



GOVERNMENT OF KERALA

MANPOWER STUDY SERIES
No. 39

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7

"STUDY ON THE
MANPOWER INVOLVEMENT
IN ENGINEERING INDUSTRIES
IN KERALA"

MANPOWER DIVISION
DEPARTMENT OF ECONOMICS
AND STATISTICS, KERALA
FEBRUARY, 1984



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P R E F A C E

Manpower study series contains reports on manpower topics useful for an efficient systems of manpower planning in the State. This "study on the manpower Involvement in engineering industries in Kerala" conducted by Smt.T.Mony, Manpower Officer of Department of Industries and Commerce, attempts at an assessment of the manpower content and potential of these industrial ventures. It is hoped that finding of this study will be of some use to planners and administrators in this field.

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STATISTICS.

Trivandrum,
24.2 -1984

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CHAPTER - 1

GENERAL ASPECTS OF THE STUDY

1.1 Introduction:-

Industrialisation is held to be the lasting solution for the severe problem of unemployment in the state. It is paradoxical that inspite of the abundance of natural resources and Skilled manpower, Kerala remains industrially backward. Recently Government have taken up a package of measures to promote state's industrial growth and 'Engineering Industries' have shown quick response to these developmental incentives. The present study is intended to assess the role of engineering industries in generating employment opportunities to the educated unemployed persons in the state.

1.2 Objectives:-

This study has been conducted with the main objectives of assessing the present employment content and future employment prospects of engineering industries in the state and also to bring to light factors inhibiting expansion of this industrial sector in the state.

1.3 Methodology and coverage:-

Engineering Industrial units registered upto 1974 have been covered in this study. Out of 1919 units, identified as engineering industries, a sample of 575 units (3%) were selected on a random sample basis, have been subjected to detailed enquiry. The data from sample units have been collected through ~~marked~~ ^{mailed} questionnaire method. The proforma ^{is} given in Appendix.

1.4 Field response:

Out of the 575 units contacted, only 261 units (45%) have returned the proforma duly filled up.

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1.5 Period of study:-

Eventhough the study was ^{initia}invited during the year 1978 the actual data collection was commenced only during January 1980. The collection of data and analysis was completed towards the end of 1983.

1.6 Limitations:-

Delay in collection and analysis of data and consequent noncoverage of engineering units registered after 1974 are some of the serious limitations of this study. Since the ^{marked}questionnaire system was adopted, due to each of trained personnel, all the relevent details could not be gathered. However all possible efforts have been made to notify the defects noted in the filled inschedules received from the selected units.

C H A P T E R-2

RESULTS OF THE STUDY

2.1 Ownership pattern:-

Ownership pattern of engineering industries, given in table 2.1 shows that the highest group (78%) belong to proprietary concerns, followed by partnership firms (12%). 4% of these units is seen registered as companies. The high percentage of single proprietorship is indicative of individual initiative in the development of enterpreneurial talents.

T A B L E 2.1

Ownership pattern of engineering industries.

Type of ownership	Number	Percentage
(1)	(2)	(3)
Single proprietorship	204	78.0
Partnership	31	12.0
Companies	11	4.0
Co-operatives	4	1.5
Charitable societies	4	1.5
Details not available	7	3.0
T o t a l	261	100.0

2.2 Product line:-

Products of engineering industries were heterogenous in nature. About 40% of the units are seen manufacturing grills, gates, rothing shutters etc. and another 36% manufacture agricultural implements and related accessories. In otherwords 76% of engineering units are engaged in the manufacture of items listed as 1 and 2 in table 2.2.

Charitable societies
Details not available

Charitable societies
Details not available

T A B L E 2.2.

Product line of engineering industries.

Name of product	Number	Percentage
(1)	(2)	(3)
1. Grills, gates, steel fabrication, Steel furniture, rolling shutters etc.	105	40.2
2. Agricultural implements, sling hook pipeclamps, servicing repairing and job works.	93	35.6
3. Press tools, Jigs, fixtures, moulding and discastings, non-standard guages, machine welding components, precision components etc.	25	9.6
4. Alluminium Utensils, circles etc.	8	3.1
5. Powertransformers, potential transformers, circuit brakers, electroplating etc.	6	2.3
6. Relays, Switches, Bolts, Nuts etc.	5	1.9
7. Boat building and repairing.	4	1.6
8. Electric fumaces and ovens.	2	0.8
9. Telephone cables, PVC pipes, bare copper conductors.	2	0.8
10. Metal containers.	1	0.3
11. Micellaneous products.	10	3.8
T o t a l	261	100.00

2.3 Employment position:-

In analysing employment in engineering industries, entrepreneurs are treated as own account workers. Table 2.3 shows that 7801 persons are employed in this sector of industry in 261 reported units of which 96% is hired workers and 4% own account workers. Average employment in engineering industrial units works out to 30, constituting 28.9 hired workers and 1.1 owned workers per unit. Employment stood high in Ernakulam

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district and comparatively very low in all other districts. The highest number of reported units is in Trivandrum district followed by of Ernakulam and Cannanore districts.

T A B L E 2.3

District-wise employment position in Engineering Industries

Districts	No. of units.	No. of own account workers	No. of hired workers	Total no. of workers.	Percentage.
(1)	(2)	(3)	(4)	(5)	(6)
Trivandrum	41	42	538	380	4.9
Quilon	22	26	185	211	2.7
Alleppey	31	36	323	359	4.6
Kottayam	28	32	373	405	5.2
Idukki	1	1	2	3	0.1
Ernakulam	39	43	5786	5829	74.7
Trichur	17	20	70	90	1.2
Palghat	19	24	126	150	1.9
Malappuram	18	19	57	76	0.9
Kozhikode	11	16	55	71	0.9
Cannanore	34	37	190	227	2.9
State	261	296	7505	7801	100.0

2.4 Age composition:-

Table 2.4 shows that about 57% of entrepreneurs and 63% of workers were below 51 years age at the time of enquiry. The highest group among entrepreneurs (25%) belonged to 31-40 age group. About 5% of the entrepreneurs, though advanced in age, were dynamic and active in utilising their entrepreneurial talents. Among workers, the highest group (37%) workers of were of below thirty years above 50 years were only about 3%. About 25% of entrepreneurs and 35% of workers did not furnish their age details.

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T A B L E 2.4

Age classification of entrepreneurs and workers.

Age-group	Entrepreneurs		Workers	
	Number	Percentage	Number	Percentage
(1)	(2)	(3)	(4)	(5)
30 years and below	36	12.2	2735	37.1
31 - 40	74	24.9	1679	22.4
41 - 50	59	19.9	232	3.1
51 - 60	39	13.2	197	2.6
Above 60 years	15	5.1	10	0.1
Age not specified	73	24.7	2604	34.7
T o t a l	296	100.0	7505	100.0

2.5. Educational background:-

As furnished in table 2.5, 22% of entrepreneurs are having qualification below S.S.L.C. and more than 31% and E.S.L.C. and above, while highest group (18%) among workers are technically qualified. (Diploma holders) Technically qualified persons among entrepreneurs and workers constitute about 20% of each. About 52% of entrepreneurs and 46% of workers in engineering industries belong to educated manpower category.

T A B L E 2.5

Educational background of entrepreneurs and Workers.

Educational qualification.	Entrepreneurs		Workers	
	Number	Percentage	Number	Percentage
(1)	(2)	(3)	(4)	(5)
Below S.S.L.C.,	66	22.3	580	7.7
S.S.L.C.	62	21.0	764	10.2
P.D.C.	11	3.7	11	0.2
Graduation	18	6.1	1089	14.5
Post graduation	4	1.4	87	1.2
Technical degree	14	4.7	1	0.0
Technical Diploma	16	5.4	1383	18.4
Technical Certificate	30	10.1	131	1.7
Not specified	75	25.3	3460	46.1
T o t a l	296	100.0	7505	100.0

2.6 Skill of workers:-

Unlike workers in general sector industries, those engaged in engineering industries are highly skilled manpower. Table 2.6 shows that about 73% of the workers are skilled, 3% semiskilled and unskilled labourers form only 24% of the total number of workers in the sample units.

T A B L E 2.6

Classification of workers according to skill possessed.

Category	Number	Percentage
Skilled	5465	72.8
Semiskilled	232	3.1
Unskilled	1808	24.1
T o t a l	7505	100.0

2.7 Permanancy of employment:-

As is evident from table 2.7 about 72% of workers are permanent and 10% temporary. Casual workers form only a small percentage. A fair degree of 'Job Security' is seen in the field of engineering industries.

T A B L E 2.7

Nature of employment of workers.

Category	Number	Percentage
Permanent	5376	71.6
Temporary	735	9.8
Casual	55	0.8
Not specified	1339	17.8
T o t a l	7505	100.0

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2.8 Payment pattern:-

Payment pattern is a major determinant of the stability of the unit. Table 2.8 shows that about 75% of workers are paid monthly. About 4% each is paid weekly and daily. About 18% of workers did not furnish this information. Permanency of employment and monthly payment pattern are the dominant characteristics in the labour front of engineering industries.

T A B L E 2.8

Pattern of payment to workers.

Pattern of payment	Number	Percentage
Monthly payment	5588	74.5
Weekly payment	287	3.8
Daily payment	301	4.0
Not specified	1329	17.7
T o t a l	7505	100.0

2.9 Worker's income:-

The economic status of workers in engineering industries, revealed by their income classification given in table 2.9 shows that 45% of the workers have a monthly income of about Rs. 500/- About 28% is found having income below this range of the former category, 22% has income above Rs. 1,000/- p.m. About 27% did not report their income. Workers in engineering industries are average in economic status.

T A B L E 2.9

Classification of workers according to income.

Monthly income group (Rs.)	Number	Percentage
500 and below	2113	28.2
501 - 1000	1694	22.6
Above 1000	1681	22.4
Not specified	2017	26.8
T o t a l	7505	100.0

2.10 Length of Service of workers:-

Engineering industries in the State had a good number of experienced workers as majority (38%) of them in the sample has more than five years of service in their field of activity. Experienced workers are an asset to any establishment.

T A B L E 2.10

Classification of workers according to length service.

Length of Service	Number	Percentage
5 years and below	1749	23.3
More than 5 years	2829	37.7
Not specified	2927	39.0
T o t a l	7505	100.0

2.11 Development prospects:-

Engineering industries in the state showed little prospects of development. A highest group (61%) of entrepreneurs in the sample did not favour the idea of expansion of existing units. About 29% only had plans of expansion. One unit even opted for a closedown of the present unit. It is observed that entrepreneurs often get dejected and dispirited due to unfavourable conditions of industrial expansion in the state. Table 2.11 gives the classification of units according to its idea on expansion of units.

T A B L E 2.11

Classification of units according to opinion of expansion.

Opinion on expansion	Number of units.	Percentage
Favour expansion	77	29.5
Do not favour expansion	158	60.5
Favour close down	1	0.4
Not specified	25	9.6
T o t a l	261	100.0

2.12 Employment Potential:-

As majority of units do not favour the idea of expanding the existing units, prospects of additional employment generation in engineering industries stand very dim. From available data, it is found that 344 persons can be additionally given employment in this sector of industry in the sample units. As is seen from table 2.12, about 68% of additional requirement for employment is for skilled workers, 27% for semiskilled ones and requirement of unskilled workers is only 5% of additional requirement.

T A B L E 2.12
Employment potential in engineering industries.

Employment Category	Number	Percentage
Skilled	233	67.7
Semi skilled	94	27.3
Unskilled	17	5.0
T o t a l	344	100.0

2.13 Problems of engineering industries:-

(1) Capital:- The survey brought to light many of the specific problems that impede the development of engineering industries in the state. Difficulty in mobilising capital is experienced by almost all units. The main sources of capital mobilisation is personal investment, share participation, and loans from banks or other financial institutions. Bank are reported to be non-cooperative in extending financial assistance to these self employment ventures. Banks demand huge collateral security on loans and do not even disburse the loans, already sanctioned, in time.

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(2) Machinery:- Engineering units experience much difficulty in respect of supply of machinery by authorised institutions. Suppliers of machinery, authorised by the financing agencies, have their own specifications which the entrepreneurs often found difficult to accede to. Moreover no finance is given for purchase of additional machinery for a working unit.

(3) Raw materials:- Allotment of raw materials by Government agencies also is found problematic for engineering units. Raw materials allotted for an year is so meagre that it is not sufficient even to meet the requirement for 8 months. Due to the non co-operation of personals at the raw material depot much delay, difficulty and wastage of money is experienced by the Entrepreneurs in lifting the raw materials already sanctioned. Non availability of adequate raw materials and its untimely receipt result in the underutilisation of production capacities and loss of reputation and good will of the units.

(4) Pricing:- Infant units are the badly affected ones by stiff competition from large establishments and are unable to reduce the price for their products on account of high production cost. Imposition of sales tax add fuel to the fire.

(5) Power connection:- Undue delay in getting power connection and dislocation due to powercut are found adding fuel to the problems of engineering units.

(6) Labour trouble:- Engineering industries too suffered on account of labour troubles. According to the entrepreneurs literacy of workers and labour unrest had a high positive correlation.

(7) Factory site:- Many entrepreneurs are of opinion that it is difficult to get a suitable site for factory.

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2.14 Suggestions of entrepreneurs:-

An attempt is made in this study to collect valid suggestions of entrepreneurs for ensuring a 'development climate' for engineering industries in the state.

(1) Financial aid:-

Entrepreneurs wanted more of loan facilities ie. loans on easy terms and reduced rates of interest. Government assistance to meet working capital was also favoured by the entrepreneurs as the units were bound to extend all facilities. Specified under labour Act, to its employees, majority of whom are permanent hands.

(2) Raw materials at controlled rates:-

As wide gap exist in the open market and controlled prices of raw materials, entrepreneurs want supply of adequate quantity of raw materials at controlled rates and atleast 75% of the quota made available in advance to the units.

(3) Sales Tax remission:- In ~~e~~ position of sales tax on items produced in engineering industries should be removed so as to enable them to sell their ~~own~~ products at lower price and attract demand for the products.

C H A P T E R 3

S U M M A R Y A N D C O N C L U S I O N

- (1) The sample study aimed at examining the manpower involvement and potential of engineering industries in the state.
- (2) Of the 1919 engineering units registered up to 1974, a sample of 30% was subjected to detailed enquiry. The percentage of response was 45.
- (3) Delay in data collection and gap in the data furnished are the main limitations.
- (4) 78% of the units are proprietary concerns.
- (5) 40% of the units are engaged in manufacturing gates, grills rolling shutters etc.
- (6) 96% of the employed are paid workers and average employment in an engineering unit came to 30 persons.
- (7) 57% of entrepreneurs and 63% of workers are below 51 years age.
- (8) 52% of entrepreneurs and 46% of workers belong to educated manpower group.
- (9) 73% of the workers are skilled.
- (10) 72% of the employees are permanent.
- (11) 74% of workers are paid monthly.
- (12) 45% of workers have a monthly income of above Rs.500/-
- (13) 38% is experienced workers having more than 5 years services in the industry.
- (14) 61% of entrepreneurs do not want to expand their existing units.
- (15) Additional employment for 344 persons could be created in the sample engineering industries. 68% of the additional requirement is skilled category of manpower.
- (16) Scarcity of capital, non-availability of adequate raw materials, inadequate supply of machinery, high prices of products, powercut, labour troubles, non-availability of suitable factory site etc. are some of the main problems of engineering industries.
- (17) Easy and lowcost loans, supply of rawmaterials at controlled rates, sales tax remission for products of engineering industries etc. are some of the main suggestions for revitalising this sector of industry.

ANNEXURE I.

GOVERNMENT OF KERALA

INDUSTRIES DEVELOPMENT COMMISSIONER

STUDY ON ENGINEERING INDUSTRY IN KERALA, 1978.

Block I. Identification particulars:-

1. Name of the factory/Unit, with registration No. (if any).
 - (i) Village
 - (ii) Post office
 - (iii) Panchayat/Town.
 - (iv) Taluk.
 - (v) District.
2. Form of organisation and ownership..... Individual/Partnership
Co-operatives/others(specify)
3. Date of starting production in the unit.
4. Are you using power in the unit for industrial purpose? Yes/No
5. Products manufactured:-

Sl. No.	Name of Product	Unit	Licensed capacity	Instal- led capacity	Production		Production	
					1976	1977	1976	1977
					Qty.	Qty.	Qty.	Qty.

6. What is the process/ Technology/used for the production of the above items (Manual, Mechanical with what type of Machine etc.)

Contd....

Block II - Details of Proprietor/Manager.

1. Name and age:
2. Qualification:
3. Previous experience in the industry
4. Training if any:
5. Are you running any other Industrial unit or business? Yes/No
6. If yes, what Industry business?
7. Is this unit ancillary to it? Yes/No

BLOCK III - Details of factory/unit.

A. Fixed Capital.

Sl. No.	Item	Present value (Rs.)	Annual lease amount (Rs.)	Monthly Rent (Rs.)
1.	Land			
2.	Building			
3.	Plant, Machinery and other fixed Assets.			
	T o t a l			

B. Working Capital.

Sl No	Item	Present value (Rs.)
1.	Materials, stores, Fuel etc. in Block.	
2.	Semi finished goods including those in process	
3.	Products in stock.	
4.	Cash in hand/Bank.	
5.	Net amount receivable.	
	T o t a l	

Contd...

C. Borrowing & Equip.

Sl.No.	Source.	Borrowed (Rs.)	Outstanding (Rs.)
1.	Government.		
2.	Banks(Nationalised)		
3.	Co-op.Banks.		
4.	Other Banks.		
5.	K.F.C./Other Corporations.		
6.	Others(Specify)-.....		
7.	Equity Capital.		
T o t a l			

BLOCK. IV. Value of Inputs and Expenses During the last Three years (Rs.)

Sl.No.	Item	For the year.		
		1975	1976	1977
I. <u>INPUTS.</u>				
1.	Value of raw materials/			
2.	Consumable Stores includ- ing maintenance spares.			
3.	Steam, Power, Fuel etc. used.			
II. <u>EXPENDITURE.</u>				
1.	Wages, Salaries, Bonus & other charges.			
2.	Maintenance, Expenditure packing, taxes, insurance etc.			
3.	Interest Paid.			
III. <u>DEPRECIATION ON FIXED CAPITAL</u>				
1.	Value of Annual Sales(Dress)			
2.	Sales Tax and excise Tax.			

BLOCK V. SERVICE & OTHER ACTIVIES.

Sl. No.	Item of activity	Value (Rs.) for the year		
		1975	1976	1977
1.	Production - Job Work			
2.	Servicing.			
3.	Repairing.			

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BLOCK VI. AVAILABILITY AND SOURCES OF RAW MATERIALS.

Sl.No.	Item	Source	Qty.	Value (Rs.)	Remarks
Total					

VII. DETAILS OF EXPANSION PROGRAMME, IF ANY

A. FUTURE REQUIREMENT OF WORKERS (IN THE COMING YEAR)

Sl.No.	Name of Occupation	No. required		
		Male	Female	Children
Total				

B. Scheme, Envisaged (Pre/note)

C. Note on problems faced and suggestions for improvement.

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VIII. WORKERS.

Sl. No. of Staff	Category or Designation of Staff	Pay scale (Rs.)	Total emoluments Min. - Max. - num. (Rs.) (Rs.)	No. of Workers		No. of persons in the Age - Group of	
				Males	Females	Below 20	Above 20
				Regular	Tempor-ary	Local	Outsider
				Skilled	Unskilled	Local	Outsider

Sl. No.	Category or Designation of Staff	Pay scale (Rs.)	Total emoluments Min. - Max. - num. (Rs.) (Rs.)	No. of persons with qualifications.	No. of persons with service in years.	REMARKS.
40-45	above 55			Post Graduate	Less than 1	greater than 5
				Graduate		
				Diploma		
				Certificate		
				Metric		
				Non-Metric		
				Others.		

VIII. WORKERS.

NO. OF WORKING DAYS DURING THE YEAR 1977.

Sl. No.	Name of Employees	1	2	3	4	5	6	7	8	9	10	11	12	13	14
				Male(M) or Female(F)	Design or nature of work.	Attendance during the year 1977(No.)	Skilled or Unskilled(US)	Temporary(T) or Regular (R)	Local(L) or Outsider(O)	Age as on 31-12-1977	Basic qualification and type of skill possessed.	Training under Gene with name of course duration & Institution.	Total period of Service in the firm (Years)	Total monthly emoluments and scale of pay (RS)	Mark whether daily/weekly/Monthly paid worker or apprentice.

* Use additional sheets if necessary.

Place:

Date.

Signature of Proprietor/
Manager/Informant.

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