of agricultural labourers and headload workers who demand cheap varieties of fish like sardines, anchovies etc., that are available in larger quantities.

2. The middle income group consisting of mainly Government employees, cultivators, factory workers etc., who do not exhibit distinct preference for particular varieties of fish.
3. The higher income groups like landlords, merchants, managers and well paid Government Officers, dependents of persons employed in foreign countries who prefer high quality fish like seer, pompract, crangrades etc., that are (available in smaller quantities) irrespective of prices.
4. The non-household establishments like hotels, resturants, toddy shops, etc., who demand both high and low quality fishes to satisfy their consumer preferences.

The chief source of external demand is from wealthy industrialised countries like Japan and U. S. A. The major species demanded is the most expensive crustacea viz., shrimp—certain other items include frozen squid, froglegs, cuttle fish, lobster tails, etc. A small quantity of dried fish is also exported to Shri Lanka and Burmah.

Some fish is also exported to other Indian States like Tamil Nadu, Karnataka and Andhra Pradesh in fresh and dried form by train, trucks and lorries.

Markets for Fish Products

The spatial distribution of markets may be distinguished as follows:

1. The local markets.
2. The inland markets.
3. The outside markets.
4. Foreign markets.

Local markets are those lying in the fringes of the coastal areas.

The Inland markets are the wholesale markets that are located in the District and Taluk centres of the State.

The outside markets are those lying outside the State i.e., in the neighbouring States.

Participants in the Fish Marketing Process.

In the marketing of marine products, five major types of participants may be differentiated.

1. Headload distributors (fresh and dried fish)
2. Cycle load distributors (fresh and dry fish)

3. Whole sale merchants (fresh and dry)
4. Merchant Exporters (Prawns and other crustaceous)
5. Middlemen.

Headload distributors are mainly basket women who normally conduct way side sale and house to house distribution of fish. Their products are normally derived from catches of the male members of their family who may be active fishermen.

The cycle load distributors are mainly venders who buy fish from the landing centres and distribute to the neighbouring local markets. The above two categories may be characterised by relatively small personal assets and operational capital high labour intensity in the marketing process and low incomes. The wholesale merchants mainly operate in the more important district and taluk fish markets, from where they distribute fish to retailers who comprise of stall traders, wayside traders, headload and cycle load distributors. Wholesale merchants may own lorries and vans.

The export agents are usually employed by big and small processing firms. They are mainly involved in the marketing of prawns, lobsters and other crustacea landed by mechanised boats. They also own lorries and vans.

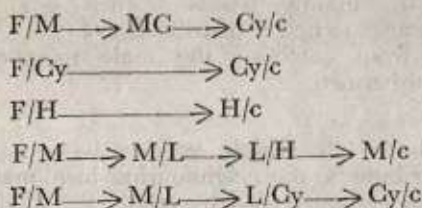
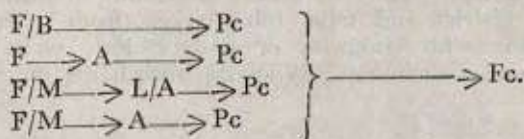
Middlemen played a pivotal role in fish marketing in Kerala from a very long time. They are the intermediary elements in the marketing channel. Three types of middlemen may be recognised. The first category are large in number and they act as petty auctioners on the shore. They act as middlemen between the producer fishermen and the headload and cycleload buyers on the sea shore. Except thickly behaviour, these people do not possess much financial assets at their disposal.

There are also commission agents at the wholesale markets who principally deal between the wholesalers and retailers. They are having comparatively better financial assets than the auctioners on the sea-shore.

Then, there are the agents of exporters who participate in the auctioning of prawns and other crustaceans in the landing centres especially those landed by the non-mechanised boats. They are normally employed by export firms.

The flow of fish and crustacea through the different participants in the fish marketing process to the final consumer is shown in Table VI.

TABLE VI

Flow of Fish and Prawns.*Fish**Prawns**Key*

F—Fishermen

Cy—Cycle load distributor

M—Middlemec

H—Headlord distributor

L—Lorry merchant

C—Consumer

Pc—Processing centre

B—Boat owner

A—Agent of exporter

Fc—Foreign Consumer

8. Employment in the Procurement, Distribution, Processing and Marketing of Marine Products

Fishing industry means the whole field of activity concerned with fish. It may be delineated into a number of activities—catching and landing of fish, procurement, distribution, fish processing industry and fish trade.

Fishery like agriculture is a labour intensive sector. In Kerala it is a chief source of employment to a sizeable section of the workforce. With the exception of the fishing proper that absorbed 1.23 lakh people into active employment in 1971 a chain of activities allied to fishing is a chief source of employment to a large proportion of the work force. The most prominent of such activities with remarkable labour involvement include procurement, distribution processing and marketing of marine products. These form the chief forward linkage activities of the fishery sector.

9. Estimate of Employment in the Forward Linkage Activities

1. Procurement and Movement Locally Consumed Fish.

It is estimated that about 70% of the fish landed in Kerala is absorbed into local consumption either in fresh, dry or cured form. Prior to the final consumption of fish by different sources as mentioned earlier, a series of movements through different media takes place. The procurement and movement of locally consumed fish take place at two levels. One is the procurement and movement of fish by headload and cycle load distributors and the other, the movement in bulk by lorries and vans from landing centres to the wholesale markets.

It is estimated that nearly 30% of the fish landed is handled at the first level. On an average, 20 kg. of fish is handled by a person per day.

The total employment generated at this stage is estimated at 49.11 lakh man days.

In the Inland sector also, the entire fish landed is handled by headload workers creating 9.57 lakh mandays.

In the bulk movement of fish by lorries and vans, it is assumed that 2000 kg. of fish gives employment to four persons (loading, unloading, icing, transport, etc.)

During the period 1974-75 to 1978-79, the bulk movement generated 4.49 lakh mandays of employment.

The fish that is turned out by lorries/vans in the wholesale markets is distributed to different kinds of distributors like stall, traders, head-load, cycleload, and retail distributors that again generate further employment avenues.

Assuming that 30 kgs. of fish per day is handled by one person, this will generate 76.39 lakh mandays of employment.

2. *Salting, Drying and Curing of Fish.*

It is estimated that 35% of the fish landed in the State is either salted/dried/cured.

Assuming that 100 kg. of fish for salting/drying curing can be handled by one person per day this has generated 11.46 lakhs mandays.

3. *Employment in the Procurement and Distribution of Prawns.*

Prawn production is often considered as the sole output of the mechanised sector. Though there is a sizeable fleet of mechanised fishing boats operating in the marine waters and almost all of them are 'Prawn-trawlers', the composition of catch in the mechanised fishery of Kerala—Appendix shows that only 40% of the total catch consists of prawns and other crustaceans. The over exploitation of prawn resources from the inshore belt by an increasing number of mechanised boats—nearly 300—has even led to a drastic decline in the percapita prawn catch of mechanised boats in recent years. See Appendix—All this show that a sizeable proportion of the prawn landings in Kerala is still claimed by the traditional sector. Prawn output of the mechanised and non-mechanised crafts shows that nearly 60% is still contributed by the latter. The procurement and distributions of prawns landed by both the sectors are noted by high labour intensity. Here, a two stage hierarchy exist between the initial producer and the final processor. The first is related to the collection and pooling of prawns and the second stage is the transportation of prawns to the processing centres. From the output of the non-mechanised sector only 50 kg. of prawns may be handled by one person per day due to the highly scattered nature of landings. From the output of the mechanised sector 300 kg. may be handled by one person due to more centralised and bulk landings. In the second stage 2000 kg. is transported by lorry/van which would give employment to 4 persons a day (driving, icing, loading, unloading etc.).

The total manpower generated in the first stage in the non-mechanised sector is 4.16 lakh that of the mechanised sector is 0.46 lakhs. In the second stage 0.70 lakh mandays are generated.

4. *Peeling of Prawns*

This is an important labour intensive activity. It can be assumed that 25 kg. of prawns is peeled by one person per day. This process has generated 12.84 lakh mandays in the marine sector and 1.93 lakh mandays in the inland sector.

5. *Freezing and Processing*

A study on the employment generated in the fish processing industry was conducted by the manpower unit of the Fisheries Directorate in 1978. According to the sample study that covered the whole state estimated that the employment generated in the freezing and processing plants come to about 18.78 lakhs mandays.

The employment content in the procurement, distribution, processing and marketing of marine products in Kerala can be arrived at by a consolidating the above figures. The above forward linkage activities have generated 190 lakh mandays of employment.

10. **Production Trends and Future Demand for Man Power in the Forward Linkage Activities**

The major species of marine fish landed in Kerala are Oil Sardines, Mackerels, Ribbon Fish, Silver Bellies, Soles and Cat fish that account on an average over 75% of the total marine landings in terms of quantity. Marine fish production in Kerala from 1965 onwards is shown in Appendix. The trend in production over the years shows, a gradual and steady upward trend from 1965-68, then widely fluctuating from 1969-75 and then gradually declining. In fact the production of some of the important species like sardines and mackerel that constitute the bulk of the marine landings, shown marked declining trend in recent years. Though the catch of the mechanised boats showed remarkable increases from 1968-1973 its share has fallen from 33% in 1973-74 to 30% in 1978-79 though the number of boats operated has further increased during this period.

11. **Conclusion**

Though the development plans fix up ambitious targets of production, the development strategy pursued is not likely to boost up production in the near future. Though the recent trend in Fish and Prawn production stresses the need for quick diversification of fishing methods for exploiting the deep sea and other potential oceanic resources as well as to introduce national management regulations to prevent the over exploitation of the resources of the inshore belt the development efforts to this end is not so encouraging. Thus there is no much scope for a meaningful leap forward in fish production in Kerala and the scope for further employment prospects in the forward linkage activities are also not so bright. Thus it may be safely concluded that the demand for manpower in the above analysed activities are likely to remain steady over the next few years or so.

The first part of the document is a letter from the author to the editor of the journal. The letter discusses the author's interest in the subject matter and the reasons for writing the paper. It mentions the author's previous work and how this new research builds upon it. The author expresses hope that the findings will be of interest to the readers of the journal.

The second part of the document is the main body of the paper. It begins with an introduction that outlines the research question and the objectives of the study. The author then presents a literature review, summarizing the work of other researchers in the field. This is followed by a description of the methodology used, including the data sources and the statistical techniques employed. The results of the study are then presented in detail, with tables and figures used to illustrate the findings. The author concludes the paper with a discussion of the implications of the results and suggestions for future research.

The final part of the document is the conclusion. The author summarizes the main findings of the study and reiterates the significance of the results. The author also acknowledges the limitations of the study and offers suggestions for further research. The paper ends with a list of references, citing the works of other researchers mentioned in the text.

APPENDIX TABLES

- I. District-wise Details of Fishermen Population in Kerala
- II. Composition of Marine Fish Landings in Kerala—1964-1978
- III. District-wise Marine Fish Landings in Kerala by type of Fish 1979
- IV. Composition of Catch in the Mechanised Fishery of Kerala in 1978.
- V. Trend in Prawn Production by Mechanised Boats at Neendakara during 1973-1979.
- VI. Method of Employment Estimation in the Foreward linkage activities in Fisheries

ABSTRACTS

- 1. The effect of ...
- 2. The effect of ...
- 3. The effect of ...
- 4. The effect of ...
- 5. The effect of ...
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- 10. The effect of ...

APPENDIX I

District-wise Details of Fishermen Population in Kerala

District	No. of fishermen household				Total fishermen population		% of actual fishermen engaged in fishing	
	Hindu	Muslim	Christian	Total	Male%	Female%		
Trivandrum	22365	6	21	73	128125	51	49	9
Quilon	15682	30	14	56	97858	51	49	19
Alleppey	22341	51	8	41	136631	51		23
Kottayam	3245	84	4	12	19420	51	49	23
Ernakulam	15909	62	4	34	102222	50	50	21
Trichur	9634	62	32	6	68543	50	50	18
Malappuram	7280	8	91	1	61849	50	60	21
Kozhikode	11666	41	58.6	0.4	87708	51	49	19
Cannanore	10315	55	41	4	74090	50	50	21
Total	118437	40	25	35	776446	51	49	20

Source:—Socio-economic census of fisheries in Kerala—1980 (Provisional)

APPENDIX II

Composition of Marine Fish Landing in Kerala—1964-1978
(in tonnes)

Name of Fish	1964	1965	1966	1967	1968
Elasmobranchs	7218	5969	8080	7330	4175
Eels	..	3	..	273	2
Cat Fishes	2248	3565	5793	7536	4173
Chirocentras	705	452	427	337	390
Oil-Sardine	190401	219170	202800	235410	247048
Other Sardine	13808	18962	8680	9038	7723
Hilsa Ilisha	2	..	2	..	1
Other Hsila	253	10	..	123	35
Anochoviella	10461	2718	8816	11606	5652

<i>Name of fish</i>	1964	1965	1966	1967	1968
Thrissocles	755	849	2744	2785	1293
Other olupelds	1341	1811	2177	2562	1018
Harpodon nehereus	..	..	..	..	..
Saurida & Saurus	62	199	173	192	581
Hemirhamphus & Belone	30	35	190	101	114
Flying fish	..	..	..	2	4
Perches	791	1057	1286	1717	1649
Red mullets	189	305	2782	164	495
Polynemids	113	73	152	49	80
Scisenids	3647	3267	4921	4310	3630
Ribbon fish	169	13826	21102	6841	992
Caranx	15026	3959	7841	9642	4827
Chorinemus	247	65	142	537	81
Trachynotus	..	..	7	4	19
Other carangids	..	..	7	100	..
Coryphaena	15	5	20	64	12
Elacate	25	54	22	11	30
Leiognathus	9100	9873	12970	11987	7099
Gazza	..	..	..	..	..
Lactarius	990	1332	2393	4824	1771
Pomfrets	1077	435	562	1661	973
Mackerel	9657	18048	10747	4500	3599
Seer Fish	1906	1513	1263	1353	3785
Tunnies	1842	1831	1197	1445	1852
Sphyræna	580	902	267	1129	494
Mugil	463	67	112	285	186
Bregmaeceros	..	..	..	..	..
Soles	4324	7312	4736	3201	9495
Penaeid prawns	35220	14327	28120	27164	25356
Non-penaeid prawns	..	84	259	88	35
Other crustaceans	72	130	357	58	177
Cophalopods	340	174	714	374	1122
Miscellaneous	5406	6771	4683	5328	5283
Total	317973	339173	346744	364129	345301

<i>Name of fish</i>	1969	1970	1971	1972	1973
Elasmobranchs	5759	7490	4889	6986	8852 3
Eels	9	1	31	5	
Catfishes	6245	16380	15189	12636	17438
Chirocentrus	908	877	464	397	544
Oil sardine	139983	191683	194977	104426	122783
Lesser sardines	9485	6139	11403	6790	62421
Hilsa illisha	..	..	9	19	..
Other Hilsa	..	13	6	3	39
Anchoviella	10,846	7948	10,842	10,672	8940
Thrissocles	1166	4610	2349	2001	1663
Other clupeids	1589	1566	1668	1346	1158
Harpoden nehereus	..	..	1	43	45
Sauride & Saurus	546	1066	1395	1426	1136
Hemirhamphus & Belone	83	30	97	88	185
Flying fish	..	3	2	..	1
Perches	2340	4336	3663	3939	8663
Red mullets	1548	279	1573	2960	1537
Polynemids	142	22	569	24	570
Sciaenids	3195	5792	4145	6137	11723
Ribbon fish	7446	4922	17380	10,459	23,897
Caranx	3542	2563	4952	14848	14283
Chorinemus	55	77	49	817	48
Trachynotus	6	..	6	2	..
Other carangids	4	38	3	36	36
Coryphaena	1	1	1	92	153
Elacate	51	118	299	76	52
Leiognathua	14,019	16,167	8609	5042	18,388
Lactarius	1301	1443	2991	3034	6663

<i>Name of Fish</i>	1969	1970	1971	1972	1973
Gazza	..	..	21	15	4
Pomfrets	1177	693	2416	1932	1809
Mackerel	29,981	54,659	95,164	34,516	19,780
Seer fish	1010	1731	2800	1386	1690
Tunnies	978	1226	3043	3626	2699
Sphyraena	339	79	174	1125	2333
Mugil	64	154	549	91	103
Bregmaceros	..	..	..	..	..
Sole:	10039	10212	8807	6119	8551
(a) Penacid prawns	34334	36940	31294	35866	84770
(b) Non-Penacid prawns	34	14	1519	711	981
Lobsters	..	..	..	..	..
Crabs & Other crustaceans	435	556	523	158	1781
Cephalopods	164	86	473	350	339
Miscellaneous	6923	12966	11002	15419	12208
Total	294787	392880	445347	295618	448269

<i>Name of Fish</i>	1974	1975	1976	1977	1978
Elasmobranchs	10338	10292	7308	5796	9302
Eels	49	12	10	6	38
Catfishes	33526	32603	12743	7947	9125
Chirocentrus	860	605	897	547	1298
Oil Sardine	102135	97183	123937	117356	119937
Lesser sardines	31335	33652	34305	20754	11713
Hilsa ilisha	..	10	12	36	182
Other Hilsa	33	..	..	14	69
Anchoviella	19463	11432	9987	10105	21203
Thrissoles	1321	1638	2732	1648	1898
Other clupoids	1323	998	1174	512	973
Harpodon mehereus	18	..	..	..	21
Saurida & Saurus	8839	11294	99	5169	6246
Hemirhamphus & Belone	331	278	141	281	281
Flying Fish	2	..	1	..	..
Perches	20970	14741	3069	14121	24989
Red Mullet	3881	23	2577	240	171
Polynemids	3	105	122	69	35
Sciaenids	9220	16811	6955	11965	13045
Ribbon fish	30192	15175	7687	7440	24207
Caranx	5260	7190	10478	15673	7197
Chorinemus	72	135	265	540	148
Trachynotus	..	6	..	7	19
Other carangids	73	85	6	78	72
Coryphaen	94	61	56	28	19
Elacate	35	62	106	158	166
Leiognathus	17518	5211	2727	7708	3040
Gazza	5	..	..	..	..
Lactarius	2904	983	468	823	1533
Pomfrets	1500	1181	799	3712	1614
Mackerel	10335	14930	19978	19968	25917
Seerfish	4909	4065	5936	3250	3354
Tunnies	5927	5845	12880	6705	6548
Sphyræna	3865	396	494	353	721
Mugil	955	74	26	38	1
(b) Non-penaeid prawns	1014	755	55	174	394
(c) Lobsters	..	31	50	40	38
(d) Crabs & other crustaceans	2886	1797	1316	4621	2176
Cephalopods	2175	3342	872	4973	6516
Miscellaneous	14305	43696	22824	26254	16823
Total	420257	420836	331047	345037	373339

District-wise Landings (Marine) in Kerala by type of Fish 1979

Quantity in tonnes)

Name of fish	TVM	QUN	ALPY	EKM	TGR	MALPM	CLT	CANR	Total
Elasmobranchs	990	1350	551	1858	432	313	418	985	6897
Eels	..	..	..	7	1	..	1	1	10
Cat fishes	500	3288	910	1502	303	259	1245	3222	11229
Chirocentrus	604	115	16	28	38	28	41	255	1125
Oil Sardine	5968	5065	25193	15290	15001	7350	16511	25945	116323
Lesser Sardine	5043	1679	7494	396	130	55	576	541	15914
Hilsa ilisha	6	..	..	..	..	..	..	..	6
Other hilsa	33	2	..	1	..	..	..	..	95
Anchoviella	4112	1885	162	351	19	6	10	5	6550
Thrissoles	38	424	485	170	159	145	169	199	1789
Other clupeids	60	411	43	83	9	..	..	68	674
Harpodon nechereus	..	..	..	..	..	..	1	..	1
Sauridsh Saurus	27	4810	2	466	2	5	10	3	5325
Hemirhamphus & Belone	96	121	17	52	..	..	16	15	257
Flying fish	..	..	..	..	..	..	..	..	..
Perches	1676	15306	105	2873	42	27	65	51	20146
Red Mullet	..	21	1	..	..	37	68	..	127
Polynemiids	..	..	..	1	..	8	18	2	29

Name of fish	TYM	QUN	ALPT	EKM	TCR	MALPM	CLT	CANR	Total
Sciaenids	794	1611	304	1339	137	130	254	665	5234
Ribbonfish	21056	2002	87	638	170	69	853	810	25685
Cerax	10171	573	252	307	181	80	256	492	12312
Choriremus	9	11	1	104	1	1	1	..	128
Trachinotus	..	..	..	..	..	..	..	..	..
Other carangids	..	..	..	..	..	..	..	..	..
Coreplacna	38	7	..	3	..	..	..	..	48
Elacate	15	1	35	45	..	..	12	12	120
Leiognathus	1051	936	305	313	33	71	111	767	3587
Gazza	..	..	..	..	..	..	..	..	..
Lactarius	148	16	14	24	3	14	26	8	253
Pamfres	559	134	39	320	23	38	125	499	1737
Makeral	4133	1475	3699	1181	2782	1710	2177	1889	18546
See fish	2698	544	58	1168	68	60	121	1027	6275
Tunnies	11937	1881	47	1496	4	9	14	2	15390
Spharacna	424	22	1	27	2	1	..	..	476
Mugil	..	6	6	19	6	1	1	..	39
Bregmacros	..	..	..	..	..	..	..	..	..
Soles	254	2269	502	455	80	151	318	458	4487
Panaeud prawns	63	15135	1400	4996	1035	1444	2463	2900	29521
Non-panaeud prawns	53	16	6	..	..	..	..	..	75
Lobsters	8	9	2	..	..	..	1	..	20
Crabs	..	1205	208	907	25	184	730	585	3845
Squilla	..	1941	..	1857	..	..	..	..	3798
Cephalopods	1376	1157	2	440	..	..	..	..	2975
Miscellaneous	685	2515	404	1010	2684	1006	103	128	8535
Total	74565	67943	42882	39727	23370	13202	26721	41114	329524

APPENDIX IV

Composition of Catch in the Mechanised Fishery of Kerala in 1975

<i>Name of fish</i>	<i>Catch in tonnes</i>	<i>%</i>
Elasmobrachs	9,302	7.90
Eels	38	0.03
Cat fishes	9,125	7.80
Perches	21,919	18.70
Redmulletts	171	0.15
Polynemid	35	0.03
Sciaenids	12,045	10.30
Leiognathus	2,140	1.80
Lactarius	1,533	1.30
Pomfrets	1,614	1.40
Soles	5,276	4.50
Penaeid Prawn	45,034	38.40
Non-Penaeid Prawns	394	0.34
Lobsters crabs & other crustaceans	214	0.18
Cephalopods	5506	4.70
Miscellaneous	2010	2.47
Total	1,17,356	100

Source: CMFRI published data.

APPENDIX V

Trend Prawn Production by Mechanised Boats At Neendakara under 1973-74

<i>Year</i>	<i>Total catch (tonnes)</i>	<i>Prawn catch (tonnes)</i>	<i>Total effort in hours</i>	<i>Catch per unit effort for prawn (in kg.)</i>	<i>prawn % of in total catch</i>
1973	66064	45477	550370	82.6	68.8
1974	77748	27764	823719	33.7	35.7
1975	151095	56750	1331728	42.6	37.6
1976	29836	14993	536897	27.9	50.2
1977	45828	24121	1336732	18.0	52.6
1978	89892	33143	241375	13.7	36.8
1979	56016	14582	3467943	4.2	26.0

Source: All Kerala Boat owners association

APPENDIX VI

Method of Employment Estimation:

Employment in the different forward linkage activities is calculated on the basis of the average, Marine production figures for five years from 1974-75 to 1978-79. The number of man days generated in different fishery activities are arrived at as follows:—

1.(a) *Procurement and distribution of locally consumed fish by Cycle load and headload workers*

Assumption.—30% of the fish landed is handled by cycle load and headload workers. On an average 20 kg. of fish is handled by a person per day. The entire inland fish produced is handled by headload workers.

Calculation: (Marine)

	98218000 kg.		
	<hr style="width: 50%; margin: 0 auto;"/>	..	49.11 lakh man days
	20		
(Inland)	19136000		
	<hr style="width: 50%; margin: 0 auto;"/>	..	9.57 lakh man-days
	20		

(b) *Bulk movement by lorries and Vans*

Assumption:—Nearly 70% of the fish moved by lorries and Vans 2000 kg. of fish given employment to four persons per day in bulk movement.

Calculation:

$$\frac{229176000}{2000} \times 4 \quad \dots \quad 4.49 \text{ lakhs.}$$

(c) *Distribution of Fish turned out by Lorries and Vans*

Assumption.—30kg. of fish is handled by one person per day.

Calculation:

$$\frac{229176000}{30} \quad \dots \quad 76.39 \text{ lakhs}$$

2. *Salting Drying and Curing of Fish:*

Assumption: 35% of the fish landed is salted/dried/cured, 100 kg of fish is handed by one person per day.

Calculation:

$$\frac{114588000}{100} \quad \dots \quad 11.46 \text{ lakhs}$$

3. *Employment in the procurement and distribution of prawns*

Assumption: 60% of the prawn catch is carried out by non-mechanised crafts 50kg. of prawns in handled by one person per day. In the mechanised sector 300 kg. per person.

<i>Calculation</i>	<u>2080000</u>	
(a) (Non-mechanised)	50	4.16 lakhs—Mandays
(b) (Mechanised sector)	<u>13874000</u>	
	300	0.46 lakhs Mandays

4. *Movement of prawns by Lorries and Vans:*

Assumption:—2000 kg. of prawns given employment to 4 persons per day.

<i>Calculation:</i>	<u>34684000</u> x4	..	0.70 lakhs man days.
	2000		

5. *Peeling of prawns:*

Assumption:—90% of the prawns landed is subjected to peeling 25 kg. of prawns is peeled by a person per day.

<i>Calculation:</i> (Marine)	<u>32083000</u>	
	25	.. 12.84 lakh mandays.
(Inland)	<u>4818000</u>	
	25	.. 1.93 lakh mandays.

6. *Freezing and processing*

18.78 lakhs

Total man power generated —190.80 lakh Mandays of employment.

400

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