

**THE PERSPECTIVE PLAN FOR TAMIL NADU**

**மக்கள் வளத்தில் மலரும் தமிழகம்**

**HUMAN RESOURCES FOR PROSPERITY  
IN TAMIL NADU**

**REPORT OF THE TASK FORCE ON  
HUMAN RESOURCES AND SOCIAL CHANGE  
FOR ECONOMIC DEVELOPMENT**

**1972 - 1984**

**Volume I**

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**STATE PLANNING COMMISSION  
EZHILAGAM, MADRAS-5**

Sub. Regional Systems Unit  
National Institute of Educational  
Planning and Administration  
17-B, SriAurobindo Marg, New Delhi-110016  
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This report of the Task Force sets forth its recommendations on Human Resources and Social Change for Economic Development and is not to be taken as the Perspective Plan for that sector which the Planning Commission will issue in 1973.



**DR. V. SHANMUGASUNDARAM,**  
B.A. (HONS. ECON.), M.A. (POL. SC.),  
M.LITT., Ph.D.,  
MEMBER.

STATE PLANNING COMMISSION,  
EZHILAGAM, MADRAS-5.

*Dated 31st January 1973.*

My dear Chairman,

[*Subject.*—State Planning Commission—Perspective Plan—Task Force on Human Resources and Social Change for Economic Development—1972–1984—Report—Letter of transmittal.]

I have the honour to transmit to you the Report of the Task Force on Human Resources and Social Change for Economic Development that was set up on 30th November 1971. The report suggests ways and means of developing and utilising our valuable human resources, and practical measures to bring about social change to aid economic development.

Progressive social attitudes and social change have been identified as important determinants in the process of economic growth and development, and therefore growth-promoting attitudes are to be encouraged and growth-retarding attitudes are to be discouraged. The social problems have to be solved by both “Frontal Attack” in selected areas and “Flank Attack” along the sides.

Tamil culture is essentially egalitarian in nature, and any investment in bringing about a renaissance of Tamil culture, will be a direct investment for bringing about social change. Suitable schemes have been suggested for progress in this direction. Special mention may be made of schemes like “Establishment of an Academy of Tamil Culture”, “Village Level Clubs”, “Intensive Pre-school Social Education” for bringing about rapid social change. These schemes, if implemented, will greatly aid the process of creating a casteless and classless society.

The problem of unemployment is the most urgent issue in social justice. There have been many a conceptual maze in which committees on unemployment have been caught in India and other developing countries. In rich countries industrial full employment is the instrument of economic progress and increasing standard of living. In contrast, poverty in Tamil Nadu as in the rest of India is linked with unemployment and underemployment of many kinds in the unorganised industries and agriculture. The most important aim ought to be to provide a sufficient level of income for each family in Tamil Nadu through appropriate man-power budget, and employment programmes linked to income policy. Simultaneously, technical studies, man-power surveys and man-power forecasts for the perspective plan period have to be initiated. In this context, the establishment of a State Man-power Division with research and programming functions has been suggested.

Educated unemployment is a paradoxical problem caused by accumulated errors, miscalculations and misplaced investment of scarce human and material resources. Special attention is necessary to clear (a) the backlog of educated unemployed and (b) to avert misinvestment in education and consequent future problems of educated unemployment. Major changes in the employment profiles of Tamil Nadu and forecast of employment by broad industrial activities during the Perspective Plan are given in this report.

Social Development Planning for the welfare of backward classes, harjans and tribal populations, is a pre-requisite for ushering in an era of economic development with social justice. The perspective plan strategy lays special significance on information, research and evaluation for this purpose. There is need for clear and assured allocation of resources for every sector and sub-sector of planning for the welfare of scheduled castes, and scheduled tribes and backward classes. Besides the weaker sections and socially under-privileged classes, there are areas of social distress within a district or between two or more districts. The plan schemes should be devised to take care of them. Special attention has been given in this report to the urgent need to humanise the unclean occupations in which some of the weaker sections are employed now, and schemes have been suggested for the elimination of health hazards and occupational misery of scavenging workers and other socially downtrodden people.

The weaker sections in the society such as the old-aged, the handicapped, the destitute women and children and the non-student youth are in urgent need of support. There appears to be a wide information gap at present and we need reliable information in those spheres, in the context of increased expectancy of life, and the aim to improve the status of women. With the available data, schemes have been suggested for meeting a few of the situations and for coordinating the efforts of Governmental and private agencies in the field. Social Defence Programmes are reoriented to include preventive measures and curative measures. For Women and Child Welfare, an integrated family and child welfare approach has been adopted. The role of private agencies and that of Government are discussed and the whole approach to social welfare is through measures for proper development of our human resources.

To ensure improved labour welfare and industrial relations, machinery to solve industrial dispute has been evolved in keeping with healthy trade union practices and also taking into consideration the concept of good faith in bargaining on the part of management as well as labour. The workers constitute an important segment of our human resources, and their contentment and economic progress is revealed by their welfare and productivity. Suitable schemes have been suggested for the promotion of labour welfare and for ensuring better working conditions. So far, organised labour in large scale enterprises and urbanised labour force have largely drawn the attention of the public as also of the Government. It is necessary to study the problems of the unorganised industrial, agricultural and other categories of labour force, with a view to ameliorating their conditions.

▼

Volume I of the report entitled “மக்கள் வளத்தில் மலரும் தமிழகம்” “Human resources of prosperity in Tamil Nadu”, presents the human resources picture of Tamil Nadu and draws attention to the need for manpower research, employment and unemployment studies. Reviewing the past trends and forecasting the needs in the immediate future, certain proposals for the relief of the unemployed and measures for craftsmen training and employment services are discussed. Human Resources have quantitative and qualitative, physiological and pathological, educational and health implications. In view of the work done already by the Task Forces on Education and Health, these issues have not been raised again here and the finding of these reports have to be integrated with this report to develop a comprehensive strategy for utilisation of human resources for economic development. Industrial and agricultural labour welfare are subjects covered in this report.

Volume II of the report is on “தமிழக மறுமலர்ச்சியில் புதிய சமுதாயம்”, “A new Society through Renaissance in Tamil Nadu”. Social Development Plan is the counterpart of economic plan to reach a new society which would spread justly the benefits of economic growth attributable to modern scientific technology. It is also necessary to develop social technology alongside material technology. Social Welfare projects and Social Change strategies with particular reference to the welfare of Backward Classes, Scheduled Tribes, Scheduled Castes and Denotified Tribes, have been worked out. Welfare of women and children, social amelioration measures for the aged, destitutes and socially handicapped people of Tamil Nadu are the features of the Social Development Programmes.

I am presenting this report on behalf of the Task Force on Human Resources and Social Change for Economic Development which comprises the following members and other special invitees :

Dr. V. Shanmugasundaram (*Chairman*)

Dr. Malcolm S. Adiseshiah.

Thiru Murasoli Maran, M.P.

Thiru K. Veeramani.

Thiru V. Karthikeyan, I.A.S.

Thiru M. M. Rajendran, I.A.S., succeeded by Thiru D. K. Oza, I.A.S.

Thiru V. S. Subbiah, I.A.S., succeeded by Thiru R. Pasupathi, I.A.S.

Thiru G. Jas, I.A.S., succeeded by Thiru L. M. Vasagam, I.A.S.

Prof. K. S. Sonachalam.

Thiru K. Venkatesan, I.A.S.

Thiru K. Vezhavendan, M.L.A.

Thavathiru Kundrakudi Adigalar, M.L.C.

Thiru N. V. N. Somasundaram.

Tmt. Latika D. Padalkar, I.A.S., succeeded by Thiru V. Sundaram,  
I.A.S.,

Thiru A. M. Mohideen, M.L.A.

Thiru G. A. Dharmarajan.

Thiru M. S. Ramanujam.

Thiru A. Uthandaraman, I.A.S. (Retd.).

Thiru V. A. Ramachandran.

Thiru T. B. Bharathi, I.A.S., succeeded by Thiru R. Pandarinathan,  
I.A.S., and Thiru R. Padmanabhan, I.A.S.

Prof. M. Ruthnaswamy, M.P.

Thiru G. Thirumal, I.A.S., succeeded by Thiru M. K. Gomethaga-  
velu, I.A.S.

Prof. T. E. Shanmugam.

Thiru G. Kamalarathnam, I.A.S.

Thiru K. Dharmarajan, I.A.S.

Dr. (Tmt.) C. Parvathamma.

Tmt. Champalakshmi Venkatachalam.

Thiru P. Subramaniam (*Member-Secretary*).

The Task Force divided itself into Working Groups on Employment, Manpower, Social Change, Industrial Relation and Labour Welfare and sub-groups covering different specialised issues.

I would like to express my profound gratitude to all the members of the Task Force and the Working Groups and sub-groups for their hard work, ready response and deep devotion which enabled me to present this report.

I wish to place on record, my high appreciation of the technical knowledge and work of Thiru P. Subramaniam, Secretary of the Task Force on Human Resources and Social Change for Economic Development. His familiarity with the numerous subjects covered in this report has been helpful in the drafting and the presentation of this report.

The State of Tamil Nadu is held in high esteem all over India for its rapid strides in Social Change and Welfare measures. At the technical sessions we held in different Universities especially in the Jawaharlal Nehru University, New Delhi, there was a large measure of hearty appreciation of Tamil Nadu for the spectacular progress in social change.

May I venture to submit that Tamil Nadu is now poised to become a pioneer in Social Development Planning to usher in a society that ensures both economic prosperity and social justice.

I remain at your service and will be happy to render any further assistance, and to provide any further information that you may need.

With kind regards,

Yours sincerely,  
V. SHANMUGASUNDARAM.

To

DR. KALAIIGNAR M. KARUNANIDHI,  
Chairman,  
State Planning Commission.  
Fort St. George, Madras-9.

Copy to:

1. HON'BLE THIRU S. MADHAVAN, B. COM. B.L.,  
*Minister for Industries,*  
*Fort St. George, Madras-9.*
2. HON'BLE THIRU N. V. NATARAJAN,  
*Minister for Backward Classes,*  
*Fort St. George, Madras-9.*
3. HON'BLE THIRUMATHI SATHIYAVANIMUTHU,  
*Minister for Harijan Welfare and Social Welfare,*  
*Fort St. George, Madras-9.*
4. HON'BLE THIRU K. RAJARAM, B.A.,  
*Minister for Labour,*  
*Fort St. George, Madras-9.*





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## PREFACE.

One of the directive principles of State Policy enunciated in the Constitution of India is to promote the welfare of the people and to achieve this, the State Government have undertaken planned development in the state through the various Five-Year Plans and Annual Plans. In allocating resources for implementation of the Plan, the State Government have been guided by the following principles and policies :

(a) to promote the welfare of the people by securing and protecting, as effectively as possible, a social order in which justice, social, economic and political is ensured ;

(b) to achieve a rapid rise in the standard of living of the people by an efficient exploitation of the resources of the State, increasing production, enhancing opportunities to all for employment in the services of the community ;

(c) to ensure that the ownership and control of the material resources of the community are so distributed as best to subserve the common good.

(d) to ensure that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment.

2. In furtherance of these principles, and in order to help Government implement its policies effectively by more efficient utilisation of the material, capital and human resources within the State and outside, the Government of Tamil Nadu constituted a State Planning Commission. The most important task of the State Planning Commission is to draft a perspective plan covering the period 1972-1984 drawing up an estimate of the investment in the various sectors of economic activity to achieve the desired target of rate of growth, consistent with social justice.

3. The Planning for the State will be based on an integrated approach covering (1) Sectoral Profiles and Long Term Planning and (2) District Planning and Data Collection. For Sectoral Profiles and Long Term Planning, the State Planning Commission has constituted fifteen Task Forces with the following terms of reference :—

(i) the resources endowment, the present pattern and intensity of its utilisation ;

(ii) a critical review of programmes which have been implemented during the last two decades and their impact on production and productivity ; and

(iii) directions of future development based on resources and needs which includes the broad strategy of development and a complete inventory of on-going projects as well as the shelf of new projects which are proposed to be taken up in future.

(iv) The Task Forces will spell out constraints to development also.

4. Of these Task Forces, the Task Force on Human Resources and Social Change for Economic Development, headed by Dr. V. Shanmugasundaram, B.A. (Hons.), (Econ.), I.A., (P.Sc.), M.Litt., Ph.D., Member, State Planning Commission, was entrusted with the

task of preparation of the report for Human Resources and Social Change for Economic Development. The objectives before the Task Force in drawing up its report are —

I. To ensure Social Development Planning mainly by :

- (a) Devising a strategy for Full Employment.
- (b) Making special provision for raising the income of the rural poor above poverty line.
- (c) Bringing about social change with a view to ensuring economic development.
- (d) Tackling the problem of educated unemployed successfully.
- (e) Drawing up a strategy for manpower development and utilisation.
- (f) Suggesting a strategy for the proper development of our human resources, not covered by other Task Forces.
- (g) Investment in Tamil Cultural Development and propagation as a means of humanising the development programmes as also to bring into existence an egalitarian society.
- (h) Developing a programme of Intensive Child Care at the pre-school stage with a view to re-orienting social attitudes and social values.
- (i) Promoting welfare of Backward Classes including Harijans and Tribals.
- (j) Promoting Social Welfare Programmes.
- (k) Re-orienting the Social Defence Programmes.
- (l) Promoting the Labour Welfare and Industrial harmony.

II. To work out projects to be implemented during the Fifth and Sixth Plans which would translate the above objectives into realities.

III. To conceptualise pragamatically and to the extent possible difficult and elusive economic terms relevant to Indian conditions such as employment, unemployment, under employment, social attitudes, social interaction, etc., and to use this in achieving the objectives enunciated above.

5. The Task Force was inaugurated on 30th November 1971 by Honourable Thiru N. V. Natarajan, Minister for Labour, Government of Tamil Nadu. The names of persons with profound knowledge and experience in their various fields of activities acted as the Members or Special invitees are given hereunder :—

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Dr. Malcolm S. Adiseshiah.
3. Thiru Murasoli Maran, M.P.
4. Thiru K. Veeramani.
5. Thiru V. Karthikeyan, I.A.S.
6. Thiru M. M. Rajendran, I.A.S., succeeded by Thiru D. K. Oza, I.A.S.



7. Thiru V. S. Subbiah, I.A.S., succeeded by Thiru R. Pasupathi, I.A.S.
8. Thiru G. Jas, I.A.S., succeeded by Thiru L. M. Vasagam, I.A.S.
9. Prof. K. S. Sonachalam.
10. Thiru K. Venkatesan, I.A.S.
11. Thiru K. Vezhavendan, M.L.A.
12. Thavathiru Kundrakudi Adigalar, M.L.C.
13. Thiru N. V. N. Somasundaram.
14. Thirumathi Latika D. Padalkar, I.A.S., succeeded by Thiru V. Sundaram, I.A.S.
15. Thiru A. M. Mohideen, M.L.A.
16. Thiru G. A. Dharmarajan,
17. Thiru M. S. Ramanujam.
18. Thiru A. Uthandaraman, I.A.S. (Retd.).
19. Thiru V. A. Ramachandran.
20. Thiru T. B. Bharathi, I.A.S., succeeded by Thiru R. Pandarinathan, I.A.S., and Thiru R. Padmanabhan, I.A.S.
21. Prof. M. Ruthnaswamy, M.P.
22. Thiru G. Thirumal, I.A.S., succeeded by Thiru M. K. Gomethagavelu, I.A.S.
23. Prof. T. E. Shanmugam.
24. Thiru G. Kamalarathnam, I.A.S.
25. Thiru K. Dharmarajan, I.A.S.
26. Dr. (Thirumathi) C. Parvathamma.
27. Thirumathi Champalakshmi Venkatachalam.
28. Thiru P. Subramaniam, (*Member—Secretary*).

6. For purpose of discussing the subjects in depth, the Task Force constituted the following working Groups and Sub-groups.

#### I. WORKING GROUP ON 'MANPOWER.'

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Thiru G. Jas, I.A.S., succeeded by Thiru L. M. Vasagam, I.A.S. (*Convener*).
3. Thiru Murasoli Maran, M.P.
4. Thiru K. Vezhavendan, M.L.A.
5. Prof. K. S. Sonachalam.
6. Thiru B. T. Sampath, (Representative for Thiru N. S. Bhat).
7. Thiru T. V. Narayanan Nayar (Representative for Thiru A. M. M. Arunachalam).
8. Thiru C. N. Raghavan, I.A.S., succeeded by Thiru H. B. N. Shetty, I.A.S.
9. Thiru V. Krishnamoorthy.
10. Thirumathi Latika D. Padalkar, I.A.S.
11. Thiru M. S. Ramanujam.
12. Thiru C. V. Rm. Alagappa Chettiar.
13. Thiru C. S. Krishnaswami.
14. Thiru A. B. Ananthakrishnan.
15. Thiru C. Sankaranarayanan.
16. Thiru P. Subramaniam (*Member-Secretary*).

## II. WORKING GROUP ON 'EMPLOYMENT'.

1. Dr. V. Shanmugasundaram, (*Chairman*).
2. Thiru G. Jas, I.A.S., succeeded by Thiru L. M. Vasagam, I.A.S., (*Convener*).
3. Thiru N. V. N. Somasundaram.
4. Thiru V. S. Subbiah, I.A.S.
5. Thiru M. M. Rajendran, I.A.S.
6. Thiru C. N. Raghavan, I.A.S., succeeded by Thiru H. B. N. Shetty, I.A.S.
7. Thiru G. Thirumal, I.A.S., succeeded by Thiru M. K. Gomethagavelu, I.A.S.
8. Prof. K. S. Sonachalam.
9. Thiru R. Balasubramaniam, I.A.S.
10. Thiru G. A. Dharmarajan.
11. Thiru M. S. Ramanujam.
12. Thiru P. N. Vedanarayanan, I.A.S.
13. Thiru M. Raghupathy, I.A.S.
14. Thiru S. Velayudam.
15. Thiru U. Aiyasamy.
16. Thiru P. Subramaniam, (*Member-Secretary*).

## III. WORKING GROUP ON 'INDUSTRIAL RELATIONS AND LABOUR WELFARE'.

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Thiru G. Kamalaratnam, I.A.S., (*Convener*).
3. Thiru M. M. Rajendran, I.A.S., succeeded by Thiru D. K. Oza, I.A.S.
4. Thiru K. M. Sundaram.
5. Thiru J. Brown.
6. Thiru K. Vezhavendan, M.L.A.
7. Thiru A. Subramaniam, M.L.A.
8. Thiru R. Rangasami.
9. Dr. V. Anantaraman.
10. Thiru P. Subramaniam (*Member-Secretary*).

## IV. WORKING GROUP ON 'SOCIAL CHANGE'.

1. Dr. V. Shanmugasundaram, (*Chairman*).
2. Thiru T. B. Bharathi, I.A.S., succeeded by Thiru R. Pandarinathan, **I.A.S.**,  
(*Convener*).
3. Thiru G. Thirumal, I.A.S., succeeded by Thiru M. K. Gomethagavelu, **I.A.S.**
4. Thiru Murasoli Maran, M.P.
5. Thiru K. Veeramani,
6. Thiru A. M. Mohideen, M.L.A.
7. Thavathiru Kunrakudi Adigalar, M.L.C.
8. Prof. K. S. Sonachalam.
9. Thirumathi Latika D. Padalkar, I.A.S.
10. Prof. T. E. Shanmugam.

11. Thiru K. S. Narasimhan, I.A.S.
12. Thiru V. N. Thiagarajan.
13. Thirumathi Sita Badrinath.
14. Thiru P. Subramaniam (*Member-secretary*).

V. WORKING GROUP ON FIELD STUDY OF 'SOCIAL CHANGE'.  
(Held at Jawaharlal Nehru University, New Delhi.)

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Dr. Sekar.
3. Dr. V. Oommen.
4. Dr. K. G. Krishnamurthy.
5. Prof. Yogender Singh.
6. Dr. Nallagoundan.
7. Thiru V. N. Thiagarajan.
8. Selvi Fernandez.
9. Thiru Bose.
10. Thiru P. Subramaniam (*Member-Secretary*).

VI. SUB-GROUP ON 'MANPOWER IN ORGANISED SECTOR'.

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Thiru J. Jas, I.A.S., succeeded by Thiru L. M. Vasagam, I.A.S. (*Convener*).
3. Prof. K. S. Sonachalam.
4. Thiru K. Vezhavendan, M.L.A.
5. Thiru B. T. Sampath.
6. Thiru M. S. Ramanujam.
7. Thiru P. Subramaniam (*Member-Secretary*).

VII. SUB-GROUP ON 'MANPOWER IN UNORGANISED SECTOR'.

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Prof. K. S. Sonachalam (*Convener*).
3. Thiru K. Vezhavendan, M.L.A.
4. Thiru G. Thirumal, I.A.S.
5. Thiru M. S. Ramanujam.
6. Thiru P. Subramaniam (*Member-Secretary*).

VIII. SUB-GROUP ON 'PROFESSIONAL MANPOWER'.

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Thiru G. A. Dharmarajan, (*Convener*).
3. Thiru G. Jas, I.A.S., succeeded by Thiru L. M. Vasagam, I.A.S.
4. Prof. K. S. Sonachalam
5. Thiru T. V. Narayanan Nayar.
6. Thiru P. Subramaniam (*Member-Secretary*).

## IX. SUB-GROUP ON 'MANPOWER IN PRINTING INDUSTRY'.

1. Dr. V. Shanmugasundaram, (*Chairman*).
2. Thiru G. Ranga Rao, I.A.S., succeeded by Thiru F. J. Vaz, I.A.S., and Thiru C. Thangaraju, I.A.S., (*Convener*).
3. Thiru M. R. Srinivasan.
4. Thiru V. Sethuraman.
5. Thiru M. Saravanan.
6. Thiru P. Somasundaram, I.A.S.
7. Thiru D. Gangappa, I.A.S.
8. Thiru K. S. Krishnamoorthy.
9. Thiru Venkateswaran.
10. Thiru T. V. S. Manian.
11. Thiru G. Baskaran.
12. Thiru Kannan.
13. Thiru S. Viswanathan.
14. Thiru Padmanabhan.
15. Thiru N. Parthasarathy.
16. Thiru K. P. Kandaswamy.
17. Thiru M. D. Gopalakrishnan.
18. Thiru T. V. Subbaraman.
19. Thiru K. Periaswami.
20. Thiru Vishnumoorthy.
21. Thiru Naik.
22. Thiru D. Natarajan.
23. Thiru P. Subramaniam (*Member-Secretary*).

## X. SUB-GROUP ON 'SOCIAL CHANGE AND SOCIAL LAW'.

1. Dr. V. Shanmugasundaram, (*Chairman*).
2. Thiru A. Padmanabhan, I.A.S.
3. Thiru D. K. Oza, I.A.S.
4. Thiru C. Balasubramaniam,
5. Thiru P. Sankaran, I.A.S.
6. Thiru S. Rajaraman,
7. Thiru A. Palaniswami.
8. Thiru V. Venkatesan.
9. Thiru P. Subramaniam (*Member-Secretary*).

## XI. SUB-GROUP ON 'VOLUNTARY AGENCIES AND EMPLOYMENT'.

1. Dr. V. Shanmugasundaram, (*Chairman*).
2. Thiru K. R. Sundararajan.
3. Thiru S. M. Diaz, I.P.S.
4. Thiru G. A. Dharmarajan.
5. Thiru P. Subramaniam (*Member-Secretary*).

## XII. SUB-GROUP ON "ECONOMIC MANAGEMENT AND PLAN ADMINISTRATION".

1. Dr. V. Shanmugasundaram (*Chairman*).
2. Thiru K. S. Sivasubramanian, I.A.S.
3. Thiru C. Ramdas, I.A.S.
4. Thiru K. A. Sundaram, I.A.S.
5. Prof. K. S. Sonachalam.
6. Dr. B. V. Krishnamoorthy.
7. Thiru D. Natarajan.
8. Thiru P. Subramaniam (*Member-Secretary*).

7. The Task Force held eight meetings, and the various working groups and Sub-groups had periodical meetings. The Sub-groups on "Manpower in Printing Industry" and "Economic Management and Plan Administration" have been established to carry out special studies.

8. This report of the Task Force is divided into two volumes—Volume I of the report entitled "Human Resources for prosperity in Tamil Nadu (மக்கள் வளத்தில் மலரும் தமிழகம்)" covers the following subjects: Human Resources of Tamil Nadu—a demographic study; Manpower Research for Planning; Employment and Unemployment—a review of past trends; Estimates and Forecasts of Manpower and Employment; Programmes for relieving unemployment; Development of Employment Services and Craftsmen Training Programmes; Manpower contents of the plan projects; Industrial Relations and Labour Welfare; Concepts of Good faith in Industrial Relations; Important recommendations of the National Commission on Labour and needs of Tamil Nadu and the Plan Schemes for Labour Welfare and Industrial Relations.

Volume II of the report is entitled "A new society through renaissance in Tamil Nadu" (தமிழக மறுமலர்ச்சியில் புதிய சமுதாயம்) and it covers the following subjects: Social Development Planning; An approach to Social Welfare Programmes of the Perspective Plan; Social Change—Approach and Programmes; Welfare of the Backward Classes—a review of the present situation; Employment of Backward Classes; Projects for the Welfare of Scheduled Tribes, Scheduled Castes, Backward Classes and Denotified Tribes, Women's and Child Welfare; Welfare of the old aged, destitutes and the handicapped and other social welfare and social defence programmes; Perspective Plan Projects for Social Welfare; a summary of the main recommendations, and lists of project and Budget Summary.

9. The Task Force expresses its profound gratitude to all its members, the special invitees, officials, non-officials, psychologists, social workers, sociologists, conveners of the working groups and sub-groups, and the various departments of the Government of Tamil Nadu who have all taken part enthusiastically in its work. The Task Force also thanks the Secretary to Government, Social Welfare Department, Secretary to Government, Labour and Employment Department, Secretary to Government, Home Department, Director of Employment and Training, Director of Backward Classes, Director of Harijan Welfare, Director of Social Welfare, Director of Approved Schools and Vigilance Services, Commissioner of Labour, and the Inspector General of Prisons, for their valuable assistance.

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<i>Serial number and name of the paper/note.</i> (1)	<i>Name of the Members of the Task Force/Working Groups/Sub-Groups.</i> (2)
1 Theory of Social Development Planning ..	Dr. V. Shanmugasundaram, Professor of Economics, University of Madras and Member, State Planning Commission.
2 Methods and Machinery for effecting Social Change.	Prof. K. S. Sonachalam, Emeritus Professor of Economics, Sri Venkateswara University, Tirupathi.
3 A Note on " Social Norms " ...	
4 A Note on Social Change for Economic Progress.	
5 Impact of Socialistic approach of Governmental machinery.	
6 Infra-structure for Industrial Relations—the obligation to bargain in good faith.	Dr. V. Anantaraman., Associate Professor of Management, Department of Humanities and Social Change, Indian Institute of Technology, Madras-36.
7 Techniques and Machinery for Social Change.	Prof. T. E. Shanmugam, Professor of Psychology, University of Madras.
8 Problems of and Techniques for Social Change in Tamil Nadu	
9 Measurement of Human Capital .. ..	
10 Improvement of facilities for the performance of marriages with the social funds in temples.	Thiru G. A. Dharmarajan, Secretary, Students Information Bureau, University of Madras/Chief, University Employment Information and Guidance Bureau, University of Madras.
11 Religious Institutions and Social Change	Thiru A. Uthandaraman, I.A.S.,(Retired), Formerly Commissioner for Hindu Religious and Charitable Endowments, Government of Tamil Nadu.
12 Hindu Religious Institutions and their potentiality for Social Change.	
13 Religious Institutions and projects aimed at Employment Generation.	
14 Economic Development for Social Change —A few aspects.	Thiru T. B. Bharathi, I.A.S., formerly Director of Backward Classes.
15 The evolution of District Administration since the British days and its functions.	Thiru K. A. Sundaram, I.A.S., formerly, Deputy Secretary, State Planning Commission.
16 A Project on Job Profiled .. ..	Thiru L. M. Vasagam, I.A.S., Director of Employment and Training.

<i>Serial number and name of the paper/note.</i>	<i>Name of the Members of the Task Force/Working Groups/Sub-Groups.</i>
(1)	(2)
17 Job Profile—A Project proposal .. ..	} Thiru M.S. Ramanujam, Deputy Director, Indian Institute of Public Opinion, Madras Branch, Madras.
18 Note on equivalence between levels of formal Institutional Education/ Train- ing and Information/on-the-job experience.	
19 Recommendations of the National Commission of Labour and the needs of Tamil Nadu.	Thiru G. Kamalarathinam, I.A.S., Commissioner of Labour.
20 Social Change through Economic Development.	Prof. M. Ruthnaswamy, M.P., Formerly Principal, Law College, Madras.
21 The Printing Industry to-day .. ..	Thiru G. Baskaran, Formerly of Govern- ment Press, Madras.
22 Background paper on Human Resources ..	..
23 Some further thoughts on our Task ..	..
24 Projects for relieving unemployment ..	..
25 Occupational trends in Tamil Nadu ..	..
26 Changing economic activities and employ- ment opportunities.	..
27 Employment Market Studies .. ..	..
28 Vocational Guidance Programme .. ..	..
29 Self-employment for the educated un- employed.	} Thiru P. Subramaniam, Member, Secretary, Task Force on Human Resources and Social Change for Economic Development, State Planning Commission.
30 Manpower Planning and Research ..	
31 Manpower Planning at the undertaking level.	..
32 Problem of old-age, destitutes and the handicapped.	..
33 Tribal Development and Research ..	..
34 Social Welfare and Social Defence .. ..	..
35 Welfare of Scheduled Castes and other Backward Classes.	..
36 Occupational Research and Analysis ..	..
37 Craftsmen Training and Apprenticeship Programmes and Employment Service.]	..
38 Reports and working papers .. ..	Union Planning Commission.



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PART : ONE  
INTRODUCTION

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## CHAPTER I

### INTRODUCTION.

#### INTRODUCING THE TASK :

1.1 Economists from the days of Tiruvalluvar of Thirukkural down to Jan Tinbergen have been laying considerable stress on the importance of the human resources in economic development. But much more effort was devoted to theorizing on physical, capital and investment decisions. As late as 1948, P. A. Samuelson could write his famous introductory text book without even a passing reference to human capital investment. We find that in the history of economics the stress on human capital has come mainly from the relatively conservative minded. Though the Liberals were interested in education and training, they could not conceive of human resources as a force to reckon within economic analysis. Though "intellectual opposition" to the concept of human resources still exists, there is increasing awareness of human resources as a form of capital, a produced means of production, a product of investment and hence a determinant of economic growth. We now feel the "evolving integration of human resource studies with the existing corpus of knowledge" and it is the major break through of the last few decades. The recent developments in this field of analysis are particularly associated with the pioneering studies of Prof. T. W. Stults. Increasing number of specialists are now in the field and resulting in tremendous "analytical illumination" and fruitful empirical research. Economists have tended in the past to concentrate too much on the viability of under developed countries to accumulate capital. Only recently have they come to consider human resources with the respect that the subject undoubtedly deserves. Indeed as always, the pendulum has swung to the other extreme: it is already fashionable and part of the 'new' orthodoxy to under play the role of capital and to explain underdevelopment essentially in terms of the limitation imposed by the inadequate human resources.

1.2 A very good reason for this shift in emphasis in modern Growth Economics is the disquieting persistence, even in advanced economies of unemployment with all its attendant socio-economic ills. Hence the need for depth analysis in fields such as 'investment in man' and his "development through education, health and allied efforts". These investments are to develop the human resources. It is a process by which the knowledge, the skills and the capacities of all the people in a society are increased. Investment in people makes it possible to take advantage of technical progress. Improvements in health make investment in education more rewarding. Human resource development contributes to economic growth and welfare in an interdependent manner by expanding and extending knowledge leading to higher productivity and improved health. @ It is this process that results in "the accumulation of human capital" reinforcing "effective investment in economy of an economy. §

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• THURLOW—Investment in Human Capital, California, 1970, p. 6.

£ WISEMAN—Cost Benefit Analysis of Human Capital Investments in Wykstra, R. A. Ed.—Human Capital Formation and Manpower Department, Macmillan, 1971, p 178.

@ DENISON—Education, Economic growth and gaps in Information Journal of Political Economy, October (Supplement 1962, p 124

§ HARRISON AND MYERS

1.3. Human resources could be developed in diverse ways, the most obvious one being formal education, beginning with primary or first-level education continuing with various forms of secondary education, and then higher education. But then the problem is how to go about this complicated process of human resources development in the context of the developing economy of Tamil Nadu with its roots of tradition steeped in the hoary, glorious past and with its tendrils of culture and heritage shooting into the future? There is need for a proper and multi-dimensional assessment of the present socio-economic situation and potentialities of future growth and expansion taking at the same time, due note of the traditional social values and the accepted politico-economic goals. Superimposed on this general background is the picture of a rich demography with a not-so-rich ecology and a stringent investment function.

1.4. As an important step in this direction, we agree with Eli-Ginzberg and Herbert A. Smith when they say that development experts have now to consider elements previously ignored, such as the costs involved in rapidly expanding an educational system, the priorities that must be set among the different levels and types of education; the ability of the economy and the society to absorb the members who are educated and trained, the potentialities of using non-institutional forms of training for certain types of skill acquisition and the necessity to keep a balance in the expansion process between financial resources, the training of teachers, the flow of qualified pupils, and the availability of other resources such as school buildings and equipment. We could get higher education cheaper if we could house it in cheaper buildings or if we could use buildings more intensively. The best way of finding out if either or both of these things can be done is to give an incentive for doing them. Under the present system of finance, money for buildings come either free or not at all and the need for further economy in building disappears and the incentive to use the building more intensively is weak or non-existent.

1.5. The situation regarding equipment and furniture is even more curious. Equipment is provided for a new building but there is no systematic means of replacing it, even though it may have a short life.

1.6 There is a simple way to restore a proper financial control, viz., to give the universities power to borrow on capital account but to charge both interest and amortization against their recurrent income. Then the universities could choose simpler buildings more intensively used and simpler equipment in order to safeguard their ability to meet recurrent expenditure.

1.7 Other suggestions for saving are—(1) utilisation of teaching buildings over a longer part of the year; (2) better use of buildings during term time is certainly attainable (3) industrialised methods of buildings. Spacious buildings are built to-day unmindful of maintenance to-morrow. Science buildings—tailor made for to-day and therefore unsuitable for to-morrow.

1.8 Hence savings could be made in buildings but it requires large changes in Government policy. But it is important not to overestimate the effect of this as a means of cheapening higher education. However, in the words of Carten there is no easy way of cheapening higher education especially as the cost of scientific equipment rises steeply

with its increasing sophistication.\* The strategies for education and manpower development are to be clearly defined.\*\* Quantitative indicators of human resource development are to be chosen.

1.9 The content and quality of manpower is another important factor in economic development and is no less significant in our present context. As per Simon Kuznets, a high rate of growth of per capita product, accompanied by a high growth rate of per unit efficiency is one basic characteristic of modern economic growth observed within the developed nations, the second being a high rate of structural shifts. These shifts represent among others changes in the shares of various industries in labour force, in the position of the people in the labour force, as between entrepreneurial and self-employed workers on one hand, and employees on the other, with a variety of occupations cutting across industry lines.

#### MANPOWER PLANNING AND RESEARCH.

1.10 Manpower planning whether it is applied on a broadscale of macro-economic plans or on a micro-scale, is inseparable and in many respects indistinguishable from research. The planning process is necessarily an application of scientific methods, involving "empirical derivations of relationship; the formulation testing and modification of hypotheses; the constant search for explanations of phenomena and measures of their importance in terms of quantitative functional relationships to serve as the basis of forecasting"\*\*\*. The planning process meaningfully carried out is in fact research and applied science and the purpose of this planning is to obtain the best possible utilisation of human resources. Virtually all the variables and parameters that go into the equation of manpower supply and demand are potentially capable of being modified by research or policy orientation.

#### MANPOWER PLANNING TECHNIQUES.

1.11 Whatever be the level of manpower planning, national or local forecasts of needs and an inventory of manpower resources available are to be taken. These are done against background of current levels of economic activity which generate the pattern of employment. Such forecasts of demands and supplies of labour should be reasonably realistic. The accounting frameworks for economic and demographic variables can be presented in a square matrix form, as follows:—

#### THE SYMBOLIC ECONOMIC ACCOUNTS 1.

<i>Activities.</i>	<i>Institutions.</i>	<i>Government.</i>	<i>Capital accumulation.</i>	<i>Rest of the world.</i>
(1)	(2)	(3)	(4)	(5)
1. Activities .. ..	.. ..	.. ..	.. ..	.. ..
2. Institutions .. ..	.. ..	.. ..	.. ..	.. ..
3. Government .. ..	.. ..	.. ..	.. ..	.. ..
4. Capital accumulation .. ..	.. ..	.. ..	.. ..	.. ..
5. Rest of the world .. ..	.. ..	.. ..	.. ..	.. ..

time—t.

\* Carter C.F. -- Can we get Higher Education cheaper? *Blang* - 2. p. 336-338.

\*\* HARBISON F and M YERS, C.A. *Education Manpower and Economic growth. Strategies of Human Resource Development.* New York 1964

Also See;

VAIZEY. F. *Education Manpower and Economic Growth.* *Economic Journal* 1964-p.548.

\*\*\* SMITH A. R. *Manpower Research (Ed.) N.A.B WILSON (London, 1969) p. 8*

## THE SYMBOLIC DEMOGRAPHIC ACCOUNTS 2.

<i>In Employment.</i>	<i>Unemployed.</i>	<i>In Education and Training.</i>	<i>At home.</i>	<i>Elsewhere.</i>
(1)	(2)	(3)	(4)	(5)
1. In Employment .. ..	..	..	..	..
2. Unemployed .. ..	..	..	..	..
3. In Education and Training ..	..	..	..	..
4. At home .. ..	..	..	..	..
5. Elsewhere .. ..	..	..	..	..

time (t+n)

\* 1 and 2: LEICESTER. Colin. Manpower Training for National Economy WILSON N.A.B (Ed.) Manpower Research (London 1969) P. 24 and 25.

1.12 The economic nature of the various parts of the framework compressing the entire transactions is given in table 1. A system of demographic accounts is concerned with human population and the table 2 shows possible transitions from one demographic state to another. Unlike the earlier matrix its two dimensions belong to different date, the rows relating to an earlier point in the States at the first date and the column totals the numbers in them at the second date. A cell in this matrix denotes the number of people who hail from the State denoted by the row to that denoted by the column between the two dates.

1.13 Both accounts can be disaggregated to suit the needs. With such disaggregated and fully documented economic and demographic accounts we can identify the extent to which the use of manpower in various economic activities are interdependent.\*

1.14 'Manpower' should take due care of "womanpower" also. Though normally by manpower we mean womanpower also, yet this concept of womanpower has a special significance in our socio-economic framework. This aspect has to be specially gone into against the background of our traditional respect for womanhood and the pride of place which we give to our women in our society in general and in our homes in particular. To what extent are the coming changes in the socio-economic set-up going to pose problems of adjustment to our womenpower and how best to meet them successfully and ensure a smooth transition from economic dependence to economic independence for them against the background of our Tamil tradition, culture and social values. This will have to be examined in detail and guidelines set on a time-horizon for successful tackling.

1.15 We have to take due note of our commitment to the establishment of an egalitarian society on the socialist pattern suitably adopted to our own values. The accent on development will be as stressed by our Hon'ble Chief Minister Dr. M. Karunanidhi, time and again, on the expansion of Science and Technology. There will have to be a complementary growth on the farm-front coupled with a sustaining expansion of our Social-services base. These will have to include within their ambit the welfare of the less privileged classes of our society and look into the problems of their social adjustments in the context of economic advancement with social egalitarianism.

\* Also see. Stone Richard. "Input-Output and Demographic Accounting; a tool of Educational Planning". *Minerva* - Vol. IV No. 3 1963.

1.16 This leads us to the task of social change. Social Change will have to come about to help economic development. It is to be noted in this context that after all it is the social attitude which is the chief determinant of the volume and velocity of economic progress. To this extent then, it becomes necessary to develop healthy social attitudes conducive to economic growth. We may have to identify this context, the growth promoting and the growth-retarding attitudes and try to promote the former ones and remove the latter ones. A time-bound programme may have to be thought upon for doing this. What are the patent social ills and how they can be tackled will thus form part of our present task of launching a 'direct' and a 'frontal' attack on the problem of social change.

### THE PRESENT SETTING FOR THE TASK.

1.17 *A Assessment of Human Resources*—The recent interest problem of development has led to a number of 'discoveries' extensions and even innovative transformation<sup>\*\*</sup> both in substantive theory and analytical methods. The most important of such rediscoveries is the human art and ingenuity so much appreciated by Petty and his contemporaries in their economic relevance. Human and physical resources are now brought into the same conceptual framework and the human resource approach enjoys enhanced status in modernised classicism and a place of honour in an extended neoclassical investment theory.

1.18 There is, therefore, a strong case for the clarification of many issues concerning human resource. Main problem that we encounter is that of human capital values. Sound decisions cannot be taken without adequate information on the capitalised value of people. When society has to choose and decide between private and social investment, the estimates of human capital values become indispensable. In other words a substitute for the market evaluation of labour services is to be developed and this involves establishing a conceptual frame work for estimating the value of assets in the form of human capital. Utilising such frame work quantitative estimates of capital values of people as productive assets as a function of their sex and age can be made. Such estimate of human capital are useful for a variety of purposes like population and immigration policies, public health, highway construction and flood control could be better formulated by the knowledge of the value of human capital preserved through such expenditure. The obvious results are the benefits from public projects through reduced loss of human capital. Especially educational and vocational rehabilitation policies enhance the quality and value of human capital, per capital human capital value could serve as welfare index.\*\*

1.19 In the above context an examination of the human resources of Tamil Nadu is undertaken in the following sections in order to evolve a human capital value index as far as the data available could permit. The value of a person to others can be measured as any excess of his contribution to production over what he consumes himself for his maintenance. It is from this difference that others benefit from his productivity. There are two ways of solving this problem. If our interest is the value of a person to others then his productivity

\* BOWMAN Mary Jean. The Costing of Human Resource Development. Paper prepared for Carnegie Foundation, U.S.A.

\*\* WEISBROD. The valuation of Human Capital. *Journal of Political Economy*. 1961. p. 436.

net of consumption is most relevant. On the contrary if our interest is in his total output then his gross productivity is more relevant. The gross present value of a man is the present value of expected future earnings at age "a", ( $V_a$ ) is :

$$V_a = \sum_{n=a}^{\infty} \left[ Y_n P_a^n \frac{1}{(1+r)^{n-a}} \right]$$

Where

$Y_n$  = Value of productivity of a person at age 'n';

$P_a^n$  = the probability of a person of age 'a' being alive at age 'n'; and

$r$  = the rate of discount.

( The present value of net future productivity can be easily arrived at by subtracting consumption expenditure from gross productivity  $Y_n$  )

1.20 With an area of about 50,000 square miles, Tamil Nadu presents a picture of diverse but distinct topographic divisions, ranging from plain country to mountain peaks, with a long coastline. All the rivers in the State are rain-fed. The climate is tropical, but more equable when compared with some parts of India. The average rainfall in the State varies from area to area over a wide range of 25 'to 75' a year.

1.21 The population of the State is 41.1 million (41,103,125) as on April 1, 1971. The State ranks seventh in population and eleventh in area. There has been a net increase in population by 7,416,172 persons, as compared to the figures for 1961 and this represents a 22 per cent increase over the decade. In other words, this means that there has been a 2.2 average annual increase. And about this rate of growth of population, we have something interesting to hear from Prof. A. J. Jaffe, who has made a study in depth of the Puerto Rican Economy, which again is comparable to the economy of Tamil Nadu in more than one respect. According to this author, such a rate of population growth can lead to a doubling of population in a generation. This in itself would be a small concern if the economy could grow at a significantly faster rate. But what is significant about a demographic growth rate leading to a doubling of the population in a generation is that it is difficult to force an economy to grow at a rate very much faster than this. Although it is probable and quite possible for certain developing economies to grow at a faster rate than the one contemplated above, yet the truth remains that such a faster rate of growth might become difficult of maintenance in the indefinite future. Therefore, Prof. Jaffe advocates a rate of population growth of one to one and half per cent per year for developing economies of this type.

1.22 The density of population in our State is 316 per square mile in 1971 as compared with 259 in 1961. This gives the State the eight rank in the order of density of population in the country. Of the total population of the State 12,446,860 or 30.3 per cent persons

\* WEISBROD. The valuation of Human Capital, Journal of Political Economy. 1961 p. 497



live in urban areas and 69.7 per cent or 28,656,265 persons live in rural areas. There has been a 38.4 per cent growth in the urban population of the State for 1971. Tamil Nadu accounts for 10.1 per cent of the total literate population of the country and her own percentage of literates to population is 39.4 per cent. This is in comparison to the 31.4 per cent in 1961. There has thus been an eight per cent growth in literates. There are 17 cities in the State with over 1,00,000 inhabitants. The following table gives an indication of the sex-ratio of populations of cities with over 1,00,000 inhabitants in our State :—

<i>Serial number and name of city.</i>	<i>Persons.</i>	<i>Males.</i>	<i>Females.</i>	<i>Sex-ratio 1971 females per 1,000 males.</i>
(1)	(2)	(3)	(4)	(5)
1 Madras .. ..	2,470,288	1,298,786	1,171,002	902
2 Madurai .. ..	548,298	281,331	266,967	949
3 Coimbatore .. ..	353,469	186,358	167,111	897
4 Salem .. ..	308,303	158,221	150,082	949
5 Tiruchirappalli ..	306,247	157,290	148,957	947
6 Tuticorin .. ..	154,804	78,105	76,699	982
7 Nagercoil .. ..	141,207	70,829	70,378	994
8 Thanjavur .. ..	140,470	71,183	69,287	973
9 Vellore .. ..	138,220	70,621	67,599	957
10 Dindigul .. ..	127,406	64,710	62,696	969
11 Singanallur .. ..	113,397	58,819	54,578	928
12 Tiruppur .. ..	113,171	58,724	54,447	927
13 Kumbakonam .. ..	112,971	56,726	56,245	992
Kancheepuram ..	110,505	56,184	54,321	967
5 Tirunelveli .. ..	108,509	54,638	53,871	986
6 Erode .. ..	103,704	53,886	49,818	925
7 Cuddalore .. ..	101,345	51,292	50,053	976

(Source : Census, 1971 (Preliminary data).)

The above table is given here to bring out the male-female composition of the urban resources with their high degree of literacy and professional skills.

1.23 A review of the general employment situation in the State reveals that by the end of the Third Plan period, Tamil Nadu had an investment outlay of about Rs. 611 crores for the building in of the necessary infra-structure to sustain economic growth. Generation of electric power recorded unprecedented growth, resulting in bumper crops. As per the present programme, all the villages in the State are to be electrified very shortly. Besides, the growth trends in industrial estates as an institutional technique for industry growth, there were to be seen growth trends in production of compound fertilisers, construction of integral railway coaches, manufacture of surgical tools, teleprinters, heavy pressure boilers, small arms, photo-films, heavy vehicles and refining of oil. Such industrial growth trends and hence income growth trends were duly complemented by expansion in social services. An important consequence quite a disquieting prospect though of the future growth pattern is likely to be invisible unemployment, popularly known as under-employment. Yet another important factor to be reckoned with, in this context, is unemployment of educated persons. The table below gives an idea about the growth trend in the educated unemployed in Tamil Nadu.

<i>Year.</i>	<i>Degree holders.</i>	<i>Matrics.</i>	<i>Total. (All)</i>
(1)	(2)	(3)	(4)
1961	2,987	35,978	38,965
1962	2,114	40,850	42,964
1963	2,662	38,514	41,176
1964	2,346	43,202	45,548
1965	2,801	51,699	54,500
1966	4,366	56,444	60,810
1967	6,561	70,937	77,498
1968	9,487	96,130	1,05,617
1969	13,810	98,914	1,12,724
1970	21,819	1,44,009	1,65,828
1971	27,658	1,53,384	1,81,042
1972 (up to June) ..	28,633	1,67,081	1,95,714

(Source : Live Registers of Employment Exchanges in Tamil Nadu).

1.24 The problem of the educated unemployed is likely to get more accentuated with the anticipated expansion of educational facilities in the State at the present rate of employment generation and with the present industry-occupational matrix. The following table

gives an idea of the general unemployment situation in the State, as reflected in a limited way though, by the Employment Exchange statistics.—

<i>Year.</i>	<i>Registration.</i>	<i>Placement.</i>	<i>Number on the live registers as on 31st December.</i>
(1)	(2)	(3)	(4)
1968 .. ..	3,53,759	41,581	2,76,930
1969 .. ..	4,03,404	42,770	3,54,924
1970 .. ..	3,85,045	42,232	4,01,533
1971 .. ..	4,06,908	41,689	4,60,676
1972 (up to June) ..	3,75,619	34,337	4,64,040 (up to June).

1.25 It may be seen from the above table that the total number of registrations in 1970 increased by +8.8 per cent over 1968 figures but declined by —4.6 per cent when compared to 1969 figures. As for placements, they were 1.6 per cent more in 1970 when compared to 1968 and they were (—) 1.3 per cent less when compared to 1969. As for the total number of job seekers on the active rolls of the Employment Exchanges, it was 44.9 per cent more as compared to 1968 and 13.1 per cent more as compared to 1969. A special feature of the manpower seen of this State is the periodical addition to its labour force of participants repatriated from Burma and Ceylon.

1.26 An analysis of the employment coverage in the State reveals that by the end of 1970, as many as 15,43,200 persons were employed in non-agricultural salaried positions in this State. As compared to the 1966 level, this was a net gain of 1,14,500 persons (or +8.0 per cent). Sectorwise the growth rate was more in the public (+9.6 per cent) than the Private Sector (+5.98 per cent). Industry-wise, the bulk of the employment increase was accounted for by services, electricity, construction and manufacturing industries; while trade and commerce and transport and communications reported only marginal increases. Petrochemicals, salt and salt based industries, transport and communications, electricity generation through nuclear reactors, production of earth movers, electronics and manufacture of steel are the possible fields of future growth in employment in this State. A complementary strengthening of our farm base and a supplementary broadening of our services base would give sustenance to our industrial growth and via that introduce into the economy that amount of flexibility which would insulate it against ricocheting economic disequilibria.

## SOME GUIDELINES FOR THE DEVELOPMENT AND UTILISATION OF HUMAN RESOURCES.

1.27 Occupations can be classified into three categories namely, classical, traditional and modern. The classical occupations are the ones which have been in existence right from the days of Yore when organised human societies emerged. Examples are the warrior policemen, farmers, etc. The traditional occupations are those which evolved as culture

and civilisation advanced bringing in the wake aesthetics in taste and nuances in sophistry. Examples are occupations connected with traditional arts, handicrafts and village industries. The modern occupations are those that have appeared on the scene in the post-renaissance era. For a smooth and orderly socio-economic development, there is to be a balanced growth in all these occupational sectors so that the gains of industrialisation are not unduly offset by losses in employment especially in the semi-urban and rural sectors of the economy. A careful study of the economic histories of certain South East Asian countries would reveal that in fact such losses in employment have been caused by an abrupt introduction of certain exotic economic and industrial institutions into these economies which have reacted quite spasmodically to this treatment. Therefore, for a smooth industrial growth, a steady employment build-up, and self-sufficient farm base, there is to be an equally sophisticated industry occupational matrix which acts as the Cynosure of manpower fluctuations which are caused by economic policies, political vicissitudes and social attitudes. How to go about doing this? It will be through proper human resources assessment, with reasonably accurate manpower forecasts and by means of pragmatic manpower planning.

1.28 In recent years it is more deeply felt and increasingly recognised that development in technology in economic performance and in fact the general welfare of a society is highly dependent on the supply of qualitative manpower. The allocation of resources to the production of such manpower and its proper utilisation within the economy have become essential factors to policy makers in general and particularly to educational planners.\*

1.29 National character is said to be of overriding importance. The Chinese for instance are believed to be industrious, the Thais are thought to be easy-going. But these observations are only broadly true. Similarly it is stated that "the overseas Chinese and Indians are particularly hardworking and accumulate saving rapidly". Is it because the enterprising emigrants or of the impediments at home? A study of human resources or analysis of manpower data should not ignore this very important factor of enterprising talent among the society.

1.30 The first step in the process is to take stock of the manpower supply situation. There are two approaches † to this problem, viz., qualitative and quantitative approaches. But they are not independent of one another. Any quantitative approach presents certain technical difficulties but a qualitative approach also involves difficulties of evaluation in the absence of some quantitative data. Therefore two approaches are mutually supportive while the first sets the framework for qualitative discussions, the second, by means definitive stimulates more thorough analysis when better data become available. There are several determinants of manpower supply, such as diet, hygiene, land tenure, administrative traditions, education and much else. Among these, however, education is very important. The present day manpower planning methods can be viewed as having a five-stage programme. In stage one, the manpower planner is given or himself makes

\* EIDE. K. Educational departments and Economic growth in OECD Member countries in Robinson E.A.G. and Vaizey F Economics of Education—Macmillan—London 1966. P. 174.

† HARBISON Frederick. Quantitative Indicators of Human Resource Development. Princeton University USA in Economics of Education Ed. Robinson EAC and Vaizey. Macmillan London 1966.

up a target or forecast of the gross national product in the future. In stage two, there is a derivation from the above of the number of persons who will have to be employed in each economic branch. Out of this, and in the third stage is derived their distribution by occupation. This in its turn gives rise to the fourth stage in which is derived the number of persons in the population who at given future dates, must have completed specific types and levels of education. Again, from this are derived, in the fifth stage, the schedules of the activities required to expand educational flows. They are building construction, teacher training, student enrolment and budgets.

1.31 As for manpower needs, it is to be noted that a nation's goals can significantly influence manpower requirements and employment opportunities. In the words of Leonard A. Lecht, "pursuit of national objectives, as in education or manpower training can add to the supply of manpower in a variety of occupations and skill levels. The activities we undertake to make progress towards achieving our Society's goals, accordingly, can be expected to constitute an important influence in determining the volume of employment, the occupational composition of employment and the prospects for bottlenecks or surplus in specific occupational fields." The organisations and agencies concerned with the nation's future manpower needs work out estimates of such manpower needs in their own spheres. These estimates are important in that they represent expected manpower needs to meet anticipated production requirements, or growth in school enrolments, or the anticipated increases in spending for research and development by Universities, industries and Government. All these estimates of needs have to be carefully studied, shifted and a list of priorities drawn for effective implementation of any manpower programme.

1.32 Against this general background of manpower planning in a developing economy, we can now examine the problem as it now obtains in Tamil Nadu with a percentage of population growth which is typical of developing nations of South East Asia, with characteristics, demographic and topographic that remind us of conditions in Puerto Rico; and with a relatively high incidence of educated unemployment and rural and semi-urban under-employment. We should now plan to influence our manpower supply in line with projected demand so as to avoid serious imbalances or under-utilisation of abilities and talents. This presupposes two conditions. They are: (i) that we have a forward planning programme for manpower; (ii) that we have reliable estimates of present supply and its pattern as also of future demand and its pattern. Again there should be effective co-ordination of the activities of various agencies engaged in such assessment so that a comprehensive, guiding and executing "manpower nucleus" is formed to make the various manpower actions meaningful. Among the means of influencing supply to adjust to projected needs are included: effective spread of manpower information, career counselling, education and training programmes, referral to jobs in accordance with abilities and projected needs, reduction of institutional and other obstacles to job transfer, and wage-benefit levels that encourage needed shifts between industries and occupations.

1.33 A common denominator for the factors of growth is that their growth effects may extend over a long future period and hence policy has to be geared to the long-term development of the economy. Targets in the field of education, research, innovation and allocation of capital and labour must be oriented so as to agree with the long term transformation and growth of the economy mobility of factors above is not adequate equally

important in the direction in which they move. A good labour adjustment diminished the risk of intakes in investment, smoothen the path of transformation and consequently is contributory to the rate of growth.\*

1.34 Proper labour mobility is a complex concept with diverse dimensions. It includes movement between occupations, industries, areas, firms and jobs within the firm through transfer and promotion. The activities of the Department of Employment and Training may be construed to be mobility-promoting in as much as counselling, training and employment office services may be considered to be mobility-promoting. Good manpower planning should result not only in the prevention of shortages and surpluses but also in better fits of men and jobs all up and down the line and therefore, less dissatisfaction. In an economy like ours, characterised by significant changes in technology and jobs, flexibility in the labour force is very desirable. General education and training greatly help in promoting occupational flexibility. The concept of labour mobility has therefore to be examined in its multi-dimensional aspect, namely, in terms of time, space, persons, skills and incentives. Mobility may again be either voluntary or involuntary. The net differences between projected requirements and qualified resources over a period of time could provide a conceptual measuring rod for judging desirable and undesirable mobility and for guiding efforts to influence labour mobility in general. In fact, the development of a set of mobility guidelines would represent a significant step forward in manpower planning and policy.† Such guidelines will have to be applied through a programme of more, upto-date and authentic information on employment opportunities in different areas of economy. This information complex is to be linked up with an intensification of the programme of vocational guidance and job counselling. The machinery for labour supply and vacancy clearing should be geared up to achieve better inter-area and intra-area adjustments of labour market forces. In the absence of such well-defined and clear cut guidelines, there are bound to be irksome labour market frictions and consequent economic wastages caused by uninformed and misdirected labour mobility. The programmes like Occupational Information, Employment Market Information and Vocational Guidance of the Department of Employment and Training contribute very much towards the formulation of such guidelines.

1.35 The next important aspect to be taken note of in this context is Education and Training as an influencing factor on the mobility and productivity of the labour force, in general. Programmes of education and training are to be based on the best possible set of assumptions about the future. Especially important in this context is the need for careful forecasting of the demand for the University and technical school graduates and the probable supply and rates of new supply in each category. In recent programme of educational expansion too much attention has been given to the material and financial input and too little to the human input in the form of teachers. Fundamentally a country's capacity to invest in human capital is limited by the most important of its scarce resources viz., the quality and quantity of existing supply of qualified people who can be used either directly or indirectly in the production process of the economy. "Direct" use in production is employment of persons in administration, business, army, medicine, engineering

\* SAMUELSON. Education, Research and other factors in growth. Problem in Economic Development International Economic Association, Vienna, 1962

† LESTER. A. Richard.

etc., and smaller proportion is in "indirect" use of trained people for teaching so as to produce a greater supply of the trained people in future.\* The main issue in Educational Planning is demarcate what proportion of trained people for 'indirect' use. This involves in choice between the sectors of the education system and priorities among the various disciplines.

1.36 Incidentally, the possibilities for substitution should also be taken du enote of, for example, the use of higher ratio of technicians to scientists and engineers. Yet another special aspect to be taken note of is that a part of existing stock of engineers is employed in non-engineering activities such as sales, personnel administration and general management. From the point of view of manpower planning, education and training programmes should be designed to serve a number of purposes. First, they should aim at providing the general and special training for the professions. Second, there is the need for training facilities for white collar-occupations with much shorter periods of special training. Third, there is need for fuller and quicker training programmes for skilled manual trades and for more work-study programmes to facilitate smooth transition from educational environment to work environment. Further, there should be easy and ready access to refresher and retraining programmes so as to remedy skill obsolescence in a developing economy like ours, with rapidly changing job-requirements. Fifth, there is need for training for the educationally disadvantaged, especially if they are frequently out of job. Sixth, in-service or on-the job-training is needed to adapt individuals to the special requirements of jobs in particular work places and to prepare them for promotion. As for the pattern of Education and Training, this will be a spill-over subject for the Task Force on Education. But as far as planning human resources goes, this Task Force and the Task Force on Education will have liaison. Again aspects which are purely in the nature of development of human resources like skill development, in-service and on-the-job training, etc., have been dealt with in this report.

1.37 Regarding the planning method itself, the right type of planning education should be one which makes the structure of education a variable instead of a constant factor. This requires a more complicated framework which can be conceived of as consisting essentially of three parts, namely, a plan of the educational structure ; a long-term manpower plan ; and a short-term co-ordination of manpower activities. It is in the last mentioned field, namely, that of short-term co-ordination of manpower activities that effective decisions are made. The plan of the educational structure and the long-term manpower plan together form a perspective or background plan. In each period these activities will have to be consistent with the presumed state of technology, the long-term goals of restructured education, and changes in the educational structure from period to period. Again they must also be consistent with subject levels, modes of study and educational progression. Numbers, costs and physical feasibility are the province of the long term manpower plan. It will work on a lead time from five to twenty years and will be aggregative in nature. And there will be built into this system an infrastructure which will deal directly with details, errors and unpredicted events. The short-term co-ordination of manpower activities also deals with numbers, costs and physical feasibility. In this case matters are considered in full detail and effective decisions are

\* HLA MYINT. *Economic Theory and Underdeveloped Countries*. (London, 1971.)

made. Again this framework, specialised courses of intensive study are opened and closed as required, thus regulating the final stage of supply of educated manpower, up to the very highest levels. Here, too, practical steps are taken to expand the whole educational system, as determined by the long-run manpower plan and modified by current information. All the same, the short-run co-ordination is primarily administrative in character.

#### THE NEED FOR SOCIAL CHANGE.

1.38 Social change is viewed as an ideal and end in itself and this Report covers all the relevant issues that are involved in bringing about social change. The question is whether there should be a frontal attack on the problem or a flank attack. The consensus of the members of the Task Force is for a frontal attack, to be duly supplemented by a flank attack. This strategy is advocated because of our present socio-economic set up which leaves much to be desired in fields such as incentive to work hard, earn more, and better one's standard of living. Juxtaposed to this are the problems of other social maladies such as abuses of casteism and classism. To remove all these and to create the necessary rapport for the advent of economic advancement, it is necessary to usher in social change expeditiously. As has been said earlier in this chapter, it will be our task now to identify both the growth-promoting factors and the growth retarding factor in our social framework and then devise suitable incentives for the former and disincentives for the latter as part of the plan strategy. Prominent fields where work has to be done are social attitudes, casteism, classism, welfare of backward classes including Harijans welfare, etc. To this will be supplemented welfare work such as welfare of children, woman, old-aged, handicapped, non-student youth and the like. These are dealt with elaborately in the appropriate chapters.

1.39 It needs no emphasis that exhaustive empirical studies are called forth and such studies cannot be easily separated from the general social and educational environment which render the empirical data ambiguous and imprecise. But a detached attitude is essential and it would be "plausible only if we can reach a point at which it is possible unambiguously to solve the valuation problem"\*. This enables the prediction of the economic consequences of changes in environment as well as changes in the volume of education.

#### THE GENERAL SCOPE.

1.40 The general scope of this Report is, therefore, to study in depth the problems of our human resources and their development, manpower planning, employment and unemployment situation, social structure and the change required, social welfare measures with particular reference to the welfare of Backward Classes including Harijan Welfare, and Industrial Relations and Labour Welfare. After a detailed study of many of these problems, the Task Force comes out with proposals and recommendations for removing constraints to growth and development identified in the present set up with suitable schemes for implementation during the Perspective Plan, which would set in mill on the

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\*WISEMAN



process of building a better and a happier society. There are a number of spill over issues on which special consultation and Reports are under preparation. According to this scope, this Report deals with the following subjects under the broad parts as given in the contents: Manpower Planning; Employment; Social Change; Welfare of Backward Classes—Harijan Welfare; Welfare of Backward Classes—Other Backward classes; Social Welfare—Child Welfare; Social Welfare—Women's Welfare; Social Welfare—Old age Pension; Social Welfare—Handicapped; Social Welfare—Non-student youth; Other Social Welfare programmes; Industrial Relations and Labour Welfare; Improving the quality of our human resources generally; Fifth Plan Schemes; Sixth Plan Schemes and Appendices.

1.41 As the scope of this Report is rather all-embracing and comprehensive, it is perforce necessary to discuss subjects which strictly speaking fall under the ambit of other Task Forces such as Education, Health, Industries, Agriculture, Rural Development, and the like. But care is however taken to avoid any avoidable overlapping of subjects. Again in several areas, where the field is vast or vague such as the unorganised sector, assessment of the current problems and future trends are made on the basis of past experience, current available data, and also on the basis of intuition. Suitable recommendations for filling in gaps in data and other information are made at the appropriate places. It is recommended that such remarks are taken up for further detailed and deeper studies so as to enable the building of an upto-date authentic, exhaustive and useful information base for our Planning Machinery. Such a complex scope has made the report now lapse into abstractions, again sound recommendatory. But these abstractions and recommendations will nonetheless be useful as guidelines for official and non-official action to be followed up suitably during the implementation stage of the plan with the help of detailed probes, if and where necessary.



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PART : TWO  
ASSESSMENT OF HUMAN RESOURCES

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## CHAPTER II.

### HUMAN RESOURCES OF TAMIL NADU—A DEMOGRAPHIC STUDY.\*

#### 2.1 INTRODUCTION.

Thiruvalluvar extols the spirit of human enterprise and perseverance as the prime source of all material resources (1). And consistently Valluvar considers that the attribute of an ideal stage are health, wealth, production, productivity, happiness and social welfare (2). Much as he extols agriculture, Valluvar states that mother earth laugh at those who sigh in helplessness without realising the cause of poverty (3). The need of Supplement Economic Planning and deep faith in Social Development Planning which are necessary for social change and social integration are the desiderate for rapid progress in Tamil Nadu.

Human Resources, the importance of which has not been adequately recognised in economic planning till recently, can be developed in many ways. In traditional and hoary Societies of Asia, cultural and social practices have conserved human resources. Subsequently, formal education, systematic or informal training programmes, adult literacy, participation in social and cultural groups, improvement of health, hygiene and nutrition have been attempted. In the other reports on Education, Science and Technology, Health Services, Water Supply and Sanitation, many measures have been outlined to develop and conserve Human Resources. Human Resources development is concerned with the two-fold objective of building knowledge and skills and providing employment and broader opportunities for unutilised or underutilised manpower.

Efforts to give greater emphasis to human resources in economic theory and attempts to measure the contribution of education to economic growth are constructive to development effort. But at the same time, the concept that human resources development either can or should be analysed solely in economic terms is misleading. Human resources development can be a more realistic and reliable indicator of modernisation or development than any other single measure. It is one of the necessary conditions for all kinds of growth social, political, cultural or economic. Human resources development is concerned with the two-fold objective of building knowledge and skills and providing employment and broader opportunities for unutilised or underutilised manpower. The objective of a strategy of human resources development is to build the skills and knowledge required for economic, social, cultural, and political growth and to provide avenues of participation in the creation of a better society for all who seek them.

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- 1) உள்ளாம் உடைமை உடைமை பொருளுடைமை  
நில்காது நீங்கி விடும்.
  - 2) பிணியின்மை செல்வம் விளையின்பம் ஏமம்  
அணியென்ப நாட்டிற்கில் வைந்து.
  - 3) இலமென்று அசைது இருப்பாரைக் காணின்  
திலமென்னும் நல்லாள் நகும்.

#### Acknowledgment :

For most of the factual data on population analysis, "A Demographic Appraisal of Tamil Nadu—1972" of the Department of Statistics has been used.

There are two basic types of indicators of human resources development, viz. (i) those which measure the stock of human capital and (ii) those which measure the gross or net additions to this stock (the rate of human capital formation over a specified period). Where the stock indicates the level of human resources development, the rate of human capital formation indicates its rate of improvement. In computing these rates, the following indicators would be useful:—

- (i) Levels of educational attainments ;
- (ii) The number of persons in relation to the population of labour force who are in high level occupations ;
- (iii) Net addition to the number of persons in high level occupations ;
- (iv) The net addition to the stock of persons as measured by educational attainments.

On the economic development side, the gross national product per capita and the percentage of the active population engaged in agricultural occupations could be taken as indicators of the level of development. And the other two measures which indicate in part the financial commitment to education, and the effort in achieving universal primary-education are:—

- (i) public expenditure on education as a percentage of national income ;
- (ii) the percentage of total population in the age group of universal primary education.

Using a complete index to measure the level of human resources development in the various countries, it has been estimated that India is in the third level with the following explanations for levels; Level I—Underdeveloped. II. Partially developed. III Semi-advanced; and IV Advanced.

This leaves us with the problem of planning the strategy of our human resources development in such a way as to raise our economy from the level of “Semi advanced” to “Advanced”. One characteristic of this semi-advancement is that we have not been able to develop research manpower and research institutes which are characteristics of the advanced countries.

## 2.2 DEMOGRAPHIC SITUATIONS—PRESENT AND POTENTIAL.

The population of Tamil Nadu according to 1971 Census is 41.1 million with a rural urban combination of 28.65 million and 12.45 million. The district-wise break up of the population is as follows :—

	(1)	1961. (2)	1971 (P) (3)
1 Madras .. .. .		1,729,141	2,470,288
2 Chingleput .. .. .		2,196,412	2,889,143
3 North Arcot .. .. .		3,146,236	3,738,273
4 South Arcot .. .. .		3,047,973	3,606,961
5 Dharmapuri .. .. .		1,332,251	1,674,193

	(1)	1961. (2)	1971 (P) (3)
6 Salem .. .. .	.. .. .	2,471,857	2,986,686
7 Coimbatore .. .. .	.. .. .	3,557,471	4,357,373
8 The Nilgiris .. .. .	.. .. .	409,308	491,330
9 Madurai .. .. .	.. .. .	3,211,227	3,931,104
10 Tiruchirappali .. .. .	.. .. .	3,190,078	3,844,901
11 Thanjavur .. .. .	.. .. .	3,248,927	3,832,740
12 Ramanathapuram .. .. .	.. .. .	2,421,788	2,857,424
13 Tirunelveli .. .. .	.. .. .	2,730,279	3,194,494
14 Kanyakumari .. .. .	.. .. .	996,915	1,228,215
		<u>33,686,953</u>	<u>41,103,125</u>

P—Provisional.

The size of the working population has been estimated as 15.07 million, which gives the workers participation rate of 36.37 per cent. This compares favourably with the All India percentage of 33.54. Out of the 15.07 million recorded as workers in 1971, 60.11 per cent were found engaged in agriculture and the rest in non-agricultural occupation. The All India percentage of workers in agriculture to the total stood at 68.63 in 1971. There are almost as many agricultural labourers as cultivators in Tamil Nadu. The ratio in this regard in Tamil Nadu is 48.5 : 51.5 whereas the All-India ratio is 37.5 : 62.5.

Population of Tamil Nadu is expected to rise to 440 lakhs in 1973-74 and 489 lakhs in 1978-79, from the figure of 411 lakhs in 1970-71. Assuming that 40 per cent of the population is economically active, the growth in the size of labour force would be from 164 lakhs in 1970-71 to 176 lakhs in 1973-74 and 195 lakhs in 1978-79.

According to the Census of 1971, the number of persons employed in that year was 147.42 lakhs constituting 35.8 per cent of the population. But this figure does not represent full time jobs reckoned in adult units. It includes working children below the age of 14 constituting 8.84 lakhs and a large number of agricultural workers who are not employed all the year round. If one regards work done by two children as equivalent to one adult's job, the number of jobs held by this group is 4.42 lakhs. The number of persons engaged in agriculture is shown to be 90.98 lakhs, but on an average, an agricultural worker has employment for only 240 days in a year. If full employment were to mean working 300 days in a year, only 80 per cent of 90.98 lakhs could be considered as fully employed, giving a figure of 72.78 lakhs. Allowing for these two factors, full time jobs that were available in 1971 works out at 124.80 lakhs. Since the total labour force was 144.41 lakhs in 1971, the size of additional jobs that were needed to provide full employment was 164.41—124.80 i.e. 39.61 lakhs or 24.1 per cent of the labour force. On this basis, nearly one-quarter of the total labour force remained unemployed in 1970-71.

Population in Tamil Nadu is expected to reach 440 lakhs in 1973-74 and 489 lakhs in 1978-79. The number of jobs needed in 1973-74 in order to absorb fully the labour force would be 176 lakhs. Assuming that the annual rate of net output per worker on the average is 2.7 per cent, the number actually employed would be 152 lakhs of persons. On conversion into full time jobs this works out to be 128 lakhs. This would mean a backlog of unemployment of 48 lakhs at the commencement of the Fifth Plan Period.

### 2.3. POPULATION SIZE.

Tamil Nadu occupies the seventh rank among the States of India with 41.1 million persons with its populace forming 7.5 per cent of the total Indian population. In size, the State takes the eleventh place with an area of 129,901 sq. km. occupying 4 per cent of the area of the Indian Sub-continent.

The population size of Tamil Nadu enumerated at the Census, 1901 and adjusted for the boundaries of the present State after State's reorganisation was 19.3 millions. It rose to 33.7 millions in 1961. The recent 1971 Census puts the population size at 41.1 millions provisionally indicating a growth of 114 per cent since the beginning of the century.

The following table shows the population of the reorganised Tamil Nadu since the beginning of the century.

	<i>Census year.</i>							<i>Population in Millions.</i>
	(1)							(2)
1901	..	..	..	..	..	..	..	19.3
1911	..	..	..	..	..	..	..	20.9
1921	..	..	..	..	..	..	..	21.6
1931	..	..	..	..	..	..	..	23.5
1941	..	..	..	..	..	..	..	26.3
1951	..	..	..	..	..	..	..	30.1
1961	..	..	..	..	..	..	..	33.7
1971 (P)	..	..	..	..	..	..	..	41.1

P—Provisional.

[Source: (i) Census of India, 1961: Vol.—IX Madras Part—II A: General Population Tables.

(ii) Census of India, 1971—Provisional Census Figures.]

According to 1971 census, in the whole of India, Uttar Pradesh is the State having the largest population of 88.3 millions which is 16 per cent of the total population of India.



Nagaland on the other hand is the smallest State with half a million persons accounting for 0.1 per cent of total All-India population. These largest and smallest States cover 9.2 per cent and 0.5 per cent respectively of the total Indian extent.

The India's population State-wise for 1961 and 1971 is as follows :—

INDIA'S POPULATION BY STATES : 1961 AND 1971.

State.	Population (Millions).	
	1961	1971 (P)
(1)	(2)	(3)
1 Uttar Pradesh .. .. .	73.7	88.3
2 Bihar .. .. .	46.5	56.4
3 Maharashtra .. .. .	39.6	50.3
4 West Bengal .. .. .	34.9	44.4
5 Andhra Pradesh .. .. .	36.0	43.4
6 Madhya Pradesh .. .. .	32.4	41.6
7 Tamil Nadu .. .. .	33.7	41.1
8 Mysore .. .. .	23.6	29.3
9 Gujarat .. .. .	20.6	26.7
10 Rajasthan .. .. .	20.2	25.7
11 Orissa .. .. .	17.5	21.9
12 Kerala .. .. .	16.9	21.3
13 Assam .. .. .	11.1	14.9
14 Punjab .. .. .	11.1	13.5
15 Haryana .. .. .	7.6	10.0
16 Jammu and Kashmir .. .. .	3.6	4.6
17 Himachal Pradesh .. .. .	2.8	3.4
18 Maghalaya .. .. .	0.7	1.0
19 Nagaland .. .. .	0.4	0.5
20 Union Territories .. .. .	6.2	8.9
India .. .. .	439.1	547.4

P—Provisional.

(Source: Census of India, 1971: Paper I of 1971 supplement series I—India)

## 2.4 POPULATION GROWTH.

(a) *Tamil Nadu vs India* :—The trends in the growth of population in Tamil Nadu and in India for the period 1901–71 are as follows :—

TREND IN POPULATION GROWTH—TAMIL NADU AND INDIA : 1901–71.

Year.	Tamil Nadu.		India.	
	Population (Millions).	Index.	Population (Millions).	Index.
(1)	(2)	(3)	(4)	(5)
1901.. .. .	19.25	100.0	238.34	100.0
1911.. .. .	20.90	108.6	252.01	105.7
1921.. .. .	21.63	112.4	251.24	105.4
1931.. .. .	23.47	121.9	278.87	117.0
1941.. .. .	26.27	136.5	318.54	133.7
1951.. .. .	30.12	156.5	360.95	151.4
1961.. .. .	33.69	175.0	433.07	184.2
1971 (P) .. .	41.10	213.5	547.37	229.7

P—Provisional.

(Source :—Computed from data available from 1961 and 1971 Censuses.)

It is seen that during 1901–71 the population of Tamil Nadu has grown by 114 per cent whereas that of India has increased by 130 per cent. The above figures also indicate that the population of Tamil Nadu has grown faster than that of the country as whole upto 1951 but in the later decades 1951–61 and 1961–71, the trend in the growth position has changed and Tamil Nadu's growth is lower than that of All-India.

(b) *Tamil Nadu vs. Other States* :—When the growth of Tamil Nadu population is compared with that of other States of India for 1951–1971, the following points emerge:—

(i) The growth rate of Tamil Nadu population during 1951–61 is the least among the States, except Jammu and Kashmir.

(ii) The rate during 1961–71 in respect of the State is in keeping with the general trend in India. This is the highest growth rate in this century.

(iii) The growth rate in 1961–71 in Tamil Nadu is 86 per cent higher than the growth rate in 1951–61. Excepting Jammu and Kashmir and Nagaland, no other State has registered such a large increase in the growth rates.

(iv) The growth rates of Tamil Nadu during both the decades are, however, less than that of the country as a whole. The Tamil Nadu rate is 3 per cent point less than All-India during 1961–71 as against 10 per cent point in the previous decade

(c) *Districts.*—From the decennial percentage variation in population in Tamil Nadu by districts for the latest two decades, viz., 1951—61 and 1961—71, it may be seen that the Chingleput District has the highest rate of variation of 159 per cent while Ramanathapuram District has recorded the least (10 per cent). The next least growth rate is observed in case of the Kanyakumari District where it is 12 per cent. The Madras City population growth has increased by 94 per cent. The Nilgiris is the district wherein the rate of growth has fallen from 31 per cent in 1951—61 to 20 per cent during 1961—71, indicating a recessionary trend of 36 per cent. The variation rates of eight districts besides Chingleput are higher than the State's variation as shown below :—

<i>District.</i>	<i>Variation.</i>	
	IN PER CENT.	
1. Salem .. .. .	159	147
2. Tiruchirappalli .. .. .	146	146
3. North Arcot .. .. .	121	121
4. Madurai .. .. .	103	103
5. Thanjavur .. .. .	103	103
6. Madras City .. .. .	94	94
7. Tirunelveli .. .. .	89	89
8. South Arcot .. .. .	88	88
Total Tamil Nadu .. .. .	86	86

#### 2.5 SEX-RATIO:

(a) *Tamil Nadu vs. India.*—Sex-ratio measures the balance between males and females in the human population. It is defined as “Number of females per 1,000 males”. It is true that social economic and community life is affected by large imbalances in many ways.

The sex composition for Tamil Nadu and All India for the period 1901—71, as revealed by the different censuses are as follows :—

#### SEX-RATIO OF TAMIL NADU AND INDIA : 1901—71.

<i>Year.</i>	<i>Sex-ratio (females per 1,000 males).</i>	
	<i>Tamil Nadu.</i>	<i>India.</i>
1901 .. .. .	1,044	972
1911 .. .. .	1,042	964
1921 .. .. .	1,029	955
1931 .. .. .	1,027	950
1941 .. .. .	1,012	945
1951 .. .. .	1,007	946
1961 .. .. .	992	941
1971 (P) .. .. .	979	932

P—Provisional.

(Source : (i) Census of India, 1961—Volume IX, Madras—Part II-A—General Population Tables.

(ii) Census of India, 1961—Volume I—India—Part II-A (i) General Population—Tables.

(iii) Census of India, 1971—Series I—Paper 1 of 1971—Supplement).

(b) *Tamil Nadu vs other States.*—In the whole of India, Kerala, is the State which is having the highest sex-ratio of 1,022 in 1961 and 1,019 in 1971. Orissa comes next with a sex-ratio of 1,001 during 1961. But in 1971 it has fallen in line with other States, with a sex-ratio of 989. In 1961 Punjab has recorded a minimum sex-ratio of 854 among the States whereas in 1971 Nagaland is at the bottom with 872. Punjab's figure for 1971 is however, 873, one more than Nagaland's sex-ratio. In the sex-ratio as per 1961 Census Tamil Nadu occupied 4th place next only to Kerala, Orissa and Bihar and 3rd rank as per 1971 census next to Kerala and Orissa.

The sex-ratio is observed to be declining during the period 1961—71 in respect of States of Andhra Pradesh, Bihar, Gurjarat, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Orissa, Tamil Nadu and Uttar Pradesh. The highest percentage decline is noted in the case of Nagaland which in 1971 is 6.54 per cent less than in 1961. The lowest of decline is 0.29 per cent registered by Kerala. As against this, the sex-ratio in regard to Assam, Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab, Rajasthan, West Bengal and Meghalaya has increased during the decade, 1961—71. The increase is considerable in the case of Himachal Pradesh with 3.84 per cent Meghalaya's variation of 0.11 per cent is the least among the States having increasing sex-ratio. Mysore has, however, maintained the same sex-ratio (959) during the decade 1961—71. All India has recorded a fall of 0.96 per cent in its sex-ratio.

(c) *Districts.*—From the district-wise pattern of sex-ratio of Tamil Nadu population for 1961 and 1971 it may be seen that Ramanathapuram and Tirunelveli are the only districts where women out-number their counterparts in both the decades. Moreover, Ramanathapuram has got the highest sex ratio 1,060 for 1961 and 1,044 for 1971 while the States figure is 992 for 1961 and 979 for 1971. The city of Madras has the least number of women per 1,000 men as provided by sex-ratio of 901 in 1961 and 902 in 1971.

In the entire Tamil Nadu, The Nilgiris, Dharmapuri and Madras have shown an increase in sex-ratio. The Nilgiris registering the upper limit of 3.7 per cent and Madras the lower one with 0.1 per cent. All other districts have recorded a decline in the proportion of females per 1,000 males, Thanjavur having the highest fall of 2.1 per cent and Kanyakumari the lowest of 0.5 per cent. The percentage decrease in sex proportion is 1.3 for the State as a whole.

In respect of sex differentials measured by sex-ratio nine districts, viz., Madras, Chingleput, North Arcot, South Arcot, Dharmapuri, Salem, Coimbatore, The Nilgiris and Kanyakumari are below State average for both 1961 and 1971. On the contrary, the sex-ratio of Madurai, Tiruchirappalli, Thanjavur, Ramanathapuram and Tirunelveli is above the State's figure.

#### 2.6 DENSITY:

(a) *Tamil Nadu vs India.*—The density of population measures the dispersion of persons over unit of area. It is defined as the number of people living in an area of square kilometre/mile. In Tamil Nadu, according to 1971 census, 316 persons are

living in a space of one square kilometre. The National figure is 182 per square kilometre (excluding NEFA and Jammu and Kashmir). It is clear that the State is more over-crowded in relation to the country. The States' density was 258 persons per square kilometre in 1961 as against All India density of 138. This indicates that the pressure on space in Tamil Nadu has increased by 22.5 per cent during 1961-71 whereas it is 31.9 per cent for the country as a whole during the same period.

(b) *Tamil Nadu Vs. other States.*—Among the States, Kerala is the most densely populated, where 548 persons are residing per square kilometre in 1971. Next in rank is West Bengal with 507. Sparse aggregation of people is found in Nagaland whose density is just 31. Kerala's density is 18 times that of Nagaland. In density, Tamil Nadu, stands at the fourth rank in the whole of India in both 1961 and 1971 censuses.

(c) *Districts.*—In Tamil Nadu, Madras City is the most populated district with 19,299 persons living in a space of one square kilometre in 1971. Next comes the southern most district of Kanyakumari with 729 as its density. Dharmapuri is found to be the least dense district wherein the spread of its inhabitants is just 174 over one square kilometre. In the Madras City, the growth of density of population is the highest recorded during the last decade, 1961-71. The lowest has been recorded in Salem. The figures are 41.7 per cent and 16.5 per cent respectively.

## 2.7 RURAL-URBAN COMPOSITION

The definition of an urban area in India varied from census to census. According to the Census, 1961, an urban area is defined as follows:—

(i) All municipalities, cantonments and town ships are deemed to have urban characteristics and are declared as towns.

(ii) For other areas, three conditions are laid down:—

(a) the population of the area should not be less than 5,000.

(b) 75 per cent of the male population should depend on non-agricultural resources for their livelihood.

(c) there should be density of 1,000 persons per square mile (i.e., 400 per square kilometre).

(iii) Places which satisfy two of the above three conditions and which in the opinion of the Collector of the district have urban characteristics are also declared by the State Director of Census Operations as urban.

A similar definition was adopted in the 1971 census.

### A. GROWTH IN TOWNS :

According to Census 1971, there are 443 cities and towns in Tamil Nadu. In contrast there were only 127 urban centres in State in 1901.

*Growth of Towns and Cities in Tamil Nadu 1901-1971.*

<i>Year.</i>	1901.	1911.	1921.	1931.	1941.	1951.	1961.	1971(P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Number of cities and towns.	127	153	173	204	238	266	388	443
Index (Base 1901)	100	120	136	161	187	209	266	349

P—Provisional.

[Source : (i) Census of India, 1961—Volum IX—Madras Part II-A General Population Tables.

(ii) Census of India, 1971—Series 17—Tamil Nadu—Paper 1 of 1971].

The increase in the number of cities and towns over the seventy years period is  $3\frac{1}{2}$  times. The growth over decades is, by and large, steadily and same except during the last two decennia when it is sharp and large showing a rapid urbanization in Tamil Nadu since the latter half of the century.

**B. LEVEL OF URBANIZATION :**

A common indicator to measure the urbanization level in population is by means of "Proportion of population living in urban areas (expressed as per cent) to total population".

**LEVEL OF URBANIZATION IN TAMIL NADU 1901-1971.**

<i>Census year.</i>	1901.	1911.	1921.	1931.	1941.	1951.	1961.	1971(P)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Urban population (in millions).	2.69	3.10	3.35	4.14	5.08	7.13	8.99	12.44
Total population (in millions).	19.25	20.90	21.63	23.47	26.27	30.12	33.69	41.10
Level of Urbaniza- tion (percentage).	13.99	14.84	15.49	17.66	19.66	23.68	26.69	30.28

(P)—Provisional.

[Source : (i) Census of India, 1961—Volume IX—Madras Part II-A, General Population Tables.

(ii) Census of India, 1971—Series 17—Tamil Nadu Paper 1 of 1971].

The above table shows that the urbanization process in Tamil Nadu has an accelerated tempo, the rate of urbanization is more pronounced in the last three decades. The development activities and process of industrialisation and modernisation consequent on the Five-year Plans in the State may be responsible to a large extent for the increased urbanization in Tamil Nadu during 1951-71. In 1901, 14 per cent of to a Tamil Nadu population lived in urban parts of the State while in 1971, it has increased to 30 per cent which is more than double the 1901 level.

### C. DENSITY OF URBAN POPULATION :

The degree of urbanization is also assessed by the number of persons residing in a square mile or square kilometre of urban sector called "Density of Urban Population".

#### DENSITY OF URBAN POPULATION IN TAMIL NADU 1901—1961.

Year.	1901	1911	1921	1931	1941	1951	1961
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Density (persons per square mile of urban area).	3,795	3,698	3,642	3,842	4,080	5,064	4,460

(Source: Worked out in Department of Statistics, Tamil Nadu.)

The density differentials over the period under study are not consistent. It decreased slowly in the first two decades, the decrease being 153 per square mile. Between 1931—1951, it grows rapidly the increase being 1,222 persons for every square mile during the said 20 years period. In 1961, the density in Tamil Nadu urban centres is, however, 4,460 which is 604 persons less per square mile than in 1951. It is on the contrary, the highest in 1951. The reason ascribable for this break in trend of urban centralization of population is the increase in urban areas without a proportional growth in population. Table below indicates the growth of urbanized areas in Tamil Nadu for sixty years.

#### GROWTH OF URBANIZED AREAS IN TAMIL NADU 1901—1961.

Year.	1901	1911	1921	1931	1941	1951	1961
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Urban area (sq. miles).	709.81	838.92	919.99	1,078.37	1,246.31	1,408.18	2,016.21
Percentage of Urban area to total area.	1.42	1.67	1.83	2.15	2.48	2.81	4.02

Note.—Data for 1971 are not readily available.

(Source: Computed in Department of Statistics, Tamil Nadu).

The increase in proportion of urban areas to total area is from 1.42 to 2.81 till 1951. It jumps to 4.02 per cent in 1961. This rise in urbanized areas has pulled down the density of population in 1961.

### D. RURAL URBAN DISTRIBUTION :

(a) *Tamil Nadu Vs. India.*—As per 1971 Census, there are 443 towns and cities in Tamil Nadu out of a total of 2,921 in India indicating that 15.2 per cent of India's cities and towns are located in Tamil Nadu. There is a population of 12.45 millions in the 443 urban pockets of Tamil Nadu while 108.79 million people

live in all the Indian cities and towns. The urban population of the State forms 11·4 per cent of All India Urban inhabitants. In 1961, there were towns and cities in Tamil Nadu as against 2,700 in whole of India. This shows that Tamil Nadu has 12·5 per cent of country's total urbanized centres situated within its boundaries. The urban population in Tamil Nadu for 1961 was of the order of 8·99 millions out of the total of 78·94 millions for India. Surprisingly, Tamil Nadu urban population bore 11·4 per cent to the country population residing in Urban areas in 1961 which is equal to that in 1971. There is a relative growth in number of towns and cities in Tamil Nadu in 1971 over 1961 compared to India, but the urban population proportion in Tamil Nadu to India is just the same (11·4 per cent).

Tamil Nadu had 14,124 villages out of a total of 567,338 in whole of India during 1961. In these 14,124 villages of the State, there lived 24·7 million people as compared to 360·3 million population settled in the village side of the country. It is note worthy that comparatively a large percentage of rural population of the country (6·9 per cent), are concentrated in just 2·5 per cent of the total villages of the country accounted for in Tamil Nadu.

(b) *Tamil Nadu Vs. other states.*—Maharashtra is the most urbanized State in the whole of India wherein 31 per cent of the population live in urban areas. It is followed by Tamil Nadu with its 30 per cent of population in urban sector as per 1971 census. Gujarat with 28 per cent is the third among the States. These three States occupy the same places in 1961 also. Nagaland is the least urbanly developed State in India with only 5 per cent of its 1961 population residing in urban centres, whereas in 1971, Himachal Pradesh's Urbanisation even less than that of Nagaland, with the result that the former State (with 7 per cent) is occupying the last rank as far as urbanization level is concerned.

As regards the percentage variation urbanization in Nagaland it has increased by 90·9 per cent over the period 1961—71, the highest for all the states in the country. West Bengal has recorded the least increase of 0·6 per cent in the decade. The percentage variation in Tamil Nadu is 13·5 per cent which is above the national figure of 10·5 as also of all the States except Assam, Bihar, Mahaya Pradesh, Nagaland and Orissa.

(c) *Districts.*—According to 1971 census, 30·3 per cent or 12,446,860 of the States population reside in urban areas and the remaining 69·7 per cent or 28,656,265 persons live in village side. The corresponding figures for 1961 are 26·7 per cent and 73·3 percent respectively. Madras District being the capital city of the State, is entirely urban in character. As per 1971 census, the Nilgiris, the hill district of the State is the next predominantly urbanized district with 49·4 per cent of its population residing in towns and Coimbatore with 35·7 per cent follows the Nilgiris, Chingleput, Madurai and Tirunelveli take fourth, fifth, and sixth places. The least urbanized district is Dharmapuri where just 8·6 per cent of total population live in urban sector.

The trend of urbanization by districts in 1971 is, by and large, similar to that observed in 1961 with an exception of Chingleput where the urbanization has been comparatively more rapid during 1961—71 as shown by the population proportions in urban areas of 20·8 per cent (1961) and 34·8 per cent (1971).



The greatest variation of 67.6 per cent is observed in case of Chingleput district during 1961—71 and next comes Salem with 25.5 per cent. The least acceleration barring Madras City is in Thanjavur district where it is just 0.9 per cent. The over-all percentage of variation of the State is 13.5 per cent.

#### E. RURAL URBAN POPULATION:

(a) *Tamil Nadu Vs. other States.*—In Maharashtra the largest number of India's urban population viz., 15.7 millions or 14.43 per cent, is concentrated followed by Tamil Nadu where 12.4 million persons live in cities and towns indicating that 11.4 per cent of country's urban population is settled in urban Tamil Nadu. The least population of just 0.051 million is found in urban parts of Nagaland which is 0.05 per cent of urban population of the Nation. The State of Uttar Pradesh contains the largest number of 76 million persons in its villages. This is 17.33 per cent of the rural population of India. Next in the list is Bihar whose rural population is 51 millions indicating that 11.58 per cent of rural India's population is concentrated there. The last again is the Nagaland State.

(b) *District.*—In Tamil Nadu, the Coimbatore District has the maximum population (having 10.6 per cent of the State's total population) residing in it. Next in importance comes Madurai where 9.6 per cent of Tamil Nadu total population is clustered. The lowest is recorded by the Nilgiris district which contains just 1.2 per cent of the total population of the State. As far as the rural population of Tamil Nadu is concerned, the maximum proportion of 10.8 per cent is in the South Arcot district. The Nilgiris district again is observed to have the minimum percentage of rural persons of the State (viz., 0.9 per cent) Coimbatore district with 12.5 per cent of the State's Urban population residing in its Urban Sector is next in order after the city of Madras wherein 1/5 of the Urban population of Tamil Nadu live. The Dharmapuri district 1.2 per cent at the lowest.

### 2.8. LITERACY :

#### 1. GENERAL LITERACY:

(a) *Tamil Nadu Vs. India.*—Taking the country as a whole 29.3 per cent of the population is literate. The State figure is 39.4 per cent. Though these compare favourably with the literacy rates recorded in 1961, which were 24.0 per cent for India and 31.4 per cent for Tamil Nadu, the rise in literacy of 22 per cent of the country as a whole and 25 per cent for Tamil Nadu during 1961—71 is not striking. More than 60 per cent of the population are still illiterate.

(b) *Tamil Nadu Vs. other states.*—In India, Kerala is noticed to have the highest literacy where 60 persons out of 100 are literate as per 1971 census. Tamil Nadu maintains second rank among the States with 39 per cent of literacy level. Jammu and Kashmir is most backward in the realm of literacy as it has registered only a rate of 18 per cent. Next least developed state is Rajasthan where hardly 19 persons know how to read and write for every 100 population.

In the entire Indian sub-continent, Kerala again tops in male as well as female literacy. According to census of 1971,  $\frac{2}{3}$  of its male population are literate where as more than  $\frac{1}{2}$  of the State's females know to read and write. Tamil Nadu literacy differentials by sex are

The work participation figures by sex reveal that the sex wise working capacity in all states has gone down in 1971 as compared with 1961. The decline in female participation is much more marked than that of male work rate.

(b) *Districts*.—Among the districts, only six have recorded an increase in the working population during 1961—71. They are Madras (35.8 per cent) Chingleput (6.6 per cent) Coimbatore (5.4 per cent), The Nilgiris (2.4 per cent), Madurai (1.3 per cent) and Kanyakumari (0.3 per cent). The remaining eight districts have registered a fall in workers. The maximum decline of 9.4 per cent is observed in case of Dharmapuri and the least of 3.1 per cent in Tirunelveli. The state percentage of variation as already mentioned is (—) 1.8.

The participation rates in 1971 are invariably less than those for 1961 in all the districts. This, may, as stated earlier, be the consequence of the differential concepts of working population. It may also be said that the growth of workers in 1971 is not commensurate with that of population as it was during 1961.

The male working class has increased during 1961—71 in all the districts without any exception. The largest decadal growth of 34 per cent, is found in the city of Madras and the lowest in the Nilgiris (8 per cent). The corresponding variation of State is 15 per cent. On the contrary, the female working population has decreased in number in all the districts except in the city. The magnitude of negative variation is the highest (51 per cent) in Kanyakumari and it is the least again in the Nilgiris (7 per cent). The percentage variation of Tamil Nadu as a whole is (—) 34. It is astounding that female workers have swollen in number in the Metropolis by 51 per cent during 1961—71. The state of affairs may be due to the non-inclusion of female family helpers especially in cultivation. Because the Madras City is wholly non-agricultural area, no such omissions are there and hence the positive growth in the women workers in the city.

The work participation rates by sex have fallen during 1961—71 period. The fall is very much pronounced in female rates than male ones.

#### WORKERS BY RURAL URBAN RESIDENCE :

(a) *States* :—The distribution of working population by its residence Rural or Urban throws light on the areal concentration of workers. This helps in taking stock of workforce, mobilizing the manpower resources and planning for their better utilization and creation of additional job opportunities.

The concentration of workers male, female or both is very much higher in Rural area in the case of all states. This is apparently due to the agrarian economy of the country. The highest percentage of workers in rural area is observed in Orissa in respect of male (93.4 per cent) and also of total workers (94.6 per cent). The percentage employment of female workers in Assam is maximum (97.9 per cent) among the States. On the contrary, Orissa is observed to have provided the least percentage of jobs to its male. (6.6 per cent) as well as total (5.4 per cent) working population in Urban sector. Similarly, Assam with 2.1 per cent of its female workers working in Urban areas is at the last place in the whole country. The high concentration of workers in Urban Sector is noticed in the States of West Bengal, Maharashtra and Tamil Nadu under total and male workers.

The distribution of Tamil Nadu working population male, female or both, in rural places is less than the national average. It is appreciably higher than the country's figures in respect of urban sector.

(b) *Districts.*—The districtwise distribution pattern of working population by Rural-Urban areas in Tamil Nadu is similar to that already perceived in respect of States in the country. In country side, Dharmapuri has recorded the highest proportion of working population male, female or total as indicated by 91.2 per cent, 97.6 per cent and 95.5 per cent respectively in the entire Tamil Nadu. On the other hand, it has got the least proportion (5.8 per cent, 2.4 per cent and 4.5 per cent for male, female and total workers) in the urban areas which is obvious. The distribution of working force in the Nilgiris is the least as far as Rural parts are concerned while it is the highest in urbanized areas in the whole of the State, barring in the City of Madras.

#### WORKERS BY LITERACY :

(a) *States.*—It is believed that literate working force is an asset to the nation in as much as it increases the productivity of the country. It is beyond the scope of this Chapter to study the impact of literacy on workers' efficiency and thereby productivity. Here, simply a comparative study among the literate working population of different estates of India has been undertaken with the help of 1961 census.

As is expected, the literacy among urban male workers is higher than those in rural areas. Between sexes, female working population is less literate than its counterpart. This trend is noticed both in rural as well as urban sectors. Further more, the literacy among urban female workers is at a higher level than among rural females. The combined literacy of males and females in urban areas is more pronounced than in rural parts. This pattern is observed throughout India.

The ratio of literate male workers to total workers in urban areas of Gujarat is the highest (52 per cent) in the country, whereas Rajasthan's figures of 15 percent is the lowest. The corresponding figures of Tamil Nadu is 33.3 per cent which is more than that of all other Southern States viz. Andhra Pradesh (33.1 per cent) Kerala (31.2 per cent) and Mysore (25.4 per cent). The States ratio is, however, slightly less than the All India level of 34.5 per cent. In respect of literacy among rural male working force, again the state of Gujarat stands first with 23 percent and Rajasthan the last with 2 per cent. Tamil Nadu's literacy achievement of rural men workers is 7.0 per cent. Among the Southern States, Kerala's 16.8 per cent is the highest and Mysore has registered the least one (4.6 per cent). The order is Kerala (16.8 per cent), Andhra Pradesh (8.4 per cent) Tamil Nadu (7.0 per cent) and Mysore (4.6 per cent),

Among the female workers, Assam has got the largest proportion of literates of 23.6 per cent in urban areas while in rural sector, Kerala's 6.8 percent is the highest. The lowest figures for urban and rural parts are respectively 3.6 percent for Orissa and 0.1 per cent for Rajasthan. The literacy level among female working population in Tamil Nadu is 9.8

per cent in urban and 1.1 percent rural sector. These levels of the State in urban and rural areas are lower than the corresponding All-India figures which are 10.9 percent and 1.2 per cent, respectively. The State's figures are higher than all Southern States except Kerala.

As regards the combined literacy differentials of both sexes, Gujarat once again tops the list of States in all the areas with 46.4 per cent in urban, 16.4 per cent in rural and 22.0 per cent in both the areas. Rajasthan has registered the least percentage in this respect of 13.4 per cent for urban, 1.4 per cent for rural and 2.6 for all sectors. Tamil Nadu's figure of 28.3 percent in urban areas is equal to Kerala's level i.e., 28.3 per cent and above the levels of Andhra Pradesh (26.2 per cent) and Mysore (21.6 per cent) in rural sector, Tamil Nadu occupies the third place among the Southern States. In both the rural and urban areas, Tamil Nadu occupies the second place amidst the Southern States. The order is Kerala (15.7 per cent), Tamil Nadu (9.5 per cent) Andhra Pradesh (7.9 per cent) and Mysore 6.2 per cent).

(b) *Districts.*—The general pattern of literacy levels among male and female workers, and between urban and rural areas of the districts in Tamil Nadu is similar as in other States. The male literacy level among workers is higher than that of females. Similarly the urban educational attainment amidst workers is more than the rural.

In urban sector, the literacy levels of the workers in the city of Madras are the highest for both sexes. They are 53.0 per cent for male, 34.5 per cent for female and 51.24 per cent for both sexes of working population. Next place is occupied by Tiruchirappalli for male (34.3 per cent) and total working force (29.6 per cent) and by Kanyakumari is case of workers with 17.4 per cent. Tirunelveli's 22.2 per cent for male and 17.5 per cent for total working population and Salem's (including Dharmapuri) 5.5 per cent for female population at work are at the other extreme.

The position in rural sector is different. It is noteworthy that the Nilgiris is at the first place having 18.6 per cent of male workers as literates while Kanyakumari is seen having the largest percentage of literates among females (8.3 per cent) and total working population (12.3 per cent). Salem (including Dharmapuri) is at the last rank in case of literacy level in male and total working force with 4.9 per cent and 3.2 per cent respectively. In regard to female workers, the least level of 0.5 per cent is observed in South Arcot.

Considering all areas, Madras City is the most forward district in literacy for male female and both sexes. It is significant that the hill district of the Nilgiris is second as far as the literacy among male workers (25.2 per cent) and total workers (17.6 per cent) is concerned. Kanyakumari is only third in respect of literacy among male workers and total workers in all areas with 15.9 per cent and 14.3 per cent respectively. It is however, next to Madras City having achieved a level of 9.4 per cent among female working force. Salem (including Dharmapuri) is again found to occupy the last place concerning the literacy level of male and total workers. The literates among the female workers are observed to be least (0.9 per cent) in South Arcot.

## SECTORAL WORKING POPULATION.

The distribution of working population by sectors is studied in this section. The Sectors of economy as adopted by the Registrar General India, have also been adopted in the study herein. They are as follows :—

<i>Sector.</i>	<i>Classes of workers included.</i>
1 Primary .. .. .	i. Cultivators. ii. Agricultural labourers. iii. Mining, quarrying, livestock, forestry, hunting, plantations orchards and allied activities.
2 Secondary .. .. .	iv. Household industry. v. Manufacturing vi. Construction.
3 Tertiary .. .. .	vii. Trade and Commerce. viii. Transport, Storage and Communication. ix. Other Services.

As Indian economy in general and that of Tamil Nadu in particular, is predominantly agrarian, it is expected that the primary sector may be the prime employer of the population both in India and Tamil Nadu. This hypothesis is examined with the help of data on working population by these three economic sectors for 1961 Census.

(a) *States.*—The general pattern observable from the data available is as follows:—

(i) For the male workers, primary sector provides the largest employment followed by tertiary and then secondary sectors.

(ii) In the case of female population at work, the optimum employment is seen in primary sector again. Next comes, however, secondary and then the tertiary sector with the exception of Orissa and Tamil Nadu where tertiary sector is second and secondary is last.

(iii) The work pattern of both sexes combined is similar to that of male workers. This is obvious as the percentage of male workers to total workers is high.

(iv) In the Primary Sector, the ratio of females at work is more than that of males in all the States except Orissa.

As regards the State-wise variations, no uniform pattern emerges. A few examples are cited below :—

(a) The States which have provided the largest percentage of employment to their male workers in the sectors of primary, secondary and tertiary are respectively Bihar (77.5 per cent), West Bengal (16.8 per cent) and Kerala (37.4 per cent) whereas Madhya Pradesh with 89.3 per cent and Kerala with 26.1 per cent and 25.0 per cent are perceived to have offered the maximum jobs to their female workers in these three sectors, *viz.*, primary, secondary, and tertiary.

(b) The following statement shows the position as far as the least sectoral male and female employment among the states is concerned.

<i>Sector.</i>	<i>State.</i>	<i>Per cent</i>
(1)	(2)	(3)
Least percentage of—		
<i>Males employment :</i>		
Primary .. .. .	Kerala .. .. .	46.1
Secondary .. .. .	Assam .. .. .	4.6
Tertiary .. .. .	Madhya Pradesh .. .	13.0
<i>Females employment :</i>		
Primary .. .. .	Kerala .. .. .	48.9
Secondary .. .. .	Madhya Pradesh .. .	5.4
Tertiary .. .. .	Jammu and Kashmir	1

(c) As regards male and female combined together, Madhya Pradesh tops the list with 82.2 per cent of its workers engaged in primary occupations. Kerala with 19.3 per cent and 33.7 per cent of its working population at jobs in secondary and tertiary sectors respectively is the first among all the States of India. The order of States recording the lowest trend in these sectors is Kerala (47.0 per cent) and Madhya Pradesh (8.0 per cent and 9.8 per cent).

(b) *Districts.*—The distribution of workers in Tamil Nadu by districts indicates a pattern generally in correspondence with that found in case of States. The district of Madras, however, does not conform to the general pattern due to its special characteristics of being entirely urban. Besides Madras, there are some exceptions like Kanyakumari, Tirumelveli, Salem, etc.

The highlight of the districtwise distribution of working population is that in Dharmapuri District, the highest proportion of workers by sex is engaged in primary sector among the districts. The figures are 86.3 per cent for male workers, 89.2 per cent for female workers 87.5 per cent for both. The effect of this is reflected in the other sectors that is secondary and tertiary could afford to give work opportunities for the least proportions of workers in the whole of the State.

In secondary field, Madras City has provided with 32.7, the largest percentage of employment to male workers, whereas the maximum proportion (59.3 per cent) of female workers is employed in Kanyakumari. As regards male and female workers combined together, Madras, tops the list with 31.2 per cent closely followed by Kanyakumari with 28.5 per cent. The least proportion of workers is noticed in the Dharmapuri District for all the three categories i.e., male (4.1 per cent) females (2.4 per cent) and both

(3.4 per cent). However, in case of tertiary sector, Madras City is at top in providing the highest proportion of employment opportunities to all the three classes, viz., males (65.8 per cent) females (81.8 per cent), and both (67.4 per cent) and the Dharmapuri District is again at the last place as far as this sector is concerned.

In the metropolis of Tamil Nadu, tertiary sector is the employer of the maximum ratio of working population male, female and total and the City's figures are the largest among the districts.

## 2.10 A GENERAL COMPARISON

This section is devoted to a comparison of Tamil Nadu population with the populations of some select countries. This will throw light on the place of Tamil Nadu in the World picture. For this purpose, the following countries have been selected:—

### A. *Developed Countries :*

- (i) United States of America.
- (ii) United Kingdom.
- (iii) France.
- (iv) West Germany.
- (v) Canada.
- (vi) Japan.

### B. *Socialistic Countries :*

- (i) U.S.S.R.
- (ii) Poland.
- (iii) Yugoslavia.

### C. *Developing Countries :*

- (i) India.
- (ii) United Arab Republic.
- (iii) Phillipines.
- (iv) Thailand.
- (v) Malaysia.
- (vi) Iran.
- (vii) Ceylon.

The comparative study in the sections to follow is in respect of a few variables such as growth rate, sex-ratio, density, urbanization, literacy level and work participation.

*Growth Rate.*—For the purpose of studying the comparative growth rates of populations of Tamil Nadu and select countries, the population is reckoned as growing

geometrically over time. The details of annual growth rates of Tamil Nadu as well as select countries (as far as data are available) are indicated in the table below :—

ANNUAL GROWTH RATES (PER CENT) TAMIL NADU AND SELECT COUNTRIES.

Country.	Year.	Annual growth rates per cent.
(1)	(2)	(3)
Tamil Nadu .. ..	1951-61	1.1
	1961-71*	2.0
<i>Developed Countries :</i>		
U.S.A. .. ..	1958-63	1.6
U.K. .. ..	1958-63	0.7
France .. ..	1958-63	1.3
Federal Republic of Germany. ..	1958-63	1.3
Canada .. ..	1958-63	2.0
Japan .. ..	1960-63	1.0
<i>Socialistic Countries :</i>		
U.S.S.R. .. ..	1960-63	1.6
Poland .. ..	1958-63	1.3
Yugoslavia .. ..	1958-63	1.1
<i>Developing Countries :</i>		
India .. ..	1958-63	2.3
U.A.R. .. ..	1958-63	2.5
Phillippines .. ..	1958-63	3.2
Thailand .. ..	1958-63	3.0
Malaya .. ..	1958-63	3.2
Iran .. ..	1958-63	2.4
Ceylon .. ..	1958-63	2.5

\* Estimated.

(Source: U. N. Demographic Year Book—1964.)

The period for which growth rates have been presented is not uniform for different countries. Nevertheless, the annual rates will give a broad picture of the comparative trends. The analysis below is based on this assumption. The annual growth rate of Tamil Nadu Population for 1951-61 is less than that of all the developing countries considered and also developed and socialist countries except United Kingdom and Japan. It is equal to Yugoslavia's rate. The 1961-71 rate of the state is just equivalent to Canada's figure but higher than all other developed and socialistic countries selected. It is less compared to all developing countries.



Among the countries selected, United Kingdom is having the least growth rate per annum (i.e., 0.7 per cent) and Malaya and Phillipines are each found with 3.2 per cent per annum at the other extreme. Japan's rate of 1.0 per cent is the second lowest after United Kingdom. The rate of increase for India is 2.3 per cent per annum.

*Sex-Ratio.*—The Sex ratio differentials of Tamil Nadu for 1961 and 1971 are studied in comparison with those of select countries of the World. Table below furnishes these particulars.

SEX-RATIO—TAMIL NADU AND SELECT COUNTRIES.

<i>Country.</i>	<i>Year.</i>	<i>Sex-Ratio</i> <i>(Females per</i> <i>1,000 males.)</i>
(1)	(2)	(3)
Tamil Nadu .. .. .	1961	992
	1971	979 (P)
<i>Developed Countries.—</i>		
U.S.A. .. .. .	1960	1030
U.K. .. .. .	1961	1,069
France .. .. .	1962	1,058
West Germany .. .. .	1961	1,118
Canada .. .. .	1961	978
Japan .. .. .	1960	1,036
<i>Socialist Countries.—</i>		
U.S.S.R. .. .. .	1959	1,220
Poland .. .. .	1960	1,067
Yugoslavia .. .. .	1961	1,051
<i>Developing Countries.—</i>		
India .. .. .	1961	941
U.A.R. .. .. .	1960	988
Phillippines .. .. .	1960	983
Thailand .. .. .	1960	996
Malaya .. .. .	1957	939
Iran .. .. .	1956	965
Ceylon .. .. .	..	N.A.

P = Provisional

N. A. = Not Available.

(Source : Computed from data available in U. N. Demographic Year Book-1964.)

It is interesting to note that all the economically advanced countries except Canada and also the socialist countries have more females than males. It is very high in Russia and West Germany. It may be due to the effect of Second World War when male members died in large numbers in battle field. The Sex-ratio is the other way in the economically backward countries. The sex-ratio of Tamil Nadu falls in line with that in developing countries.

Among the economically developed countries, the highest sex-ratio of 1,220 is found in the U.S.S.R. as against 1,030 in U.S.A. Canada's 978 is, however, the least.

The sex-ratio among the economically developing countries ranges between the maximum of 996 in Thailand and the minimum of 939 in Malaya.

*Density of Population.*—The density of population indicates the level of crowding in the area concerned. Table below presents details showing this level in the select countries facilitating an easy comparison with the state's figures.

Country.	Year.	Density (Population/ sq. km.)
(1)	(2)	(3)
Tamil Nadu .. .. .	1961	259
	1971	316 (P)
<i>Developed countries :</i>		
U.S.A. .. .. .	1963	20
U.K. .. .. .	1963	221
France .. .. .	1963	87
West Germany .. .. .	1963	224
Canada .. .. .	1963	2
Japan .. .. .	1963	259
<i>Socialist Countries :</i>		
U.S.S.R. .. .. .	1963	10
Poland .. .. .	1963	98
Yugoslavia .. .. .	1963	75
<i>Developing Countries :</i>		
India .. .. .	1961	138
U.A.R. .. .. .	1963	28
Phillippines .. .. .	1963	101
Thailand .. .. .	1963	56
Malaya .. .. .	1963	58
Iran .. .. .	1963	13
Ceylon .. .. .	1963	162

P=Provisional.

(Source : U.N. Demographic year Book—1964.)

No specific pattern is observed relating to the density differentials. The development or otherwise of the countries does not seem to have any impact on the density level. Japan is having the highest density (i.e., 259 persons in an area of one sq. km.) among all the nations under review. West Germany with 224 is next in the list and the U.K. with 221 ranks third. The inhabitants are seen residing per sq. km. of area in the U.S.S.R., Canada is the least density populated country in the world just 2 persons are living in one sq. kms.

The 1971 density of Tamil Nadu is fairly high compared to different countries. It is higher than West Germany and the United Kingdom and equal to Japan, when compared with the 1961 figure.

*Urbanisation.*—The Urbanisation phenomenon is an outcome of industrialisation. That is to say, usually the more a country is industrialized, the higher is the urbanisation level of that country. This section compares the Tamil Nadu level in particular and that of the country in general with the countries selected. While comparing, it must be borne in mind that the urban concept is not uniform in all the economics of the world considered. The National definitions of the select countries are as follows :—

*France.*—Communes containing an agglomeration of more than 2,000 inhabitants living in continuous houses, or with not more than 200 metres between houses and communes of which the major part of the population is part of a multi communal agglomeration of this nature.

*Canada.*—Cities, towns and villages of 1,000 or more inhabitants, whether incorporated or un-incorporated, including urbanised fringes of cities are classed as metropolitan areas and other major urban areas. In 1961, urban areas includes urbanised fringes of certain smaller cities if the population of city and its urban fringes was 10,000 or more.

*Japan.*—Urban municipalities (Shi and Ku of Tokyo—to) usually having 30,000 or more inhabitants and which may include some rural areas as well as urban cluster.

*U.S.S.R.*—Cities and urban-type localities officially designated as such by each of the constituent Republics, usually according to the criteria of number of inhabitants and predominance and agricultural, or non-agricultural workers and their families.

*Poland.*—Towns and settlements or urban type, e.g., workers' settlements, fishermen's settlements, health resorts.

*Yugoslavia* —Localities of 15,000 or more inhabitants, localities of 5,000—14,992 inhabitants of which a least 30 percent are engaged in agricultural, localities of 3,000—4,999 inhabitants, of which at least 70 per cent are not engaged in agriculture, and localities of 2,000—2,999 inhabitants of which at least 80 percent are not engaged in agriculture.

*U.A.R.*—Cities, including the five largest cities which are also governorates and the capital of provinces and districts.

*Phillippines.* —Baguio, Cubu and Quezon cities, municipalities with a density of not less than 1,000 persons per sq. kilometres, administrative centres of cities and municipalities with a density of not less than 500 persons pe sq km. or with a population of 20,000 persons or more administrative centres and barries of 2,500 persons or more.

*Thailand*.—Municipalities.

*Iran*.—Cities, towns and villages of 5,000 or more inhabitants.

*Tamil Nadu and India*.—Refer to paragraph 2.7 on pages 34–35.

(Source : U.N. Demographic year book—1963–64).

As is apparant from above, the definition varies from country to country. In view of this, the urbanisation levels are not strictly comparable. However, Table below furnishes the relevant data on urbanisation phenomenon in the select nations to test the above-mentioned hypothesis with this conceptual limitation on a broad basis.'

URBANISATION LEVEL—TAMIL NADU AND SELECT COUNTRIES.

<i>Country.</i>				<i>Year.</i>				<i>Urbanisation Level (Urban population as percentage to total population).</i>	
(1)				(2)				(3)	
Tamil Nadu	..	..	..	..	1961	..	..	..	26.7
					1971	..	..	..	30.3 P
<i>Developed countries :</i>									
U.S.A.	..	..	..	..	1960	..	..	..	69.9
U.K.	..	..	..	..	..	..	..	..	N.A.
France	..	..	..	..	1962	..	..	..	63.0
West Germany	..	..	..	..	..	..	..	..	N.A.
Canada	..	..	..	..	1961	..	..	..	69.6
Japan	..	..	..	..	1960	..	..	..	63.5
<i>Socialist Countries :</i>									
U.S.S.R.	..	..	..	..	1959	..	..	..	47.9
Poland	..	..	..	..	1960	..	..	..	47.7
Yugoslavia	..	..	..	..	1961	..	..	..	28.3
<i>Developing Countries :</i>									
India	..	..	..	..	1961	..	..	..	18.0
U.A.R.	..	..	..	..	1960	..	..	..	33.0
Phillippines	..	..	..	..	1960	..	..	..	29.9
Thailand	..	..	..	..	1960	..	..	..	18.2
Malaya	..	..	..	..	..	..	..	..	N.A.
Iran	..	..	..	..	1956	..	..	..	31.4
Ceylon	..	..	..	..	1963	..	..	..	14.9

P—Provisional NA—Not Available.

(Source : Computed from Data available in U.N. Demographic year book—1963 and 1964).

The urbanization measure for which data are included in Table above by and large proves the hypothesis. The industrialised countries are noticed to have high degree of urbanization while the under developed economies are predominantly rural in their character. The socialist nations form the bridge between these two extremes. Yugoslavia with 28.33 per cent of her inhabitants residing in urban localities is an exception among the Socialist countries.

Among the non-industrialised economic, U.A.R. and Iran with 38 per cent and 31 per cent of their respective populations living in urban agglomerations are more nearer to developed countries having 30 per cent of its people in urban areas in 1971. Ceylon's urbanizing efforts is the least.

*Literacy level.*—Literacy is also defined differently in different countries. Any comparison of this factor should take into account the definitional variations. The literacy differentials by sex in the select nations to the extent available are indicated in Table here under.

LITERACY RATES AMONG POPULATION 15 YEARS AND ABOVE  
BY SEX—TAMIL NADU AND SELECT COUNTRIES.

Country.	Year.	Male.	Female.	Total.
(1)	(2)	(3)	(4)	(5)
Tamil Nadu .. .. .	1961	51.9	16.8	34.4
<i>Developed Countries :</i>				
U.S.A.* .. .. .	1959	97.5	98.2	97.8
U.K.	} Not Available.			
France .. .. .				
West Germany .. .. .				
Canada .. .. .				
Japan .. .. .	1960	99.0	96.7	97.8
<i>Socialist Countries :</i>				
U.S.S.R.** .. .. .	1959	99.3	97.8	98.5
Poland .. .. .	1960	97.1	93.8	95.3
Yugoslavia .. .. .	1961	90.1	71.2	80.3
<i>Developing Countries :</i>				
India .. .. .	1961	41.5	13.2	27.8
U.A.R. .. .. .	1960	40.5	12.4	26.3
Philippines .. .. .	1960	74.2	69.5	71.9
Thailand .. .. .	1960	79.3	56.1	67.7
Malaya .. .. .	1957	65.9	26.5	47.0
Iran .. .. .	1956	19.8	5.5	12.8
Ceylon .. .. .	Not available.			

\* Age Level = 9-49.

\*\* Age Level—14+

(Source : 1. U. N. Demographic Year Book, 1963 and 1964.  
2. UNESCO Statistical Year Book 1965.  
3. Census of India, 1961 - Cultural Table II—C (i).)

Though Tamil Nadu is second in literacy development in the whole of India (Kerala being the leader in this regard), it takes a relatively low position compared to the levels of other countries selected. The literacy level by sex in Tamil Nadu is far below that of developed and socialist nations and it is even less than that of under-developed countries such as Phillipines, Thailand and Malaya. Tamil Nadu's achievement in the realm of literacy is however, higher than that of countries like U.A.R. and Iran and India. This points out that much remains to be achieved in this sphere, if the State wants to compete atleast with other more educationally advanced countries falling under developed group.

*Work participation* :—The participation of a population in work is an indicator which shows the economic activity level of that population. This activity rate is measured as a ratio of working force to total population and expressed as a percentage. The particulars on work participation by sex for Tamil Nadu and certain select countries are given in Table below.

ACTIVITY RATES BY SEX—TAMIL NADU AND SELECT COUNTRIES.

Country.	Year.	Activity rate in percentage.		
		Male.	Female.	Both.
(1)	(2)	(3)	(4)	(5)
Tamil Nadu .. ..	1961 .. ..	59.7	31.3	45.6
	1971 .. ..	56.0	17.0	36.7
<i>Developed Countries:</i>				
U.S.A. .. ..	1965 .. ..	53.9	27.0	40.3
U.K. .. ..	1961 .. ..	65.3	29.3	46.7
France .. ..	1966 .. ..	57.1	25.9	41.2
West Germany .. ..	1965 .. ..	61.8	31.9	46.1
Canada .. ..	1961 .. ..	51.3	19.7	35.7
Japan .. ..	1965 .. ..	60.5	39.6	49.8
<i>Socialist Countries :</i>				
U.S.S.R. .. ..	1959 .. ..	55.8	49.3	52.2
Poland .. ..	1960 .. ..	55.1	40.1	47.3
Yugoslavia .. ..	1961 .. ..	59.6	31.1	45.0
<i>Developing Countries :</i>				
India .. ..	1961 .. ..	57.1	28.0	43.0
U.A.R. .. ..	1960 .. ..	55.1	4.8	30.6
Phillippines .. ..	1960 .. ..	46.5	16.3	31.5
Thailand .. ..	1960 .. ..	54.3	5.1	52.7
Malaya .. ..	1957 .. ..	50.5	17.4	34.5
Iran .. ..	1956 .. ..	56.9	6.2	32.0
Ceylon .. ..	1953 .. ..	53.0	18.8	36.8

P . Personal.

(Source ; 1, U. N. Demographic Year Book 1964.

2, Year Book of Labour statistics—1966 I.L.O., Geneva.

The rates of Tamil Nadu are fairly comparable with those of several countries. In this context, it must be borne in mind that there are differences in the definitions of work participation of populations of countries. The activity rate among males in the State's population (1961) is by and large, in correspondence with that of the select countries. It is less than that of U.K. West Germany and Japan and higher in respect of male participation of India and other countries. As far as the male activity level is concerned, there does not seem to be much variations between developed and or socialist countries and developing countries. Among the countries, U.K. with 65 per cent of its male population engaged at work, is the foremost while Phillipines is the last having only 47 per cent of the activity rate of her males.

On the contrary, the State female participation differs significantly. The female work participation of the State is 31 per cent and this level is above that of India and all under-developed countries except Thailand. It is greater than even that of developed nations such as U.S.A., U.K., France and Canada and of socialist country—Yugoslavia. The activity level by females in countries of West Germany, Japan, U.S.S.R. and Poland is higher than the State's figure. The female activity rates of economically forward countries are generally higher than those of developing nations except Thailand whose rate of 51.03 per cent is very high and ranks first of all the countries compared. Canada's rate is however low compared to other advanced nations. Among the countries, the female participation in U.A.R. is observed to be the least (5 per cent) and then Iran's (6 per cent). The reason may perhaps be due to the purdath system observed in these countries by their womenfolk and the Muslim culture. The highest is, of course, recorded again by Thailand.

The work participation of population of Tamil Nadu is 46 per cent. This level is fairly higher than most of the countries selected, exceptions being U.K. (47 per cent), West Germany (46 per cent) Japan (50 per cent) U.S.S.R. (52 per cent) Poland (47 per cent) and Thailand 53, per cent.

The work activity of the State for 1971, is low compared to 1961 level. The reason for his decline in the rates is not immediately assignable. In the contest of planned efforts or development, the decline is perhaps attributable to change in the concept between the two Censuses.

## 2.11 PROJECTED POPULATION OF TAMIL NADU

The projected population of Tamil Nadu worked out by the Committee consisting of Statisticians and Demographers constituted by the State Planning Commission is adopted here. The projection is based on the following assumptions:

### *Assumptions.*

	1970-75.	1976-80.	1981-86.
General Fertility Rate .. .. .	160	144	130
Expectation of life at birth—			
Males .. .. .	52.0	55.0	58.0
Females .. .. .	50.5	53.5	56.5
587C-87-7			

It is assumed that the quantum of future migration will not significantly affect the future size of population.

PROJECTED POPULATION OF TAMIL NADU 1972-86.

(In 00 s)

<i>Year.</i>				<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
(1)				(2)	(3)	(4)
1971	..	..	..	207,725	203,306	411,031
1972	..	..	..	212,692	208,143	420,835
1973	..	..	..	217,645	212,975	430,620
1974	..	..	..	222,578	217,791	440,369
1975	..	..	..	227,563	222,597	450,160
1976	..	..	..	232,382	227,382	459,764
1977	..	..	..	237,336	232,152	469,488
1978	..	..	..	242,104	236,907	479,011
1979	..	..	..	246,935	241,645	488,580
1980	..	..	..	251,745	246,371	498,116
1981	..	..	..	256,533	251,078	507,611
1982	..	..	..	261,352	255,818	517,170
1983	..	..	..	266,168	260,555	526,723
1984	..	..	..	271,613	265,291	536,904
1985	..	..	..	275,791	270,029	545,820
1986	..	..	..	280,594	274,765	555,359

2.1.2 ESTIMATED SIZE OF LABOUR FORCE.

The size of Labour Force (aged 15—59) in Tamil Nadu has been estimated by the Commission as follows :—

(In 000 s)

<i>Year.</i>				<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
(1)				(2)	(3)	(4)
1972-73	..	..	..	11,322	5,622	16,944
1973-74	..	..	..	11,587	5,746	17,333
1974-75	..	..	..	11,849	5,876	17,725
1975-76	..	..	..	12,118	6,004	18,122
1976-77	..	..	..	12,374	6,133	18,507
1977-78	..	..	..	12,639	6,258	13,897
1978-79	..	..	..	12,894	6,390	19,284
1979-80	..	..	..	13,152	6,518	19,670
1980-81	..	..	..	13,409	6,646	20,055
1981-82	..	..	..	13,665	6,773	20,438
1982-83	..	..	..	13,923	6,901	20,824
1983-84	..	..	..	14,183	7,028	21,211



**PART : THREE**

**DEVELOPMENT AND UTILISATION OF HUMAN RESOURCES**

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## CHAPTER III.

### MANPOWER RESEARCH FOR PLANNING.

#### 3.1 MANPOWER PLANNING AND RESEARCH—

3.1.1. Manpower Research is a patent and significant aspect of modern Applied Economic Research. The "raison detre" for this has been the persistence of unemployment even in affluent societies. Hence the mounting concern of modern societies, be it affluent or otherwise, for the development and effective utilisation of human resources.

Even as an economic factor, pure and simple, the competence and skill of a nation's people are important in determining the rate of development of that nation. Manpower is thus a determinant of economic growth. It is now well established that the speed of the economic advance of a society depends also on its developing and maintaining an effective infra-structure comprising competent managers, administrators, professionals, technicians and skilled workers.

This developing and maintaining of an effective infra-structure is to take due note of not only the quantitative aspect, but also the qualitative one. It is a well known fact that even in developing economies with their apparent manpower surpluses, the dearth of skilled workers has been one cause for the disappointing results of investment. Hence the developing economies are now endeavouring to coordinate the material investment and the training of workers. Manpower utilisation through planned programmes assumes importance in the context of a developing economy like ours with its vast manpower resource.

3.1.2. *Manpower Planning.*—How to go about building an effective infra-structure referred to above? It is through manpower planning. Manpower resources are to be carefully assessed, understood, and then allocated purposefully and used efficiently. It is the aim of manpower planning to forecast the growth of the gross national product and the population. And out of this arises the need for measuring the total requirements of manpower in different years. Next, it will have to be found out if there will be any divergence and if so to what extent between the available working force and additional jobs for each level of skill for different years at given rates of economic and population growth. After this is done, attempts are made to forecast the total requirements of high-level manpower, divided into the various special skills or professions. Such a forecasting necessitates a close co-ordination between economic trends and educational policy. Action is also required on certain supplementary measures such as location of educational institutions, student enrolment. etc. Thus it would appear that manpower planning concerns itself with the demographic, educational and economic aspects of the general economic planning.

As for manpower forecasting, there are essentially two main approaches. They may be termed as the "non-economic" approach and the "economic" approach. The former approach tends to base the forecasts on technical data, leaving aside the effects of the employment market forces on the demand and supply conditions. The latter approach takes into account labour market trends and their influence on making skills scarce or otherwise.

## INVESTMENT IN HUMAN RESOURCES

3.1.3. Whatever shape the manpower development programme takes as a result of manpower assessment and forecasting, it is essentially an investment in human resources. This investment generally aims at increasing the knowledge, the skills, and the capacities of all the people in a society. In short, it is the process of human capital formation and its effective investment in the development of an economy. Human resources are developed in diverse ways. The most obvious way is formal education, beginning with primary or first-level education, continuing with various forms of secondary education, and then higher education. Human resources development is a complex process. It has to take into account several and varying factors such as the costs involved in rapidly expanding an educational system, the priorities that must be set among the different levels and types of education; the ability of the socio-economic structure to absorb the quality and quantity of those who are educated and trained; the possibilities of employing certain non-institutional forms of training for the creation of certain types of skills; and the necessity to co-ordinate the expansion process with other connected factors such as financial resources, the teaching competence, the turn-out of qualified pupils, availability of other resources like buildings and equipments, etc.

For doing all this effectively, the programme of development of human resources, hinges heavily on the proper assessment of current manpower supply and the projected future.

Thanks to the pioneering work of Schultz and others, the rediscovery of the importance of human resources has led to more recent efforts to incorporate investments in education into the mainstream of modern economic analysis.

### RECENT TRENDS IN MANPOWER DEVELOPMENT AND PLANNING IN INDIA.

3.1.4. Manpower planning has a special significance to our country with its 560 million human constituents. As we are a developing economy, again, manpower planning assumes importance as an economic strategy for development. As George Tobias has said, India has "One of the longest continuous programmes of manpower strategy and action of any country developed or underdeveloped". Right from the dawn of independence, there has been a marked awareness of the problem of manpower deficiencies and a patent anxiety to correct these deficiencies by suitable manpower strategy.

A real difficulty in the way of formulating a suitable and effective manpower strategy in this country has been the non-availability of data that are current, continuous and comprehensive about the diverse factors and forces that describe labour market and manpower behaviour.

The First Five-Year Plan recognised the need for manpower planning and considered manpower as a key economic input needed to match other resources in a balanced way. With rapid industrialisation of the country, set as the goal, the development of industry supporting engineering, technical and craftsman skills, was given urgent priority. Thus there was the need to provide employment opportunities for persons entering the labour force during the period of the Plan. The idle rural manpower was there and its effective deployment

posed another problem. By the early 50's, the Planning Commission became convinced that manpower shortages constituted a real handicap to the development effort. A direct result of this was the establishment of a working Group on Manpower Studies to assess manpower needs, with reference to the Plan programmes.

The importance attached to manpower problems reached a new high in 1956, when a Cabinet Committee on Manpower, under the Chairmanship of the Prime Minister and a Manpower Division of the Planning Commission, were established. In quick succession a Manpower Directorate was created within the Union Ministry of Home Affairs. And till about 1960, the perspective Planning Division of the Union Planning Commission assumed primary responsibility for manpower research. By this time, all the States had also appointed manpower officers and a good many of them had created Cabinet Committees on Manpower. It was in 1962 that the Institute of Applied Manpower Research was created with the Home Minister as its President. The Institute of Applied Manpower Research initially devoted itself to engineering manpower, medical manpower and an area manpower survey seeking to analyse the changes in the working force of an area experiencing rapid industrialisation. Substantial research support was provided to the Education Commission. Current and recent activities of the institute include assessment of agricultural manpower needs and present utilisation of agricultural personal, manpower studies related to medical and managerial needs and a training course for public and private sector executive on manpower planning at the level of the undertaking. The forthcoming assignments include the preparation of manning tables for one or two public sector firms. And in 1965 an inter-ministerial steering group on Manpower was established which was given the task of promoting the development and utilisation of high level manpower in accordance with the nation's needs. And, in preparation for the Fourth Five-Year Plan, several working groups were constituted to propose suitable Plan programmes. The Fourth Plan announced that the emphasis in education, particularly technical education would be on improving quality. It also proposed the strengthening of the manpower planning organisation at the state level. At present, the basic manpower planning and policy-making organisations include the Cabinet Committee on Manpower, the steering group on manpower, the manpower Directorate, the Manpower Division and the Employment Division of the Planning Commission, the Institute of Applied Manpower Research and the manpower units in the States. The Council of Scientific and Industrial Research in the Ministry of Education and the Directorate General of Employment and Training in the Ministry of Labour, Employment and Rehabilitation play important roles in the nation's manpower strategy. While the Council of Scientific and Industrial Research encourages and co-ordinates scientific research with in India, the Directorate-General of Employment and Training is responsible for the National Employment Service and the National Training Programme, the two important aspects of the manpower programme.

As education prepares young persons for labour force participation, it is a critical factor in any manpower strategy. With a view to correcting the deficiencies in the education system, three Commissions on Education were appointed by the Government of India. While the first two Commissions dealt extensively with the importance of relating university education to the nation's urgent manpower needs and the need for improving science education and diverting students to vocational education, the third Commission

enunciated a national enrolment policy. This policy expects the nation to "Provide higher secondary and university education to those qualified consistent with demands for trained manpower and the need to maintain essential standards" and to emphasize "professional, technical and vocational education to prepare skilled personal for agriculture and industry".

Two peculiar aspects of the massive labour force in this country are chronic underemployment, and the high incidence of unemployment of the educated. Superimposed on these is the picture of a steady increase in the population which goes up each year by approximately 2.5 per cent. As young people reach working age, the labour force is enlarged to that extent. The Fourth Plan states that an essential objective of planning is "to achieve a balance between development and investment on the one hand and growth in employment on the other". The Plan also envisages the establishment of Rural Industries Projects that will cater to the needs of agriculture, using local resources, and stimulating the town-centered development that should provide sizeable employment in industry and services. The National Employment Service, and the Rural Works Programme are the two important programmes to assist the unemployed in finding work.

A general review of the manpower programmes followed in the past reveals that there has generally been an over-emphasis on the "numbers" to the extent sometimes of even obscuring the other very important aspects of human resources development. It is however heartening to note that currently attention is paid to enhancing the quality of the professional man through improved education and inservice training, to deploying manpower according to the location of the need, and to utilising the full potential of the manpower.

The actual details of manpower planning of each category of professional manpower such as agriculture, engineering, medicines, etc. are related to the policies of the responsible ministry and administrative agencies, in the form of manning patterns specified for operational programmes and qualifications prescribed for posts at different levels. Hence any discussion about shortage or surplus is relevant only in the context of the existing manpower policies. When the policies are changed, the gravity of the maladjustment also changes. "Shortage" is a relative concept and it has any meaning only if the mutable circumstances under which it is said to exist are made known. This fact is to be taken note of especially when studying professional manpower.

Another trend in evidence in India's manpower strategy in the recent years is the consideration of short-run changes and requirements. This is a welcome trend because the volatile labour force and the dynamic labour market can be safely charted only in the short-run period. Again, compared to the advanced economies, the composition and content of a developing economy over a long-range period, is less predictable. One more point is worth bearing in mind in this connection and that is that a given stock of manpower will become more productive in an exponential fashion. That is, a given level of output in the future may require progressively smaller inputs of high-level manpower as more capital, training, and better production methods are supplied to the worker. Therefore, it is that if future requirements of manpower are extrapolated in a linear relationship from current input-output ratios, they are almost bound to be too high.

Manpower is in essence the labour force. And manpower programmes are at best the efforts designed to improve the quality and effectiveness of the labour force. The more volatile the labour force, the more unpredictable become the manpower projections. Hence there is no finality about manpower strategy. It should be continuous, constantly reviewed and re-designed to combine its programmes in a fashion most conducive to improving the effectiveness of the labour force. It is heartening to note that in our country, we have evolved an elaborate machinery for "constant surveillance of the manpower scene perseverant action to deal with persisting problems, and immediate attention to fresh problems that develop".

3.1.5. *Recommendation.*—This Task Force also strongly feels that there should be a suitable and Central machinery for Manpower Planning in the State Level to act as a sounding post for all the complexities of the manpower scene, such an unit would be in a position to generally control and guide all manpower actions and make them more meaningful. This Task Force has recommended the setting up a State Manpower Division elsewhere in this Report. But here it would like to recommend the setting up of a Manpower planning Division within the State Planning Commission for co-ordinating manpower planning with the overall planning in the State level. Detailed proposals have been sent to the Government and the complete details of this have been given elsewhere in this Report.

### 3.2. CREATION OF A STATE MANPOWER DIVISION FOR TAMIL NADU.

3.2.1. *Preamble.*—The modern theory of Growth Economics is manpower oriented. A very good reason for this orientation is the disquieting persistence, even in advanced economics, of unemployment with all its attendant socio-economic ills. In the context of a developing economy like ours this assumes even greater significance. In the context of our planning for economic development, we have to think of "investment in man" and developing our human resources through education, health and other allied efforts. In terms of plan strategy, there will have to be a process by which the knowledge, the skills, and the capacities of all the people in our society are increased and such an accumulation of human capital will have to be effectively invested and utilised for the development of our economy.

3.2.2. *Manpower Planning.*—In this process, we have now to consider elements previously ignored, such as the costs involved in rapidly expanding our educational system, the priorities that must be set among the different levels and types of education, the ability of the economy and the society to absorb the number who are educated and trained, the potentialities of using non-institutional forms of training for certain types of skill acquisition, and the necessity to keep a balance in the expansion process between financial resources, the training of teachers, the flow of qualified pupils and the availability of other resources such as school buildings and equipment. In terms of planning, this can be conceived of as on five-stage programme. In stage one, we have to make up a target or forecast of the gross national product at a given future date. In stage two, we derive from the above the number of persons who will have to be employed in each economic branch. The third stage is to derive their distribution by occupations. In the fourth stage, we derive the number

of persons in the population who at given future dates, must have completed specific types and levels of education. The scheduling of activities required to expand educational flows will form the fifth stage. As for manpower needs, we may note that our goals can significantly influence manpower requirements and employment opportunities. Different estimates at official, organisational and academic levels are to be worked out and these have to be carefully studied, sifted and a list of priorities drawn for effective implementation of any manpower programmes.

3.2.3. *Our present difficulty* :—The above processes for the development and utilisation of human resources presuppose the availability of data—authentic, up to date and detailed. But then this is exactly our present difficulty. The fact is that we do not have such data relating to our human resources. Even the limited data available are at best aggregations and have been found to be inadequate and in the words of the Experts committee headed by Prof. Dantwala, “the conclusions based on them are, therefore unavoidably inaccurate” Again taking for instance concepts such as labour force and labour mobility, we come across the difficulty of a lack of a well-defined, articulated pattern of a labour market, as it is understood in the advanced economies, we also realise that for our planning purposes we need to distinguish clearly between the overtly unemployed and the under-employed, and attempt separate estimates of the two categories. The Experts Committee referred to above have also discouraged the practice of aggregating labour force estimates into single dimensional magnitudes, and have recommended instead estimation of different segments of the labour force, taking into account such important characteristics as region, sex, age, rural-urban residence, status or class of worker, and educational attainment. This should than be linked with the anticipated demand to be generated for particular categories of labour as a result of the various development projects envisaged under the Plan. But right now there is no agency which goes into all the aspects of human resources and collects and interprets data on a continuing basis. Though there are good and useful work being done on manpower in several departments of Government, yet there is a general feeling that there are many more aspects of the sector which need to be studied in greater depth and on a continuing basis, especially from the point of view of a Plan perspective.

3.2.4. *The suggestion* .—Realising the above difficulty and taking stock of the above situation, the task Force on Human Resources advocates the setting up of a State Manpower Division in Tamil Nadu with a view to filling in this gap in data collection as also with a view to undertaking original and continuous research on manpower problems pertaining to this State.

3.2.5. *A Model* .—The proposed State Manpower Division will be patterned after the ‘Institute of Applied Manpower Research’, New Delhi. The objects of the Division will be—

(i) to advance knowledge about the nature, characteristics, and utilisation of human resources in Tamil Nadu;

(ii) to provide a broad perspective of requirements of trained manpower for economic development in different fields with due regard to the probable impact of technological changes on the pattern of employment ;



- (iii) to develop improved methods and techniques for dealing with
  - (a) training and development of the existing work-force ;
  - (b) educational preparation for employment ;
  - (c) vocational guidance ;
  - (d) identifying and developing highly talented persons ;
  - (e) forecasting demand and supply of manpower and connected matters ;
- (iv) to provide manpower research services to Government departments, public corporations and private establishments ;
- (v) to establish and maintain centres for research into manpower problems.
- (vi) to undertake, organise and facilitate study courses, conferences, lectures, seminars and the like to promote the aforesaid objects :
- (vii) to undertake and provide for publications of journals and research papers and books and to establish and maintain libraries in the furtherance of the aforesaid objects ;
- (viii) to subscribe to, or become a member of or to co-operate with any other association or society whose objects are similar ;
- (ix) to stimulate interest in manpower problems generally and to co-operate with and assist manpower research by other agencies and institutions or professional associations
- (x) to co-operate with international agencies engaged in manpower research and arrange for inter-change of personnel, materials and data ; and
- (xi) to provide advanced training in professional techniques for manpower planning and administration.

The Division shall have the Chief Minister as its CHAIRMAN and a Senior Administrator as DEPUTY CHAIRMAN. Representatives from the following Government Departments and Institutions shall be co-opted on the Division :—

- 1 State Planning Commission.
- 2 Labour and Employment Department.
- 3 Education Department.
- 4 Industries Department.
- 5 Agriculture Department.
- 6 Finance Department.
- 7 Health and Family Planning Department.
- 8 Public Works Department.
- 9 Home Department.

- 10 Transport Department.
- 11 Rural Development and Local Administration Department.
- 12 Statistics Department.
- 13 University of Madras.
- 14 University of Madurai.
- 15 University of Annamalai.
- 16 Madras Institute of Technology.
- 17 Agricultural University, Coimbatore.
- 18 Institute of Applied Manpower Research.
- 19 Indian Institute of Technology, Madras.
- 20 Tamil Nadu Public Service Commission.
- 21 Tamil Nadu Electricity Board.
- 22 Tamil Nadu Small Industries Corporation.
- 23 Tamil Nadu Small Industries Promotion Corporation.
- 24 Reserve Bank of India.
- 25 State Bank of India.
- 26 Leading Commercial Banks.
- 27 National Small Industries Service.
- 28 Union Planning Commission Centre (Madras Branch).
- 29 Central Statistical Organisation (Madras Branch).
- 30 Council of Scientific and Industrial Research.
- 31 All India Council of Technical Education.
- 32 All India Council of Agricultural Education.
- 33 Medical Council of Tamil Nadu.
- 34 National Council for Training in Vocational Trade
- 35 Institution of Engineers (India).
- 36 Institution of Chemical Engineers.
- 37 Institution of Telecommunication Engineers.
- 38 Indian Statistical Institute (Madras Branch).
- 39 National Productivity Council (Madras Branch).

- 40 Central Institute for Labour Research.
- 41 Indian Institute of Public Administration (Madras).
- 42 National Council of Applied Economic Research.
- 43 Institute of Chartered Accountants of India.
- 44 All India Management Association.
- 45 The Federation of India Chambers of Commerce and Industry.
- 46 Employers' Federation of India.
- 47 The All India Manufacturers' Organisation.
- 48 The All India Organisation of Industrial Employers.
- 49 Representatives of Labour nominated by the Government.

The Division shall have the following categories of posts :-

- 1 Director.
- 2 Joint Director.
- 3 Project Leader.
- 4 Senior Economist.
- 5 Chief (Training).
- 6 Senior Industrial Engineer.
- 7 Head of Research Division.
- 8 Work study Analyst.
- 9 Industrial Engineer.
- 10 Statistician.
- 11 Administrative Officer.
- 12 Documentation Officer.
- 13 Economist.
- 14 Senior Research Officer.
- 15 Editor-*cum*-senior Research Officer.
- 16 Executive Assistance (Training).
- 17 Documentation Assistant.
- 18 Production Assistant-*cum*-Manager (Rotary).
- 19 Cartographer.
- 20 Technical Assistant

- 21 Accounts Officer.
- 22 Assistant.
- 23 Tabulator.
- 24 Steno-typist.
- 25 Vari-typer operator.
- 26 Journal Assistant (Proof Reader).
- 27 Research Investigator.
- 28 Librarian.
- 29 Draughtsman.
- 30 Library Assistant.
- 31 Plate maker.
- 32 Copy Holder.
- 33 Staff Car Driver.
- 34 Rotaprint/Multilith operator.
- 35 Roneo/Gestetner operator.
- 36 Binder.
- 37 Daftry.
- 38 Press Attendant.
- 39 Messenger.
- 40 L. G. G. S.
- 41 Chowkidar.
- 42 Sweeper.

An outlay of Rs. 322.95 lakhs under the Fifth Plan and Rs. 600.00 lakhs in Sixth Plan is envisaged for this Division which will include the cost of a Computer also. Pending the setting up of the Division, during the Fifth Plan, the Task Force has taken up the basic research work in this field and having already finished the first manpower study in the series viz., "Occupational Trends in Tamil Nadu—A study of the changes in the occupational pattern of employment in Tamil Nadu." In this study the changes in the manning patterns in the significant industries in Tamil Nadu, both in the private and in the public sectors over the past 12 years have been analysed and trends established. This study has been suitably incorporated in Chapter V of this Report. This Division may take up more intensive as well as extensive studies arising out of this first exercise.

### 3.3 MANPOWER PLANNING AT THE ESTABLISHMENT LEVEL.

3.3.1. *Manpower Planning at the undertaking level.*—Manpower Planning as an accepted technique for economic development can successfully be applied to situations in both macro as well as micro economic dynamics. At the macro-economic level, it deals with such variables as population, educational facilities, occupational, industrial and geographical migration, quantum analyses of skills, their formations and forecast requirements, etc. At the micro-economic level, however, manpower planning has to be specific in terms primarily of what is required by the undertaking.

3.3.2. “Manpower is an asset which can be obtained, planned, developed, allocated, budgetted, and controlled by the undertaking.”\*

The problems that are usually confronted by an undertaking are about the types of manpower required by them, the jobs in which they are required, the quantum of such requirement the educational and skill contents of such requirement, the time when they would be required, and the medium through which each one is likely to escalate the employment structures in an undertaking, etc. For tackling these problems effectively, there is an inevitable need to do lot of useful exercise in anticipating these problems in all their dimensions, intensities and frequencies and work out detailed plans of action aimed at insulating the economy of the undertaking from unexpected operational jolts and irksome manpower jerks.\* Any under-estimation or over estimation either in terms of quantity or quality of manpower required is most likely to result in inconvenient shortage or inexpedient surpluses, leading thereby to an impairment in operational efficiency or an avoidable enhancement of production costs.

Apart from the dimensions of numbers and of time, there are also the dimensions of occupations and skill-levels. Again, the location aspects and the remuneration aspects are also equally important in any manpower planning at the undertakings level. In fact one of the end products of manpower planning is what is known as Manning Tables. While the dimension of numbers has to do with the total number of workers they would be required, that of time deals with the appropriate moment when they would be required. The occupational dimension covers the performance requirements of occupations, occupational analyses, and “job-psychographs”. The skill dimension entails skill-involvement surveys, assessment of the levels of skills involved operation-wise to be suitably weighted and quantified for comparative appraisals.

The above involve considerable projection work also. Macro-economic projection techniques have to be suitably adopted for projection work at the establishment level. “Since projections are intended to be guides to action, the kinds of questions posed by the decision-maker have to govern the concepts and assumptions used, as well as the information provided in the projections. The basic conceptual issue in long-term prejections is whether to attempt to state what is likely to happen or merely to estimate the implications of certain assumptions, i. e., to forecast or to project. The distinction is not simple, since, in any consideration of future probabilities some assumptions have to be made. Even statements that purport to be forecasts of what will occur have to be based on some assumptions as to the general conditions of existance.”†

\* *Manpower Journal*—Volume II No. 3—1966—I.I.A.M.R.

† *Industrial Relations*—Vol. V. No. 3—Institute of Industrial Relations, University of California—by Harold Goldstein.

Manpower planning can again be construed in its quantitative and qualitative dimensions. The numbers of men or women required come under the quantitative aspect, while the dimensions of occupations and levels of skills or knowledge fall within the qualitative group. Factors such as departmental location, remuneration levels and timing of requirements are common to both. Viewed from the individual workers point of view, the qualitative characteristics of human resources depend on the ability to work and on the willingness to work. Ability is related to the performance requirements of jobs. It is also related to the psycho-physical performance abilities in the individual workers. This concept arises out of the concept of occupational ability patterns. These are also known as 'Job Psychographs', and they follow from the fact of individual differences—differences in the physical, psychological and environmental sectors. Occupations are to be studied from the point of view of individual ability patterns and personality qualities and necessary re-adjustment effected in job engineering or in hiring, on the job training practices in such a manner that optimum operational efficiency is achieved in the establishment. Willingness to work is more a psychological trait and is largely determined by the extent of existence of motivational factors. The well-known form of motivational factor is Incentive Scheme. Prospects of earning more, getting an early lift, getting eligibility for extra benefits—these are some of the provoking elements which normally motivate individuals into a willingness for harder work. These are fields coming under the ambit of personnel functions in establishments and personnel managers have a vital role to play in organising these fields in such a way as to yield the maximum benefit to the employer and employees. Though personnel management as a whole deals with the entire area of human resources utilisation, the manpower planners in the organisation have to take stock of the above aspects of occupations and skills including motivations in formulating manning proposals.

3.3.3. *Manpower Planning is also dependent on factors outside the establishment.*—Manpower requirements and supply are not independent of each other, but rather interact on each other. A shortage of supply of workers in an occupation forces industry to adopt work processes and manning arrangements, and this affects requirements; conversely, demand creates supply by drawing workers from other occupations or from outside the labour force. It also depends on the human capital formation systems adopted in the society. It is closely related to the educational system in the country. As advancing technology has made processing of human resources imperative so as to make them a truly complementary factory, education and training play a vital role in the development of human capital. Hence the pace and pattern of human capital formation obtaining in the society has a direct bearing on the human capital inputs at the establishment level.

Theodore W. Schultz, maintains that in the United States "some important increases in national income are a consequence of additions to the stock of this form of capital"\* . And again the under-developed economies remain so mainly because, according to Schultz, "the human capabilities do not stay abreast of physical capital and they do become limiting factors in economic growth". And, economic growth and the consequential increases in national income are built up with corresponding increases in the incomes of individual economic units constituting the economy as a whole. Thus it is essential that human capital inputs at the establishment level are also carefully planned so that there is adequate support from this factor to the activities undertaken by the establishment to maximise the returns from physical capital inputs.

\* Theodore W. Schultz, "Capital formation by education" *Journal of Political Economy*, Vol. LXVIII, No. 6, December, 60.

Manpower planning has also to be related to the economic situation and level of wages and salaries and their incidence on costs to the enterprise. It has again to be related to the technological advancements. This brings in the need for collaboration with technologists.

3.3.4 *Inside the establishment it is to be a joint-venture of several departments.* Within the establishment, manpower planning cannot be conceived of or executed in isolation. It has to be a joint venture of policy-makers, works people, personnel people, technologists, research workers and sales and accounts people. To the extent that the needs of production processes have to be taken note of, the needs of personnel policy have also to be considered. Thus consideration will have to be given to wages and salary structure, formulation of leave rules, determination of the nature and pattern of shift work, simultaneous formulation of training policies, promotion policies, over-time policies, housing policies, etc. Again, to the extent that these formulations are done in coordination, there will be depth in the planning and hence it will be oriented towards meaningful economic ends. To the above extent again, the planning will be precise.

### 3.4 THE TECHNIQUES.

For a new enterprise, manpower planning has first to start with a study of certain standards. The standards may be in terms of the product the process or the labour costs. Total manpower requirements of an enterprise can be computed on the basis of known data from suppliers, from other plants in the field, from published statistics, etc., which have a bearing on man-hours input per unit of product output. Like-wise machine-hour computations can also be made from known data, and this can be converted into man-hour units and ultimately projected in terms of manpower requirements. Again the manpower projections can be arrived at through a labour cost conversion into man-hour units as well.

The main difficulty in such projects are due to the possible non-comparability of data obtained. These factors of non-comparability are the same as the basic ones to the problem of measurement of productivity. Difficulties do arise with such factors as differences in equipment, in process, in product-mix, in the size of the plant, in the end products, types of materials used, sales, economics of location, consumer preference enjoyed by the enterprise, etc. So lot of care and caution is necessary in such computations.

The next stage is study by positions. Lots of job study and methods study go into this. Manning tables for the personnel are prepared through these detailed studies. Extrapolations and calculations from standard data as also data from already established enterprises will be useful in this. Factors such as span and level of control, extent of delegation, etc., are useful in the determination of the organisation chart for executive and managerial personnel.

After the preparation of the above two, further detailed planning is undertaken for the preparation of job descriptions, job specifications or job requirements, job knowledge breakdowns and training plans.

Intensive Occupational Research and Analysis are useful in this function. Jobs are first studied, understood, their nomenclatures standardised and the entire system fitted into the general Industry-Occupational structure of the area. Industry-occupational Matrices may be useful in this. Jobs are then described at the plant level and specifications detailed. Detailed analysis of physical demands and job-traits are done with reference to the environmental conditions also. Referral to expertise in this field would be useful.

In the case of an establishment which is already in business the planning will aim at improving productivity and replacing wastages. These can again be computed in a similar manner as above, that is by comparing with and cutting out from available data in the area. The hiring practices in the area, the general wage-structure, the personnel practices are some of the external factors which have a bearing on these aspects of the programmes inside the firm, especially, on the replacement aspect. Similarly the changes in job requirements inside the firm, changes in the skill-contents and skill-levels for various jobs, etc. determine to a great extent the level of increase in productivity. Here again there is need for intensive job study, analysis of job and worker traits and preparation of skill-analysis. Organisation of skill surveys would be highly useful.

Here again research advances have been made both by Government and Private agencies in Job Research and Analysis. It is advisable to consult expertise in the field and avail of the benefits of research already made.



## CHAPTER IV.

### EMPLOYMENT AND UNEMPLOYMENT.

#### 4.1. OPTIMUM USE OF MANPOWER.

4.1.1. Economic progress depends to a large extent on the optimum utilisation of available human resources. One of the objectives of the Perspective Plan is to achieve near full employment. Conditions have therefore to be created in which the demand and supply of manpower are studied in detail and job opportunities and the training functions are correlated and in such a manner as to result in the optimum supply and utilisation of the skills. This could best be done only by developing a modern manpower assessment and forecasting system and by expanding the craftsman training programme in particular, and by developing the private and public employment agencies. All these three wings have to work in union to achieve the ideal of optimum utilisation of, and avoidance of wastages in our manpower resource.

#### 4.2. TOWARDS FULL EMPLOYMENT.

4.2.1. Poverty in Tamil Nadu, as in the case of the rest of India can be thought of as directly linked with unemployment and under-employment. It has been estimated that about 41.2 per cent of the people of India and about 52.5 per cent of the people of Tamil Nadu are below the poverty line (i.e.) those who get a income of Rs. 37.2 and less (at 1971-72 prices). It is necessary to urgently assess the causes of rural and urban unemployment and find out measures to remove the same effectively.

4.2.2. A minimum level of income should be assumed in rural areas and urban areas, related to the creation of employment opportunities which would generate such income levels. In the context of the present economic circumstances of Tamil Nadu, there appears to be a need for redefining some of the concepts like employment, unemployment and under-employment. The problem for us would be to determine whether we should think of job opportunities as giving of jobs for every individual in the labour force or whether we should think of creating circumstances which would enable a family to earn a level of income that would raise it above the poverty line.

4.2.3. The manpower utilisation programme will have to find out the capacities and skills of the people who constitute the labour force and who are not employed at present and plan for the creation of jobs suited to their skills and capacities. We may have to think in terms of mass-employment programmes that are directly related to major development programmes such as, milk schemes, millet, oil seeds, rice, vegetable and other agriculture programmes small industries programmes, village crafts programmes, etc.

4.2.4. There is a view that there is scope for the more intensive utilisation of the labour force engaged in agriculture. It is also thought that the use of intermediary technology would aid such a process and widen employment opportunities. Special agricultural mass-employment programmes should be directly linked up with agricultural policy and other production programmes.

4.2.5. The same arguments about the use of intermediary technology can be put forward for industrial employment as well. There is one view in this connection that it would be better for us to develop our own Typical Indian Technology with a view to absorbing as much of our labour force as possible in our industries. The Expert Committee on Unemployment set by the Government of India have suggested some tax incentives to industries employing labour intensive technology as against industries employing capital intensive technology. The whole idea seems to be to encourage absorption of more and more of labour force in industries as well as in agriculture.

4.2.6. Regarding productivity and wages, there appears to be a need to strike a balance between rural wages and urban wages, or to put it more scientifically, between real wages in the unorganised sector and real wages in the organised sector. As urban money wages are more and with increasing possibilities of incentives as compared with the rural wages, there is a general tendency for the rural labour force to drift to urban areas causing an unnecessary glut in the urban employment market. Mass-employment programme may have to take care of this special problem by building special incentives into the rural wage structure, so as to arrest this unnecessary drift towards urban areas. A suitable wages policy appears to be necessary.

4.2.7. The measures for encountering the unemployment problem are :

(1) to increase the age of the period of training so as to correspondingly postpone the period of entry in the employment market with the corresponding increase in social investment;

(2) to reduce the age of retirement so that new entrants may be given opportunities. In this context a scheme for using Geriatric Resources is given under Social Welfare (vide Volume II of this Report);

(3) to reduce the hours of work, which in a poor country would have production implication;

(4) to develop the skills for new jobs requiring special technological abilities with appropriate manpower planning;

(5) legal measures which enforce apprenticeship programmes and skill attainments for several jobs in the public and private sectors;

(6) educational measures which classify the manifold purposes of the education and to match employment opportunities with appropriate training; and

(7) functional fiscal policy of Taxes and subsidies, buying and selling, lending and borrowing for the period of progress in the promotion of employment oriented enterprises.

### 4.3. A DIGRESSION ON CONCEPTS.

4.3.1. Here is an attempt to project a few irresistible ones among the pertinent and useful ideas on Employment for detailed examination. This projection is only illustrative and by no means exhaustive.

4.3.2. The first one is about estimating unemployment. In this connection, the considered view of the Export Committee on Unemployment appointed by the Union Government is "that the supporting data available for the estimates were not adequate and the conclusions based on them were, therefore, unavoidably inaccurate". They, however, go on to recognise that many of the limitations of the estimates of labour force, employment and unemployment are inherent in the socio-economic conditions of our country and cannot be wholly overcome by conceptual refinements or improvements in the technique of estimation. It may be noted, incidentally, that even in a country like Japan with her "pronounced predilection for quantitative estimates", it is difficult to find a single estimate of the rate of unemployment. It is said that the Japanese planners go on changing even the definition of labour shortages as the economy progresses. Taking for instance the concept of labour force, we come across the difficulty of a lack of a well-defined articulated pattern of a labour market, in the western technical sense of the term. The participation or otherwise by persons in small family enterprises including family farms makes the definition of 'labour force' all the more difficult. This in its turn leads to difficulties of defining Unemployment, Under-employment, etc. In this connection, it seems well within the context to quote Gunnar Myrdal from his recent work "The Challenge of World Poverty". He says: "In many under-developed countries a part of the labour force does not engage in any form of work at all though the frequency of this varies between the countries. Much more general and important is the fact that most of those workers who do work, work only short periods per day, week, month and year—and not very intensively or efficiently. This is what in a false analogy to conditions in the west and in the European Communist countries, and in line with the biased post-war approach, is described in terms of 'unemployment' and 'under-employment'. The Expert Committee referred to above have recorded: "The planning authorities would, therefore, distinguish clearly between the overtly unemployed and the underemployed, and should attempt separate estimate of the two categories". Discouraging the practice of aggregating labour force estimates into single dimensional magnitudes, the experts recommended separate estimation of different segments of the labour force, taking into account such important characteristics as region, sex, age rural-urban residence, status or class of worker and educational attainment. An attempt could then be made to identify the demand likely to be generated for particular categories of labour as a result of various developments envisaged under the Plan. This should again be fitted against the time cycle, if any, and given full sectoral coverage.

4.3.3. The terms 'under-employment' leads us logically to the national possibility of more intensive employment of labour. In other words, this would mean that our present labour force is to some extent less intensive or more extensive. In the words of Gunnar Myrdal again, "this means that not only productivity of the land but also productivity of the labour force is exceedingly low in most underdeveloped countries. Particularly in those under-developed countries which have a high ratio between the labour force in agriculture and the tilled area, the general notion is that there is a labour intensive cultivation of the land. But it is not true of the largest part of the under-developed world where yields are very low. Contrary to common conception, work practices in agriculture are not labour intensive, but instead, labour extensive. The labour input per worker is generally low in terms of manhours and is of low efficiency. The low yields per acre

are therefore, largely, a consequence of an under-utilisation of the labour force". Referring to Professor Ragnar Nurkse's characterisation of the various possibilities to use surplus labour as "disguised saving potential", this author goes on to say that "it is an empirically testable general rule, that which very few exceptions, technological advance would not be labour-saving but, on the contrary, would require a higher and more efficient input of labour... According to the Indian Censuses, the proportion of the total population engaged in Agriculture in the two Census years of 1951 and 1961 had remained virtually unchanged, while during this decade India was industrialized faster than most other underdeveloped countries. This implies that for the next few decades... agriculture in most underdeveloped countries must absorb by far the larger part of the expected rapid natural increase in the first place the increase in the agricultural labour force, but also that in the national labour force. The development goal in planning must be, therefore, to increase the utilisation in agriculture of the now greatly underutilised labour force in terms of participation and, in particular, of duration and efficiency of work".

4.3.4 For a smooth industrial growth, a steady employment build up and a self-sufficient farm and social-services base, there had to be an equally sophisticated prerequisite of an infrastructure of Industry-Occupational matrix. This could be built through proper assessment of manpower resources, with reasonably accurate forecasts of manpower requirements and by means of pragmatic manpower planning. This is very elaborate, time-consuming and complex job, but very useful in the context of a perspective plan like the one we are working on. The National Classification of occupations lists about 3,600 occupations in the Indian economy. Building up a system of occupational forecasts in respect of these and others outside its purview, is not only time-consuming but also not necessary in that greatness of detail in the context of a comparatively short-term project as ours. This is not to underestimate the utility of building up and maintaining an up-to-date occupational outlook Handbook. This is only to state that this would be a long-term project. In the immediate present, we may go about conducting some *Area Skill Surveys*. This is nothing but gathering authentic data on possible future employment opportunities through a systematic study of the labour market at the micro level. Precise knowledge of future requirements of different types of skills would greatly help manpower planning. It would again be useful to attempt (1) an estimation of employment potential of plan schemes and (2) to assess the skill needs through the above area skill surveys. The former would mean the spelling out of the manpower content of each scheme with fair degree of precision at the time of its formulation. If authorities responsible for the formulation of schemes at the plan establishment local, and state-levels indicate their manpower content in as much detail relating to time, level of skills, etc., as possible, this manpower aspect of the schemes could then be aggregated at the local, departmental and state levels to obtain the estimate of total direct employment likely to be generated by the plan schemes in the Public Sector. It should be possible to extend this to the private sector also by suitable stipulations. Then estimates of indirect employment will have to be worked out. As regards No. 2, viz., Area skill Survey, it is basically a method of determining in respect of a given geographic area, current availability of skills and requirements in the foreseeable future. The first advantage of such a survey is that it is a direct approach to employers and training institutions in getting information in contrast to the manpower projections the basis of planned targets or on an assumed rate of growth of State income. Next,

manpower planning is to be effective, it must be at the area level. Such a survey will assist in translating economic goals set forth in the planned economy into manpower terms and will provide specific information on changes that will be necessary in the size and quality of training and apprenticeship programme to meet future requirements. This will again provide area-wise information concerning manpower resources needed in connection with location and expansion of industries and also supply information which will enable identification and development of avenues for self-employment. To start with, this survey could cover specific areas and in respect of selected categories of skills such as engineers, scientists, technicians and other professionalists.

#### 4.4. A RECOMMENDED STUDY OF THE ECONOMICS OF EMPLOYMENT.

4.4.1. In the context of planning for economic development, the dynamics of employment assumes great significance. It is especially so in the context of our present planning for the achievement of full employment. If full employment is the goal, what is our present level of employment? What do we mean by employment? What is the nature and magnitude of unemployment? What is the incidence of under employment? We have to know all these before we can think of planning for Full Employment. But this knowing is a very difficult task. The reason is that reliable basic data on these are not available.

4.4.2. *Estimates of employment, unemployment and underemployment.*—There have been several attempts at estimating employment, unemployment in our country and in our state. But most of them are aggregations based on assumptions. The data on employment are not full and exhaustive. Information on the organised sector is fairly organised. But this cannot be said of the large unorganised and agricultural sectors. Even in this limited coverage, the qualitative aspects like hours of work, wage rate, seasonality and determinative aspects like mobility, frictions, etc. are not clearly assessed. The Census 1971 have taken care of these aspects to some extent. But nothing much can be heard of the result of analysis before 1973 and that too perhaps not in the form in which we may need for planning purposes.

4.4.3. This is perhaps the more difficult task. The first difficulty is about conceptualisation. Then comes the difficulty of measurement. Only if we can correctly conceive of the thing to be measured can we with some confidence devise the measuring rod. The Task Force can with confidence say that we have achieved a fair level of conceptual fineness regarding the characteristics of unemployment and underemployment. Hence, the need to devise a measuring rod.

4.4.4. *The Measuring Rod.*—To determine the measuring rod as referred to earlier, the Task Force held a meeting of experts and discussed the conducting of survey to assess employment, unemployment and underemployment in Tamil Nadu.

As no reliable estimates were available at present, the need for estimating employment, unemployment etc. was thought of. It was thought that a special study in depth which could provide conceptual clarification, qualitative appraisal and relevant quantitative measurements would be useful in this context. This would be the result of inter-disciplinary enquiry wherein the Economists will draw upon relevant specialities of Sociology and Statistics.

4.4.5. *The Study*.—Arising out of the meeting of the experts, the Task Force recommends :—

That a survey as explained above may be conducted in one District of Tamil Nadu, Chingleput, to start with. It may be a 10 per cent "self-weighting" sample; the survey may be conducted in two rounds. First round with two quarterly periods and if need be a second round with two more quarters. Relevant data may be collected as they occur. About 40,000 house holds may be covered. 80 per cent of the sample may be fixed over the four quarters and 20 per cent may be rotating sample.

About 100 members from the Youth Service Corps as Investigators and about 50 members from the category of M.A., M.Sc., or B.A., B.Sc., (I Class) qualification with experience in investigation work from the registers of Madras University Employment Information and Guidance Bureau, and Madras University Students Information Bureau may be made use of as Supervisory investigators in this survey. The investigators may be employed for a period of four weeks, besides 2—3 weeks training. They may be paid at the rate of Rs. 5 per day for members of Youth Service Corps and at Rs. 400 consolidated for the other investigators. Specialists in the field from Tamil Nadu and the rest of India may be drawn for specific purposes in short duration and may be suitably compensated for their travel, time, etc. The total budget may be Rs. 85,000. The break up item wise may be as follows :—

	RS.
(i) Payment to Investigators .. .. .	34,000 00
(ii) Preparation of schedule, conceptualisation, training programme, consultancy payment and honoraria, drafting and finalisation.	15,000 00
(iii) Tabulation .. .. .	20,000 00
(iv) Editing and Publication of report .. .. .	10,000 00
(v) Contingencies .. .. .	6,000 00
Total ..	85,000 00

4.4.6. *Agency*.—The agency to carry out the Survey and to report on the same may be the Department of Economics, University of Madras and the State Planning Commission.

4.4.7. *Personnel*.—A panel of Experts in the field of Economics, Statistics and Sociology may be drawn up for the purpose of consultations and guidance.

On the official side, the Secretary, Social Welfare Department, Government of Tamil Nadu, the Director of Statistics and the Director of Employment and Training may be co-opted for this project. Besides, consultancy may be established with local experts like Panchayat Union Chariman and other non-officials with experience in the field. The location to be covered will be Kaancheepuram, Ponneri, Madurantakam and Chingleput.

To staffing may be as follows :—

Honorary Director	..	..	..	..	..	..	..	1
Full-time consultant	..	..	..	..	..	..	..	1
Full-time fellows	..	..	..	..	..	..	..	3 (1 in Economics 1 in Statis- tics 1 in Sociology.)
Investigators	..	..	..	..	..	..	..	100
Supervisory Investigators		..	..	..	..	..	..	50

The Statistical Consultant, State Planning Commission in coordination with the Chairman and Secretary of the Task Force on Human Resources may perhaps direct this project.

#### 4.5. THE MAIN RECOMMENDATIONS OF THE EXPERT COMMITTEE ON UNEMPLOYMENT AND THE THINKING OF THIS TASK FORCE ON THIS.

4.5.1. The salient features of the main recommendations made by the Committee on Unemployment set up by the Government of India and headed by Thiru B. Bhagavathi and the thinking of the Task Force with reference to the recommendations made by the Committee are discussed below :—

##### I. SALIENT FEATURES OF THE INTERIM REPORT OF THE COMMITTEE ON UNEMPLOYMENT.

4.5.2. The Interim-Report of the Committee on Un-employment suggests certain short term means for creating employment. Quite apart from open unemployment which is acute in certain areas, the incidence of under-employment involving both seasonal and insufficient employment is very high. The period of enforced total or partial idleness extends well over several months of the year for vast numbers of our rural population. The Committee feels greatly concerned about the magnitude of the problem and feels that there is pressing and urgent need for remedial measures.

4.5.3. *Present Trends.*—Pending the report of the panel which is examining the extent of unemployment and underemployment, the Committee had had a look at the Employment Exchange data, despite their well known limitations. They indicate that unemployment has been increasing over the last few years at a disquieting pace.

4.5.4. *The Existing Programme.*—To deal with the problem of unemployment of educated and technically qualified persons and weaker sections of the rural population the Government of India have initiated a number of programmes during the last three years.

Schemes for educated and Technical personnel. (i) Special Schemes for financial assistance to young entrepreneurs operated by the State Governments, the State Bank of India and other Commercial Banks.

(ii) Scheme for training of Engineers, for entrepreneurship, etc.

A special outlay of Rs. 25 crores has been provided in the Central Budget (1971-72) for schemes to provide employment for educated unemployed.

4.5.5. Besides, there are additional programmes to expand some of the more labour intensive programmes included in the Plan. During the remaining two years of the plan period, greater emphasis should be laid on the execution of some of the programmes included in the plan which are more labour intensive. These are :—

- (1) Minor Irrigation.
- (2) Rural Electrification.
- (3) Construction of roads and inland water transport.
- (4) Programmes of rural housing.
- (5) Rural water-supply.
- (6) Education.

The Committee also suggests few measures to promote productive employment for the educated unemployed or assist them to become self-employed. These are :—

- (i) Maximum utilisation of installed capacity in industry and the reopening of closed units.
- (ii) Promotion of productive employment for educated unemployed. To provide some relief to the unemployed persons, the exemption of such persons from the payment of application fees is also recommended.

4.5.6. *S.F.D. A. and M..AF.L. Programmes.*—SFDA and MFAL programmes depend to a large extent upon the arrangements made for the marketing of the produce of the supplementary occupations. The Government of Maharashtra propose to undertake a study for suggesting suitable type of organisation for the processing and marketing of dairy, poultry and piggery products of small farmers and agricultural labourers. Similar studies may be undertaken in other States also. The Committee feels that the SFDA and MFAL agencies should take practical steps to assist small farmers in supplementing their incomes through subsidiary occupations. They should take steps to persuade the banks to advance short-term and medium-term loans to them for cultivation as well as for undertaking other occupations. They should not only subsidise such loans but also insist upon the financial institutions not to insist on sureties from share-croppers and rural tenants.

4.5.7. *Crash Scheme for Rural Employment.*—The Crash Scheme for Rural Employment aims at providing employment for one thousand of the more needy persons in every district in the country. An outlay of Rs. 12.5 lakhs has been sanctioned for each district. The Committee suggests that allocations for each district should be suitably refixed after taking into account its population, state of agricultural development and other relevant factors. It is desirable to take up works of reasonable size in some selected parts of the district having regard to the severity of the problem. It is necessary that the organisational arrangements are strengthened and streamlined so that the works undertaken



result in durable assets and no undue waste or diversion of funds takes place. The Committee feels that it is necessary to undertake some pilot projects in small compact areas in selected district, The projects should deal with all aspects of development and should progressively be able to provide employment in different economic pursuits to every person offering himself for work in that area. The projects should not concern themselves exclusively with agricultural development but with development in other sectors also.

4.5.8. *Agro-Service Centres.*—The Scheme for the setting up of Agro-Service Centres introduced in 1971-72, also has potential for providing employment/self-employment to engineering graduates and technicians in the rural areas. The implementation of this scheme should be given high priority.

4.5.9. *Programme for Construction in Rural Areas.*—As is well known, much of the infrastructure in the rural areas still remains to be developed and hence there is a vast scope for undertaking construction work, labour intensive in nature, on infrastructural projects like the development of transport and communication, dams, irrigations, and electricity schemes, rural housing, etc. Such programme will provide scope for the employment of mainly unskilled and semi-skilled persons.

4.5.10. *Minor Irrigation.*—The employment potential in minor irrigation is very large. It is understood that an estimated investment of Rs. 260 crores per annum for minor irrigation (comprising investment through the Plan outlay, institutional finance and the farmers' own investment under this programme) would have an employment potential of 328 million man-days of unskilled labour and 38.50 millions man-days of skilled labour. At the rate of roughly 300 man-days per year for each person, the construction work on minor irrigation schemes by themselves would generate employment for nearly one million unskilled labourers and 1.28 lakhs skilled labourers.

4.5.11. As the employment potential of minor irrigation is large, not only at the construction stage but later also on account of the amount of labour employed for intensive cultivation, the Committee feels that the tempo of this programme should be accelerated and the area to be covered by minor irrigation expanded during the next two years. An additional area of about half a million hectares at a total cost of Rs. 100 crores could be reasonably covered during the next two years. This additional programme is expected to generate during the construction phase employment for nearly four lakhs unskilled workers (126 million man-days) and about 50 thousand skilled workers (14.80 million man-days) during the next two years. The total outlay on the programme during the next two years will be Rs. 675 crores and is expected to generate employment, in the construction phase, for 23 lakhs unskilled workers and 4.5 lakhs skilled workers.

4.5.12. *Rural Electrification.*—Rural Electrification is one of the important programmes for the development of infrastructure in the rural areas. The programme should be extended to cover more areas and more villages in order to bring the benefits of the new agricultural technology cropping patterns, agro-based and small-scale industries, etc., to

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Investigators	..	..	..	..	..	..	..	100
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4.5.4. *The Existing Programme.*—To deal with the problem of unemployment of educated and technically qualified persons and weaker sections of the rural population the Government of India have initiated a number of programmes during the last three years.

Schemes for educated and Technical personnel. (i) Special Schemes for financial assistance to young entrepreneurs operated by the State Governments, the State Bank of India and other Commercial Banks.

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A special outlay of Rs. 25 crores has been provided in the Central Budget (1971-72) for schemes to provide employment for educated unemployed.

4.5.5. Besides, there are additional programmes to expand some of the more labour intensive programmes included in the Plan. During the remaining two years of the plan period, greater emphasis should be laid on the execution of some of the programmes included in the plan which are more labour intensive. These are :—

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4.5.9. *Programme for Construction in Rural Areas.*—As is well known, much of the infrastructure in the rural areas still remains to be developed and hence there is a vast scope for undertaking construction work, labour intensive in nature, on infrastructural projects like the development of transport and communication, dams, irrigations, and electricity schemes, rural housing, etc. Such programme will provide scope for the employment of mainly unskilled and semi-skilled persons.

4.5.10. *Minor Irrigation.*—The employment potential in minor irrigation is very large. It is understood that an estimated investment of Rs. 260 crores per annum for minor irrigation (comprising investment through the Plan outlay, institutional finance and the farmers' own investment under this programme) would have an employment potential of 328 million man-days of unskilled labour and 38.50 millions man-days of skilled labour. At the rate of roughly 300 man-days per year for each person, the construction work on minor irrigation schemes by themselves would generate employment for nearly one million unskilled labourers and 1.28 lakhs skilled labourers.

4.5.11. As the employment potential of minor irrigation is large, not only at the construction stage but later also on account of the amount of labour employed for intensive cultivation, the Committee feels that the tempo of this programme should be accelerated and the area to be covered by minor irrigation expanded during the next two years. An additional area of about half a million hectares at a total cost of Rs. 100 crores could be reasonably covered during the next two years. This additional programme is expected to generate during the construction phase employment for nearly four lakhs unskilled workers (126 million man-days) and about 50 thousand skilled workers (14.80 million man-days) during the next two years. The total outlay on the programme during the next two years will be Rs. 675 crores and is expected to generate employment, in the construction phase, for 23 lakhs unskilled workers and 4.5 lakhs skilled workers.

4.5.12. *Rural Electrification.*—Rural Electrification is one of the important programmes for the development of infrastructure in the rural areas. The programme should be extended to cover more areas and more villages in order to bring the benefits of the new agricultural technology cropping patterns, agro-based and small-scale industries, etc., to

newer and fresher areas. An exercise has been made by the Central Water and Power Commission in consultation with the State Governments in making an estimation of the extent of additional energisation of pumpsets/tube wells and electrification of villages which could be feasible during the remaining period of the plan.

4.5.13 *Roads.*—A net work of well-integrated system of roads is a sinequanon for economic development. The Committee considers that the Central Government in consultation with the State Governments should devise appropriate measures by which any diversion of funds from the roads programme is completely eliminated. It is also felt by the Committee that the development programme of rural roads is primarily a State responsibility and the provision therefore has been mainly in the the State Plans. As regards the employment generation potential of the programme, it may be stated that an earlier estimate (1960-61) made by the Planning Commission had indicated that an investment of Rs. one crore would generate 10,435 man years of employment in road construction. On account of considerable increase in prices since the time these estimates were framed, the same investment would generate, in terms of current prices, 5,464 man-years of employment in road construction. Applying the suggested norms, and additional employment of about 8.5 lakh man-years may be expected from the programme during the next two years.

4.5.14. *Inland Water Transport.*—Closely allied to road transport is the inland water transport system, which has also got considerable employment potential. India is traversed by several waterways system extending over 14,000 kilometres of navigable waterways. If inland water transport is properly developed, it would not only provide low cost of transport but also considerable scope for generating employment in several parts of the country.

4.5.15. *Rural Housing.*—For the construction of houses for the rural population, a bold programme of rural housing is urgently necessary. The Committee considers that taking into account the deplorable housing condition in rural areas and the sources generated in these areas by growth of production in the agricultural sector in recent years, efforts should be made to undertake a rate of construction of 0.8 unit per thousand persons or 3.6 lakh new units for 1972-73 and 0.9 unit per thousand persons or 4.1 lakh new units for 1973-74 as against the rate of 0.7 unit per thousand persons or 3.1 lakh units expected to be reached in 1971-72. The total investment for the years 1972-73 and 1973-74 will be Rs.108 crores and Rs. 123 crores respectively. Taking the wage of an unskilled worker on an average at Rs. 3 per day and that of skilled at Rs. 5.50 per day, the investment per man-day (the ratio of skilled to unskilled worker is 1 : 2) would be Rs. 11.50. On the basis of 300 days working in the year, the above investment, will provide direct employment for 0.9 lakh workers in 1972-73 and 1.1 lakh in 1973-74. Assuming an indirect employment of the order of 1.6 times the direct employment, i.e. about 3.2 lakh workers the total direct and indirect employment potential of this programme would be about 5.2 lakh workers for the next two years.

4.5.16. *Housing Finances.*—The Committee feels that it is essential that a large scale programme of construction of rural house should be formulated. Initiated and launched

by the Government (both Central and State Governments). The Committee desires that the Government should, act as a catalytic agent by providing the necessary institutional framework and by actively promoting the development of rural housing. The Committee feels that Government should take steps to set up in each State a Board and/or a Rural Housing Finance Corporation with a Corporation for Rural Housing as the apex organisation at the centre. The committee considers however, that requirements of the situation would demand that there should be in existence in each State a suitable institutional agency, to undertake in the rural areas, the types of functions which the Housing Boards are at present undertaking in respect of the urban areas, viz., the acquisition, development of land formulation and execution of housing schemes, etc. The Committee also considers that there should be in existence in each State a Rural Housing Finance Corporation charged with the duty of providing financial assistance to co-operative societies, Panchayat Raj Institution, individuals, etc., for housing projects or individual houses. The Housing and Urban Development Corporation (or a separate Corporation if necessary) at the Centre may function as the apex organisation for financing rural housing.

4.5.17. *Rural Water Supply.*—The programme of rural water supply would have to be considerably stepped up so as to provide adequate relief in the acute scarcity areas. In view of the importance of the programme, the committee feels that the pace of execution of the current programme should be accelerated and its coverage extended. The programme should be extended to at least 21,000 additional permanently disadvantaged and disease-infested villages over the remaining two years of the plan. Of this, 10,000 villages should be served with piped water and the rest through simpler measures, e.g., dug wells and handpumps. The Committee also suggests further that the designing of suitable schemes and preparation of plans and estimates for the remaining villages also, i.e., about 42,000 villages should be taken up in the immediate near future, so that the execution of these works may be taken up when the resources become available therefore. It is desired by the Committee that the Life Insurance Corporation as well as other financing institutions extend support to this programme by giving loans, etc. The Committee reiterates the suggestion already made in the Fourth Five-Year Plan document that, wherever possible, capital contribution and levies should be collected from the beneficiaries.

4.5.18. *Education.*—The magnitude as well as intensity of the problem of educated unemployed, especially matriculates and graduates in the country, has assumed serious proportions and needs separate study and analysis.

(i) *Primary Education.*—Expansion of primary education is one of the chief measures which can in the view of the Committee, generate large employment opportunities in the short-term for the non-engineering and other non-professional category of educated unemployed. The following are some of the measures that may be considered subject to their administrative feasibility:—

- (a) The adoption of double-shift system at lower primary stage.
- (b) Part-time education.

An important strategy should be to involve the local community both organisationally and financially, in the programme of primary education in relation particularly to the construction of school buildings. The programme of expansion of primary education suggested is expected to create a large volume of employment opportunities for the educated unemployed, as teachers, inspectors of schools and in other supervisory and clerical positions.

(ii) *Adult literacy*.—The Committee feels that it is essential to undertake immediately a programme of mass literacy. This programme which should aim at covering illiterate adults preferably in the younger-age-group of 18-35 may be launched in 100 selected districts where the number of educated unemployment is comparatively large. The curriculum should have a functional and occupational bias suited to the background of the adult trainees who may be grouped suitably accordingly to their occupations, e.g., agriculture, village industries, crafts, etc., The estimated cost of this programme (on the basis of Rs. 60 per teacher per month plus Rs. 10 as non-teaching cost for 30,000 teachers per year) will be Rs. 2.50 crores annually making a total of Rs. 5 crores for the remaining two years of the plan period. This modest programme is expected to cover during the next two years about 4 million illiterates i.e., approximately 4 per cent of the illiterate persons of the districts selected.

4.5.19. *Miscellaneous*—(i) *Maximum utilisation of installed capacity and reopening of closed units*—In order to generate employment in the industrial field in the short-term, the committee feels that this under utilisation of installed capacity in various industries be reduced the extend possible. A crash programme has been launched to increase the production of Cotton and Jute. More recently, it has also been decided that in respect of 54 specified industries additional production would be allowed subject to certain conditions. The Committee suggests that the cases of other industries should be examined on individual merits and they should be allowed similar facilities if that would demonstrably lead to creation of substantial employment.

4.5.20. (ii) *Closure of Sick Units*.—In view of the Committee, suitable action requires to be taken by Government even at an earlier stage before the malaise becomes acute, and that in many cases action at an earlier stage could be prevented closure. The Committee suggests that the Government should set up an agency charged with the duty of overseeing the economic health and the state of affairs obtaining in such industries where closures have taken place or are apprehended (e.g., Cotton Textiles, Engineering). Such an agency should organize a proper system of timely reporting for this purpose and it should keep Government apprised of the developing situation from time to time to enable Government to take effective steps to prevent the situation from deteriorating further. The Committee feels that it is also important that remedial and timely action by the authorities concerned in the matter may not be stalled on account of the non-availability of requisite financial resources, adequate provision for which should, in their view, exist. The Committee recommends that setting up of a separate corporation for the purpose with adequate revolving funds.

4.5.21. (iii) *Promotion of productive employment for the Educated Unemployed*.—On this subject, the view of the Committee is as follows. —The Thakkar Committee have emphasised that the banks and similar financial institutions, which mobilise the savings



of the community and channelise them into productive investment, have to play an important role in stimulating employment. They have, therefore, to adopt a conscious policy of employment promotion. They have suggested, inter alia, that if each branch of the banks entertain on an average about 50 proposals in a year for assistance to unemployed persons, about 3 million jobs could be created by all the Commercial banks in the next five years, besides substantial indirect employment. Another suggestion made is that each branch of the nationalised banks should be enjoined to sponsor projects which within a year would create 100 additional jobs. Without being specific about any particular proportion, the amount to be earmarked in year for their schemes could, in the opinion of the Committee, be reasonably placed at 25 to 30 per cent of the additional resources. The Reserve Bank of India have also recommended in their guidelines of March, 1971, that banks should, on their own initiative formulate special credit schemes for promoting the generation of employment according to their innovative capacity and they should exercise a measure of healthy competition with other banks in this regard. Since the categories of self employed persons indentified by the Thakkar Committee are only illustrative, the Committee feels that banks should take a broad and liberal view of the categories to be eligible for assistance and should extend it to the entire range of the self-employment field so as not to deny credit facilities to any class of persons acting to set themselves up as self-employed persons in a profession or business activity. It is also essential that the terms of loans, e.g., the rates of interests, period of repayment, margins, security, etc., should be made softer and should take into consideration the requirements and limitations of such borrowers. As regards the provision of technical assistance etc., the setting up of a Multi-service Agency has been suggested. It is desirable that some institutional arrangements should exist to look after these task in a more organised and systematic way, on behalf of these entrepreneurs working in a particular locality or industry. For this purpose they might organise themselves into an association or body which will tackle the problem of small industries like raw materials, finance, marketing of products etc., and take them up with the appropriate authorities, where necessary.

4.5.22. (iv) *Exemption for unemployed persons from payment of application fees.*— Among the suggestions received by the Committee one relates to application fees generally payable by the candidates who apply for jobs and the other to travelling allowance and daily allowance for those who are called for interview. The Committee feels that the exemption from the payment of application fees will be a good gesture and would bring some relief to the unemployed persons and would be appreciated as such by the persons affected. The payment of travelling allowance to all unemployed applicants may, however, have wider financial and administrative implications which would need to be examined in all their aspects. The Committee views that a somewhat selective approach in the matter would be desirable.

4.5.23. *Conclusions.*—4. The Committee suggests that the programmes mentioned above should be implemented forthwith in the next two years. The total financial outlay on the programmes suggested by the Committee for implementation over the next two years would be of the order of Rs. 2,000 crores. The proposal would involve during the next two years a net addition of the order of Rs. 740 crores for all these programmes including that for rural housing. Out of this amount the sum required from the budgetary resources

of Government would be about Rs. 280 crores, while a sum of equal order would be required from the financial institutions leaving a sum of Rs. 180 crores to be invested by the residents of rural area on houses. A sizeable portion of the additional outlay required is expected to be found by the financial institutions including the nationalised banks and the individuals concerned.

4.5.24. The committee also suggests some fiscal measures where scope exists for raising fresh resources. For example, it may be possible for the Union Government to levy a special employment surcharge on income and corporation taxes. Further, there could be a levy on commercial advertising. The Committee adds that Government might also examine the possibility of levying an integrated income-tax comprising both the agricultural and non-agricultural income, in which provision could be made for a higher limit of exemption in respect of purely agricultural incomes.

4.5.25. An attempt has been made to give rough estimate of additional employment in respect of some of the programmes earlier. For instance, the proposed investment on roads and inland water transport over the next two years is expected to generate employment for 8.50 lakhs while the total employment under the proposed minor irrigation programme is expected to be around 27.50 lakhs comprising roughly 4.5 lakhs skilled and 23 lakhs unskilled workers. Similarly, the direct employment as a result of investment on the rural water supply schemes is expected to be 52,000 out of whom 8,000 will be for engineers and skilled persons and 44,000 for the unskilled workers. In the field of education, including adult literacy, the additional direct employment is expected to be around 2.8 lakhs for the educated persons. The committee's suggestions for the promotion of self-employment through banks as well as the implementation on a priority basis of the scheme of agro-service centres and the construction programmes in the rural areas relating to minor irrigation, road construction, etc., are expected to provide employment to a large number of engineers and other technical personnel. It should be a reasonable guess according to the Committee, that direct employment as a result of the programmes suggested by them would be of the order of 4 million over the next two years. Besides direct employment the programme involving construction have generally an indirect employment potential also and a ratio of 1 : 1.6 is normally adopted for measuring the direct and indirect employment in such programmes.

4.5.26. The Committee feels that it is essential that these programmes which are in the main intended for rural areas should be implemented in the field in a co-ordinated manner. Specific surveys should be undertaken for this purpose to collect necessary data in respect of the infrastructure, natural resources, the ground water levels, local raw materials, etc. It should be ensured that the results achieved from surveys are properly utilised in the preparation of district plans. In the Committee's view an integrated surveys approach would be useful for ensuring more active and purposive participation in planning by the rural community and the latter's co-operation and collaboration in implementation of the development programmes.

II. THINKING OF THE TASK FORCES WITH REFERENCE TO THE RECOMMENDATIONS MADE BY THE EXPERT COMMITTEE ON UNEMPLOYMENT.

(1) *Recommendation No. 1* [Paragraph 90(1) of the Committee's Report].—The integrated scheme for the rural unemployed recommended by the Task Force will take care of marketing of the produce of dairy, poultry, piggery, etc. (Vide project No. 7). This will give employment benefit to about 5 lakhs persons.

(2) *Recommendation No. 5*—[Paragraph 90(5) of the Committee's Report].—The Task Force has recommended the setting up of 1200 agro service centres during the Perspective Plan (Vide project No. 2) with employment potential for about 12,000 persons.

(3) *Recommendation No. 10* (Paragraph 90(10) of the Committee's Report).—The Task Force has proposed a scheme under which advance action in respect of road schemes is tied up with the roads programmes (Vide Project No. 4), with employment potential of about 44,000 persons.

(4) *Recommendation Nos. 19 and 20* [paragraphs 90(10) and (20) of the Committee's Report].—The Task Force has recommended a reduction in the teacher-pupil ratio in Tamil Nadu (Vide Project No. 1) to provide employment for about 25,000 unemployed elementary school teachers during the Fifth Plan and still a few more during the Sixth Plan. This scheme will not only provide employment to the unemployed teachers, but also improve the quality of education.

The Task Force has also recommended another scheme of intensive pre-school social education with the objective of laying effective foundations for social change. This scheme (Vide project No. 53 in Vol. II) will incidentally provide jobs to about 3,000 secondary grade teachers.

*Recommendation Nos. 23, 24, 25 and 26* (Paragraphs 90(23) (24), (25) and (26) of the Committee's Report).—During the meeting with the representatives of the Reserve Bank of India, leading nationalised banks and other connected financial Institutions the Task Force discussed the views expressed by the Expert Committee on Unemployment thoroughly. Arising out this discussion and with a view to evolving a machinery to identify potential entrepreneurs from among the unemployed engineers, technicians and craftsmen and also with a view to tying up bank loans with the projects of the above entrepreneurs this Task Force has recommended a scheme for the setting up a special cell to do this work. This scheme (Vide Project No. 3) is also expected to create about 15,000 jobs.

## CHAPTER V.

### ESTIMATES AND FORECASTS OF MANPOWER AND EMPLOYMENT.

#### A REVIEW OF THE PAST TRENDS—OCCUPATIONAL TRENDS IN TAMIL NADU.

(A study of the changes in the Occupational patterns in Tamil Nadu).\*

5-1. *Introduction.*—A study of the changes in the occupational pattern of employment in the economy is necessary to understand the occupational trends over a time perspective. The trends so identified will help the planners in working out future manpower projections. This study aims at identifying the changing occupational pattern in the economy of Tamil Nadu over the past 12 years in order to identify trends by significant industrial categories. The significance or otherwise of a particular industrial category is determined by its contribution to the economic development of Tamil Nadu.

This study is divided into six parts *viz.* (a) changes in the Occupational pattern in public sector employment over the period of reference (b) changes in the Occupational pattern in private sector employment over the period of reference (c) Manning patterns by years of reference in public sector (d) Manning pattern by industrial categories in public sector (e) Manning pattern by years of reference in private sector (f) Manning patterns by significant industries in the private sector.

The general trends and the broad conclusions of the study are given at the appropriate places.

The vast mass of data collected under the Biennial Occupational Enquiry have been extensively used and intensively studied for establishing the occupational patterns by years of reference as also by industries of significance.

It is hoped that this study will form the basis for further depth studies as indicated at the appropriate places in this chapter. It is also hoped that this study will lead to manpower forecasting also for the Perspective Plan years.

This is an attempt at studying the occupational distribution of employment in Tamil Nadu and the changes in the volume of employment by the various occupational categories. As the pattern of reporting on occupational composition is biennial covering one sector at a time, we can study the pattern in respect of Public or Private sector only at any point of time. In other words, public and private sector employment are studied with reference to alternative years. So any interpretation of the figures has to bear in mind this very important point.

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\*This review is based on the special manpower study done by the Manpower Unit of the Task Force on Human Resources. Under the Chairmanship of Dr. V. Shanmugasundaram, Member, State Planning Commission, the Manpower Unit, consists Thiru P. Subramaniam, Member-Secretary, Task Force on Human Resources, Thiru J. Jesu Mohan Das, Technical Assistant, Thiru A. Sundaresamorthy, Tabulator who succeeds Thiru S. R. Padmanabhan.

A study of the occupational pattern of employment is useful in that it gives us an idea of the trend in occupational composition not only of the previous years, but also a fair anticipation of its future trend based on this past performance coupled with our own reasoning regarding factors that would play a part in this process, like plan parameters, etc.

This study is based on the information collected by the Department of Employment and Training under the Employment Market Information Programme (the Biennial Occupational Enquiry). Information has been made available for the years 1958, 1960, 1962, 1964, 1966 and 1968 in respect of the public sector and for the years 1961, 1963, 1965, 1967, and 1969 in respect of the private sector.

*Employment in Public Sector.*—The Table below gives a picture of the changes in occupational composition in public sector employment from 1958 to 1968.

TABLE 1.

CHANGES IN THE OCCUPATIONAL DISTRIBUTION OF EMPLOYMENT IN THE PUBLIC SECTOR ESTABLISHMENTS IN TAMIL NADU — 1958-1968.

Occupational Division and Description.				1958	1960	1962.
				(IN THOUSANDS)		
0	(1)	Professional, Technical and related workers ..	Number.	(2)	(3)	(4)
						Per cent.
				15.8	15.3	22.4
1		Administrative, executive and managerial workers—.	Number.	11.82	31.36	51.02
			Per cent.	5.0	10.0	7.6
2 & 3		Clerical and Sales Workers .. .. .	Number.	39.22	47.60	100.76
			Per cent.	16.0	15.1	15.1
4		Farmers and related workers .. .. .	Number.	2.36	2.55	9.49
			Per cent.	1.0	0.9	1.4
5		Miners, Quarrymen, etc. .. .. .	Number.	0.02	0.04	5.88
			Per cent.	..	..	0.9
6		Transport and Communication workers.. .. .	Number.	3.30	14.05	44.97
			Per cent.	3.5	4.5	6.7
7 & 8		Craftsmen and production process workers ..	Number.	21.60	25.84	74.52
			Per cent.	9.3	3.2	11.1
9		Service, sports and recreation workers ..	Number.	1.98	2.72	40.3
			Per cent.	0.8	0.8	7.4
299		Unskilled Office workers .. .. .	Number.	27.87	23.19	47.37
			Per cent.	11.6	9.0	7.1
414, 415, 390, 399, 903 and 901	}	Other Unskilled workers .. .. .	Number.	51.05	73.71	135.51
			Per cent.	22.0	25.2	20.8
<b>TOTAL</b> ..			Number.	<b>201.04</b>	<b>273.89</b>	<b>603.03</b>
			Per cent.	<b>100</b>	<b>100</b>	<b>700</b>

TABLE 1—cont.

Occupational division and description.		1964.	1966.		8.
			(5)	(6)	(7)
0 Professional, technical and related workers .. .. .	Number.	174.35	184.29	206.26	
	Per cent.	23.7	28.8	27.0	
1 Administrative, executive and managerial workers .. .. .	Number.	57.05	49.87	59.72	
	Per cent.	7.7	7.8	7.8	
2 and 3 Clerical and sales workers .. .. .	Number.	100.91	95.58	110.17	
	Per cent.	13.7	14.9	14.4	
4 Farmers and related workers .. .. .	Number.	10.41	9.79	9.83	
	Per cent.	1.4	1.5	1.3	
5 Miners Quarrymen, etc. .. .. .	Number.	1.8	0.33	1.48	
	Per cent.	0.2	0.5	0.2	
6 Transport and Communication workers .. .. .	Number.	46.05	45.55	49.12	
	Per cent.	6.3	7.1	6.4	
7 and 8 Craftsmen and production process workers .. .. .	Number.	91.42	45.07	84.93	
	Per cent.	12.4	7.0	11.1	
9 Service, sports and recreation workers .. .. .	Number.	49.92	47.17	48.01	
	Per cent.	6.8	7.3	6.3	
290 Unskilled office workers .. .. .	Number.	58.97	52.42	61.41	
	Per cent.	8.0	8.2	8.0	
414, 415, 890, 899, 903 and 931. Other unskilled workers .. .. .	Number.	145.92	108.33	133.45	
	Per cent.	19.8	16.9	17.5	
TOTAL ..		Number.	736.80	638.40	764.38
		Per cent.	100	100	100

(Source: Employment Market Information—Occupational Enquiries.)

The total employment in public sector establishments in Tamil Nadu has risen from 201.84 thousands in 1958 to 764.38 thousands in 1968 an increase of 562.54 thousands or 278.7 per cent increase occupational category-wise, increases are significant in 'O' division—Professional, technical and related workers (from 37.49 in 1958 to 206.26 in 1968), in '2 and 3' Division—Clerical workers (from 39.22 in 1958 to 110.17 in 1968), in 414, 415, etc., group—Other unskilled workers (from 51.68 in 1958 to 133.45 in 1968), in '7 and 8' Division—Craftsmen and production process workers (from 21.60 in 1958 to 84.93 in 1968), in '6' Division—Transport and Communication workers (from 8.30 in 1958 to 49.12 in 1968), in '9' Division—Service, recreation and sports workers (from 1.98 in 1958 to 48.01 in 1968), and also in Administrative, executive and managerial workers (from 11.82 and 59.72 in 1968).

A comparison of the occupational composition of public sector employment as between these two points of time reveals that whereas the category 'other unskilled workers' accounted for the largest share in 1958 (22.0 per cent) closely followed by clerical workers (16.0 per cent) and professional, technical and related workers (15.8 per cent), the position was considerably changed in 1968 with Professional, technical and related workers leading the

composition with 27.0 per cent closely followed by other unskilled workers with 17.5 per cent and clerical workers with 14.4 per cent. There has thus been a definite shift in emphasis in favour of professional, technical and related workers over this decade.

This marked increase in public sector employment and the shift in its occupational distribution have been in evidence since 1962. Whether this shift was caused by the implementation of the Plan programmes is a matter to be probed further.

*Employment in private sector.*—The Table below gives a picture of the changes in the occupations composition in private sector employment from 1961–69.

TABLE NO. 2.  
CHANGES IN THE OCCUPATIONAL DISTRIBUTION OF EMPLOYMENT IN THE  
PRIVATE SECTOR ESTABLISHMENTS IN TAMIL NADU—1961—1969.

<i>Occupational division and description.</i>		1961.	1963.	1965.	1967.	1969.
		(IN THOUSANDS)				
(1)		(2)	(3)	(4)	(5)	(6)
0 Professional, technical and related workers.	Number. Per cent.	48.45 8.8	51.39 9.1	47.14 9.5	57.52 10.6	64.89 11.8
1 Administrative, executive and managerial workers.	Number. Per cent.	17.81 3.2	12.05 2.1	10.14 2.1	9.78 1.8	12.30 2.2
2 and 3 Clerical and sales workers .. .. .	Number. Per cent.	68.04 12.4	61.05 10.7	50.57 10.2	64.50 11.8	61.28 11.1
4 Farmers and related workers .. .. .	Number. Per cent.	3.3 0.6	4.15 0.7	3.62 0.7	4.83 0.9	5.07 0.9
5 Miners quarrymen, etc. .. .. .	Number. Per cent.	4.79 0.9	7.19 1.3	3.09 0.6	4.35 0.8	2.58 0.5
6 Transport and Communication workers ..	Number. Per cent.	13.76 2.5	17.67 3.1	16.14 3.3	18.15 3.3	18.08 3.8
7 and 8 Craftsmen and production process workers.	Number. Per cent.	207.27 37.7	230.32 40.6	199.39 40.5	205.29 37.7	229.83 41.6
9 Services, sports and recreation workers ..	Number. Per cent.	32.22 5.9	25.48 4.5	19.85 4.0	23.97 4.4	19.51 3.5
290 Unskilled office workers .. .. .	Number. Per cent.	12.11 2.2	12.97 2.3	10.64 2.1	14.94 2.7	13.34 2.4
414, 415, 890, 899, 903 and 931 Other Unskilled workers.	Number. Per cent.	141.61 25.8	145.06 25.6	132.94 27.0	141.99 26.0	125.14 22.7
Total ..	Number. Per cent.	549.38 100	567.36 100	493.52 100	545.32 100	552.02 100

Source:—(Employment Market Information—Occupational Enquiries.)

The total private sector employment (covered by the Occupational Enquiry) rose from 549.38 thousands in 1961 to 552.02 in 1969—a mere 2.64 thousand increase or a mere 0.47 per cent increase. This could as well be taken as a case of maintaining the same

level over a period of eight years. Significant increases in employment have been registered in '0' Division—Professional, technical and related workers (from 48.45 in 1961, it rose to 64.89 in 1969); in '7 and 8' Division—Craftsmen and production process workers (from 207.27 in 1961, it rose to 229.83 in 1969); and in '6' Division—Transport and communication workers (from 13.76 in 1961, it rose to 18.08 in 1969). There have been decreases in employment in Division '1'—Administrative executive and managerial workers (from 17.81 in 1961, it came down to 12.30 in 1969); in Division '2 and 3'—Clerical and Sales workers (from 68.04 in 1961, it came down to 61.28 in 1969); in Division '5'—miners, quarrymen, etc., (from 4.79 in 1961, it came down to 2.58 in 1969); in Division '9'—Service, sports and recreation workers (from 32.22 in 1961, it came down to 19.51 in 1969); and in the "other unskilled" group comprising code Nos. 414, 415, 890, 899, 903 and 931 (from 141.61 in 1961, it came down to 125.14 in 1969).

In 1961, again, the largest share in private sector employment was accounted for by Division '7 and 8'—Craftsmen and production process workers—(207.27 or 37.7 per cent); closely followed by other unskilled workers (141.61 or 25.8 per cent); and '2 and 3'—Clerical and sales workers (68.04 or 12.4 per cent). In the year 1969 also, the leading Division was '7 and 8'—Craftsmen and production process workers (229.83 or 41.6 per cent). This was followed by other Unskilled workers (125.14 or 22.7 per cent) and by Division '0'—Professional, technical and related workers (64.89 or 11.8 per cent). This lead in private employment accounted for by craftsmen and production process workers is an indicator of the healthy growth trend in as much as a steadily growing economy would require and absorb more and more skilled and trained workers at the craftsmen and production process workers level.

*General Trend.*—This general trend in favour of professionals, technicians and craftsmen in both Public and Private sectors is expected to get further diversified in view of our perspective plan programmes. What we may in this content need will be an expansion of our skill base consistent with the future diversification of our skill needs. Bearing this in view the Craftsman Training Plan Schemes have been suggested for expansion purposes. But it is at the same time quite essential for us to ensure that the content of training and the courses are constantly reviewed and readjusted taking into account the changes in production process and technologies. Forecasting of future supply and demand by specific occupational families or at least by occupational groups is very strongly recommended as a continuous Manpower Research Exercise by the Manpower Research Centre. The Industry-occupational matrices so derived would help a great deal in planning education *vis-a-vis* manpower.

*Manning patterns by industries.*—In the preceding analysis, we have studied the overall occupational distribution of employment by the Public and Private Sectors over the years. We shall now study the manning patterns by industrial categories over the years, again by public and private sectors. This study, it is hoped, will throw some light on the Industry-occupation patterns of employment over the years. The changes in these patterns could serve as useful indicators in our efforts at manpower planning as part of our Perspective-Planning Exercise.



**CHANGES IN THE OCCUPATIONAL PATTERNS IN PUBLIC SECTOR  
EMPLOYMENT OVER PERIOD OF REFERENCE**

The analysis below gives the manning patterns of Public Sector employment by the years of reference :

**TABLE—3.**  
**MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1960.**

<i>Occupational classification code.</i>		100 to 109. <i>Mining and Quarrying.</i>	400 to 403 <i>construc- tion.</i>	500 to 511. <i>Gas, Water, Electricity, and Sanitary services.</i>	700 to 709. <i>Transport services.</i>	
(1)		(2)	(3)	(4)	(5)	
0		Number.	1,029	4,359	2,093	2,984
		Per cent.	5.5	12.8	5.5	2.7
1		Number.	689	244	33	851
		Per cent.	3.7	0.7	0.1	0.8
2 and 3 (except 290).	.. ..	Number.	1,117	3,414	6,805	13,969
		Per cent.	6.0	10.1	17.9	12.8
4		Number.	..	130	64	43
		Per cent.	..	0.4	0.2	Nil.
5		Number.	221	35	17	28
		Per cent.	1.2	0.1	0.05	Nil.
6		Number.	247	886	281	14,485
		Per cent.	1.3	2.6	0.7	13.3
7 and 8 except 890, 899	.. ..	Number.	1,474	2,657	7,036	23,832
		Per cent.	7.8	7.8	18.5	21.9
9 except 903, 931	.. ..	Number.	45	3	18	714
		Per cent.	0.2	Nil.	0.05	0.7
290	.. ..	Number.	301	3,346	1,694	3,474
		Per cent.	1.6	9.9	4.4	3.2
414, 415, 890		Number.	13,639	12,871	19,940	48,509
899, 903 and 931		Per cent.	72.7	55.6	52.6	44.6
<b>Total</b>	<b>.. ..</b>	<b>Number.</b>	<b>18,812</b>	<b>33,947</b>	<b>37,971</b>	<b>1,08,880</b>
		<b>Per cent.</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

<i>Occupational classification code.</i>		730—732 <i>communi- cation.</i>	Admn. services 800—809.	810—812 <i>Education and Scientific services.</i>	820 and 821 <i>Medical and Health services.</i>	
(1)		(6)	(7)	(8)	(9)	
0		Number.	251	24,187	48,255	12,984
		Per cent.	1.0	11.4	38.9	39.1
1		Number.	787	41,979	738	109
		Per cent.	3.2	19.7	1.1	0.3
2 and 3 (except 290)	.. ..	Number.	7,564	44,138	2,786	1,649
		Per cent.	39.7	20.8	4.8	3.2
4		Number.	..	102	380	614
		Per cent.	..	0.1	0.8	1.9
5		Number.	..	36	..	..
		Per cent.	..	Nil.	..	..

TABLE 3.—cont

## MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1960.—cont.

<i>Occupational classification code.</i>		730—732 <i>Communi- cation.</i>	<i>Admn. services</i> 800—809.	810—812 <i>Education and Scientific services.</i>	820 and 821 <i>Medical and Health services.</i>
(1)		(6)	(7)	(8)	(9)
6	Number. ..	7,588	1,042	167	571
	Per cent.	30.8	0.5	0.3	1.7
7 and 8 except 890, 899	Number. .. ..	1,421	2,869	1,427	252
	Per cent.	5.8	1.3	2.2	0.8
9 except 903, 931	Number. .. ..	2	32,980	1,183	605
	Per cent.	Nil.	15.5	1.8	1.8
290	Number. .. ..	3,385	23,269	4,342	2,443
	Per cent.	13.7	10.9	6.6	7.4
414, 415, 890	Number. .. ..	3,653	42,032	6,021	14,519
899, 903 and 931	Per cent.	14.8	19.8	9.2	43.8
Total	Number. ..	24,651	2,12,692	65,299	33,146
	Per cent.	100	100	100	100

(Source : Manpower Unit, State Planning Commission)

In Mining and Quarrying Industry, the largest share has been accounted for by "other unskilled workers" followed by "production process workers". In construction industry again, "other unskilled workers" have accounted for the largest share followed by "professional and technical workers" and "clerical workers". In 'electricity, gas, etc.', the lead is by 'other unskilled' followed by production process workers and "clerical workers". In 'transport', leading share is that of 'other unskilled', followed by "craftsmen and production process workers", "transport workers", and "clerical workers" in that order. In communication Industry, the leading share is by "specialists in communications", followed by "clerical workers". In Administrative Services the professional, executive and clerical put together account for the bulk. In education and scientific services. The professional group account for the bulk. In medical and health services the other unskilled lead, closely followed by the professional group.

TABLE—4.

## MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1962.

<i>Occupational classification Code.</i>		100 to 109 <i>Mining and Quarrying.</i>	400 to 403 <i>construc- tion.</i>	500 to 511 <i>Gas, water, electricity and sanitary services.</i>	700 to 709 <i>Transport services.</i>
(1)		(2)	(3)	(4)	(5)
	Number.	3,031	5,854	2,581	3,471
	Per cent.	27.6	13.4	6.6	3.1
	Number.	66	104	15	206
	Per cent.	0.6	0.3	0.04	0.2

TABLE 4.—cont  
MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1962.—cont.

Occupational classification Code.	(1)	100 to 109	400 to 403	500 to 511	700 to 709
		Mining and Quarrying.	construc- tion.	Gas, water electricity and Sanitary services.	Transport services.
		(2)	(3)	(4)	(5)
2 and 3 except 290 .. .. .	Number.	2,087	4,199	5,719	14,391
	Per cent.	19.0	9.6	14.5	12.8
4 except 414, 415 .. .. .	Number.	5	391	72	119
	Per cent.	0.1	0.9	0.2	0.1
5	Number.	1,897	1,316	28	454
	Per cent.	17.3	3.0	0.06	0.4
6	Number.	488	1,699	782	23,688
	Per cent.	4.5	3.9	2.0	21.0
7 and 8 except 890, 899 .. .. .	Number.	1,602	4,629	11,127	22,658
	Per cent.	14.6	10.6	28.3	20.2
9 except 903, 931 .. .. .	Number.	496	26	436	3,387
	Per cent.	4.5	..	1.1	3.0
290 .. .. .	Number.	374	4,262	3,470	3,173
	Per cent.	3.4	9.8	8.8	2.8
414, 415, 890 899, 903, 931	Number.	919	21,111	15,105	40,767
	Per cent.	8.4	48.5	38.4	36.3
<b>Total</b> .. .. .	Number.	10,965	43,591	39,335	1,12,402
	Per cent.	100	100	100	100

Occupational Classification Code.	(1)	730—732	Admn. services	810—812	820 and 821
		communi- cation.	800—809	Education and scientific services.	Medical and health services.
		(6)	(7)	(8)	(9)
0	Number.	340	41,187	61,882	16,400
	Per cent.	1.3	18.6	77.0	41.7
1	Number.	295	42,398	624	65
	Per cent.	1.1	19.1	0.8	0.2
2 and 3 except 290 .. .. .	Number.	7,402	43,914	3,784	1,380
	Per cent.	28.9	19.8	4.7	3.5
4 except 414, 415 .. .. .	Number.	10	1,521	1,072	1,305
	Per cent.	Nil.	0.7	1.3	3.3
5	Number.	1,897	1,319	28	..
	Per cent.	..	Nil.	..	..
6	Number.	12,274	2,284	254	677
	Per cent.	47.8	1.0	0.3	1.7
7 and 8 except 890, 899 .. .. .	Number.	2,693	3,618	1206	525
	Per cent.	10.5	1.6	1.5	1.4
9 except 903, 931: .. .. .	Number.	12	37,742	2,065	1,036
	Per cent.	Nil.	17.0	2.6	2.6
290 .. .. .	Number.	1,709	21,040	5,416	2,433
	Per cent.	6.7	9.5	6.7	6.2
414, 415, 890, 899, 903, 931	Number.	953	28,222	4,071	15,503
	Per cent.	3.7	12.7	5.1	39.4
<b>Total</b> .. .. .	Number.	25,688	2,21,925	89,374	39,324
	Per cent.	100	100	100	100

(Source: Manpower Unit, State Planning Commission)

The largest share in mining industry goes to "professionals". In "construction", this goes to "other unskilled"; in 'electricity, gas, etc.', again to "other unskilled"; in 'Transport' also the same picture; in 'communication', this goes to the "specialist workers" in the industry; in administrative services, the professionals, executives and clerical put together account for the largest share; in 'education and scientific services', professionals lead and in medical and health services, also the professionals lead this time.

TABLE 5.  
MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1964.

Occupational Classification Code.	100 to 109 Mining and Quarrying.	400 to 403 construc- tion.	500 to 511 Gas, Water electricity and sani- tary services.	700 to 709 Transport services.
(1)	(2)	(3)	(4)	(5)
Dn. 0 .. .. .	Number 37	5272	2741	765
	Per cent 6.9	16.0	8.8	2.1
Dn. 1 .. .. .	Number 8	113	35	259
	Per cent 1.5	0.4	0.1	0.7
Dn. 2 and 3 except 290 .. .. .	Number 22	3612	5455	5335
	Per cent 4.0	11.0	17.4	14.7
Dn. 4 except 414, 415 .. .. .	Number 1	440	93	10
	Per cent 0.2	1.3	0.3	Nil.
Dn. 5 .. .. .	Number 24	116	78	..
	Per cent 4.5	0.4	0.2	Nil.
Dn. 6 .. .. .	Number 1	1468	635	10745
	Per cent 0.2	4.5	2.0	29.6
Dn. 7 and 8 except 890, 899 .. .. .	Number 71	5554	9325	4050
	Per cent 13.2	16.9	29.8	12.8
Dn. 9 except 903, 931 .. .. .	Number 1	62	63	1537
	Per cent 0.2	0.2	0.2	4.3
290 .. .. .	Number 8	3409	3305	1334
	Per cent 1.5	10.4	10.6	3.7
414, 415, 890, 899, 903, 931 .. .. .	Number 364	12736	9587	11665
	Per cent 67.8	38.9	30.6	32.1
	Number 537	32781	31317	36300
Total .. .. .	Per cent 100	100	100	100

TABLE 5.—cont.

## MANILA: PATTERN OF PUBLIC SECTOR EMPLOYMENT—1961.—cont.

Occupational Classification Code.		730 to 732 communi- cation.	800 to 809 Administra- tive services.	810 to 812 Education and scientific services.	820 and 821 Medical and Health services.
(1)		(6)	(7)	(8)	(9)
Dn. 0	Number	239	42211	66314	14460
	Per cent	1.0	20.9	76.9	44.5
Dn. 1	Number	285	39034	681	93
	Per cent	1.1	19.3	0.8	0.2
Dn. 2 and 3 except 290	Number	6616	35376	37457	1015
	Per cent	26.5	17.5	4.3	3.1
Dn. 4 except 414, 415	Number	13	920	968	1529
	Per cent	Nil.	0.5	1.1	4.7
Dn. 5	Number	..	34	7	..
	Per cent	Nil.	Nil.	Nil.	Nil.
Dn. 6	Number	12833	1440	351	482
	Per cent	51.3	0.7	0.4	1.5
Dn. 7 and 8 except 890, 899	Number	1271	4410	1192	575
	Per cent	5.0	2.2	1.4	1.8
Dn. 9 except 903, 931	Number	26	32361	2688	712
	Per cent	0.1	16.0	3.1	2.2
290	Number	2735	24094	5732	1414
	Per cent	10.9	11.9	6.6	4.4
414, 415, 890, 899, 903, 931	Number	995	22346	4658	12204
	Per cent	4.0	11.0	5.4	37.6
Total	Number	25013	202226	86338	32484
	Per cent	100	100	100	100

(Source: Manpower Unit, State Planning Commission)

Here again we find that in respect of the industries 'Mining and Quarrying', 'Construction', 'Electricity, gas, water, etc.', and 'Transport Services', it is the 'other unskilled' group that leads in the share. Similarly in 'communication' it is the specialists who lead and in 'administrative' services, it is the professional, executive and clerical who lead; in 'Education and Scientific services', it is the professionals who lead; and in 'Medical and health services' again it is the professionals who lead.

TABLE 6.  
MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1966.

<i>Occupational classification Code.</i>					100 to 109 <i>Mining and Quarrying.</i>	400 to 403 <i>construc- tion.</i>	500 to 511 <i>Gas, water Electricity sanitary service.</i>	700 to 709 <i>Transport services.</i>	
(1)					(2)	(3)	(4)	(5)	
0	..	..	..	..	Number	4174	6402	2700	897
					Per cent	22.8	17.5	7.1	2.2
1	..	..	..	..	Number	122	129	117	161
					Per cent	0.7	0.4	0.3	0.4
2 and 3 except 290.	..	..	..	..	Number	1877	4396	5657	6520
					Per cent	10.3	12.0	14.7	15.8
4 except 414, 415	..	..	..	..	Number	38	234	72	19
					Per cent	0.2	0.6	0.1	Nil.
	..	..	..	..	Number	76	100	5	Nil.
					Per cent	0.4	0.3	Nil.	..
6	..	..	..	..	Number	701	2042	690	15968
					Per cent	3.8	5.6	1.8	38.6
7 and 8 except 890, 899	..	..	..	..	Number	4902	5561	9999	7135
					Per cent	26.8	15.2	26.00	17.3
9 except 903, 931	..	..	..	..	Number	850	607	21	740
					Per cent	4.7	1.7	Nil.	1.8
290	..	..	..	..	Number	349	1449	2705	1043
					Per cent	1.9	11.3	7.1	2.5
414, 415, 890, 899, 903, 931	..	..	..	..	Number	5189	12956	16434	8839
					Per cent	28.4	35.4	42.9	21.4
					Number	18278	36576	38400	41322
				Total	Per cent	100	100	100	100

<i>Occupational Classification Code.</i>					730 to 732 <i>communi- cations.</i>	800 to 809 <i>Administra- tion services.</i>	810 to 812 <i>Education and Scientific services.</i>	820 and 821 <i>Medical and Health services.</i>	
(1)					(6)	(7)	(8)	(9)	
0	..	..	..	..	Number	606	54956	82671	22161
					Per cent	1.9	23.7	79.1	49.8
1	..	..	..	..	Number	355	32300	637	170
					Per cent	1.1	13.9	0.6	0.4
2 and 3 except 290	..	..	..	..	Number	2012	47605	4770	1797
					Per cent	25.7	20.5	4.6	4.0

TABLE 6—*cont.*  
MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1966—*cont.*

<i>Occupational Classification Code.</i>		730 to 732 <i>communications.</i>	800 to 809 <i>Administra- tion services.</i>	810 to 812 <i>Education and Scientific services.</i>	820 and 821 <i>Medical and Health services.</i>
(1)		(6)	(7)	(8)	(9)
4 except 414, 415	.. .. Number	11	1050	1005	2128
	Per cent	Nil.	0.5	1.0	4.8
5	.. .. Number	21	3	33	..
	Per cent	Nil.	Nil.	0.4	..
6	.. .. Number	16381	3036	454	984
	Per cent	52.4	1.3	0.4	2.2
7 and 8 except 890, 899	.. .. Number	1436	3386	1216	612
	Per cent	4.7	1.5	1.2	1.3
9 except 903, 931	.. .. Number	20	38808	2920	1911
	Per cent	Nil.	16.8	2.8	4.4
290	.. .. Number	3429	27411	6250	1904
	Per cent	10.9	11.8	6.0	4.3
414, 415, 890, 899, 903, 931	.. Number	1046	23136	4497	12847
	Per cent	3.3	10.0	4.3	28.8
	Number	31317	231697	104453	44574
Total	.. Per cent	100	100	100	100

(Source : Manpower Unit, State Planning Commission)

In the year 1966, we notice a shift in this pattern. In 'Mining and Quarrying', though the 'other unskilled' still lead, we find a close follower in 'production process workers and craftsmen' and in 'professional and technical workers'. In 'construction' and 'electricity', the old pattern is still in evidence. In 'transport', the specialist group has an edge over the 'other unskilled' this time. In 'communication' the old pattern continues. So is the case in 'administrative services', 'education and scientific services', and in 'medical and health services', where the professional group generally steals the show.

TABLE 7.  
MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1968.

<i>Occupational Classification Code.</i>		100 to 109 <i>Mining and Quarrying.</i>	400 to 403 <i>Construc- tion.</i>	500 to 511 <i>Gas, water, Electricity and sanitary services.</i>	700 to 709 <i>Transport services.</i>
(1)		(2)	(3)	(4)	(5)
0	.. .. Number	3589	5767	3316	2340
	Per cent	20.7	17.7	7.9	2.8
1	.. .. Number	211	218	164	621
	Per cent	1.2	0.7	0.4	0.7

TABLE 7—*cont.*MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1968—*cont.*

<i>Occupational Classification Code.</i>	100 to 109 <i>Mining and Quarrying.</i>	400 to 403 <i>Construc- tion.</i>	500 to 511 <i>Gas, water, Electricity and sanitary services.</i>	700 to 709 <i>Transport services.</i>
(1)	(2)	(3)	(4)	(5)
2 and 3 .. .. .	1994	4175	8185	10606
Number				
Per cent	11.5	12.8	19.5	12.6
4 except 414, 415 .. .. .	34	220	96	109
Number				
Per cent	0.1	0.7	0.2	0.1
5 .. .. .	936	115	1	221
Number				
Per cent	5.4	0.4	Nil.	0.3
6 .. .. .	669	3398	1136	19577
Number				
Per cent	3.9	10.4	2.7	23.1
7 and 8 except 890, 899 .. .. .	6133	6707	13147	30310
Number				
Per cent	35.3	20.6	31.2	35.9
9 except 903, 931 .. .. .	54	57	28	1424
Number				
Per cent	0.3	0.1	Nil.	1.7
290 .. .. .	522	3109	2710	3659
Number				
Per cent	3.0	9.5	6.4	4.3
414, 415, 890, 899, 903 and 931 ..	3228	8850	13340	15597
Number				
Per cent	18.6	27.1	31.7	18.5
Total .. {	17370	32616	42123	84464
Number				
Per cent	100	100	100	100
<i>Occupational Classification Code.</i>	730 to 732 <i>Communi- cations.</i>	800 to 809 <i>Adminis- tration services.</i>	810 to 812 <i>Education and Scientific services.</i>	820 to 821 <i>Medical and health services.</i>
(1)	(6)	(7)	(8)	(9)
0 .. .. .	2133	58955	98541	24436
Number				
Per cent	3.8	22.8	78.5	49.9
1 .. .. .	1436	49259	965	271
Number				
Per cent	2.5	19.0	0.8	0.6
2 and 3 .. .. .	10959	46549	6053	2445
Number				
Per cent	18.8	18.0	4.8	5.0
4 except 414, 415 .. .. .	19	1339	1048	1689
Number				
Per cent	Nil.	0.5	0.8	3.4
5 .. .. .	Nil.	61	44	2
Number				
Per cent	Nil.	Nil.	Nil.	Nil.
9 .. .. .	18938	2852	488	672
Number				
Per cent	32.5	1.1	0.4	1.8



TABLE 7—cont.

## MANNING PATTERN OF PUBLIC SECTOR EMPLOYMENT—1968—cont.

Occupational Classification Code.	730 to 732 <i>Communi- cations.</i>	800 to 899 <i>Adminis- tration services.</i>	810 to 812 <i>Education and Scientific services.</i>	820 to 821 <i>Medical and Health services.</i>	
(1)	(6)	(7)	(8)	(9)	
7 and 8 except 890, 899 .. .. .	Number	4722	3960	1372	632
	Per cent	8.1	1.5	1.1	1.3
9 except 903, 931 .. .. .	Number	208	33784	3128	1876
	Per cent	0.2	13.0	2.5	3.3
290 .. .. .	Number	4909	29474	8236	3147
	Per cent	8.4	11.4	6.6	6.4
414, 415, 890, 899, 903, 931. ..	Number	14980	32926	5684	13644
	Per cent	25.7	12.7	4.5	27.8
Total ..	{ Number	58299	259159	125590	49014
	{ Per cent	100	100	100	100

(Source: Manpower Unit, State Planning Commission)

In 1968, we find a definite shift in favour of 'craftsmen and production process workers' as far as 'mining and quarrying' is concerned. In 'construction', though 'other unskilled' still leads, there is to be seen a close follower in 'craftsmen and production process workers'. In 'electricity, gas, etc.' the share of 'craftsmen and production process workers' is almost the same as that of 'other unskilled'. It is also an evidence of a definite shift in the pattern. In 'transport' also there is a shift in favour of 'craftsmen and production process workers', followed by specialist workers. In 'communication', the previous pattern continues. Same is the case in respect of 'administrative services', 'education and scientific services', and 'medical and health services', with their predominance by 'professionals'.

The conclusion that occurs to us as we analyse the broad trends in public sector employment in Tamil Nadu is that there has been a shift in the occupational pattern in production process workers. And this shift has been in tune with the general industrial development of the State. This should serve to us as a general indicator of the likely occupational pattern during the Perspective Planning period.

*Manning patterns over the reference years by industries.*—In this connection, it is worth while to have a closer look at the comparative changes in the shares in employment of occupational divisions by significant industrial categories in Tamil Nadu. The following eight tables represent the eight industrial categories which we have adopted for our analysis above. Each table tells the story of each industry over the reference years in terms of broad occupational categories. These tables are useful in studying the fortunes of each industrial category in terms of occupational changes over the reference years in the Public Sector.

## MANNING PATTERNS BY INDUSTRIAL CATEGORIES IN PUBLIC SECTOR—

TABLE 8.

## MANNING PATTERN IN MINING AND QUARRYING INDUSTRY—PUBLIC SECTOR.

<i>Occupational Classification Code.</i>		<i>Number and Per cent.</i>	1960.	1962.	1964.	1966.	1968.
(1)		(2)	(3)	(4)	(5)		(6)
0	Number ..	1,029	3,031	37	4,174		3,589
	Per cent ..	5.5	27.6	6.9	22.8		20.7
1	Number ..	689	66	8	122		211
	Per cent ..	3.7	0.6	1.5	0.7		1.2
2 and 3 except 290	Number ..	1,117	2,087	22	1,877		1,994
	Per cent ..	6.0	19.0	4.0	10.3		11.5
4 except 414, 415	Number ..	..	5	1	38		34
	Per cent ..	..	0.1	0.2	0.2		0.1
5	Number ..	221	1,897	24	76		936
	Per cent ..	1.2	17.3	4.5	0.4		5.4
6	Number ..	247	488	1	701		669
	Per cent ..	1.3	4.5	0.2	3.8		3.9
7 and 8 except 890, 899	Number ..	1,474	1,602	71	4,902		6,133
	Per cent ..	7.8	14.6	13.2	26.8		35.3
9 except 903, 931	Number ..	45	496	1	850		54
	Per cent ..	0.2	4.5	0.2	4.7		0.3
290	Number ..	301	374	8	349		522
	Per cent ..	1.6	3.4	1.5	1.9		3.0
414, 415, 890; 903, 931	Number ..	13,689	919	364	5,189		3,228
	Per cent ..	72.7	8.4	67.8	28.4		18.6
Total	Number ..	18,812	10,965	537	18,278		17,370
	Per cent ..	100	100	100	100		100

(Source:—Manpower Unit, State Planning Commission.)

There has been a decrease in employment in this industry in 1968 as compared with the position in 1960. The figure for 1964 indicates an all-time low. The reasons for this are not clear. A more detailed probe into this appears to be warranted. 'Other unskilled' group of occupations had the largest share in total employment in 1960. In the year 1962, however, this pattern is changed with a more even distribution and with "professionals and technicians" leading, closely followed by 'Clerical Workers' and 'specialists in the industry'. In 1964, again, the pattern of 1960 is more or less repeated.

In 1966, we see the pattern of 1962 of a more even distribution of occupations with "other unskilled" leading and closely followed by "craftsmen and production process workers" and "professionals and technicians". In the year 1968, we see that there is a shift in emphasis in favour of "craftsmen and production process workers", closely followed by "professionals and technicians".

TABLE 9.  
MANNING PATTERN IN CONSTRUCTION INDUSTRY PUBLIC SECTOR.

<i>Occupational Classification Code.</i>	<i>Number and Per cent.</i>	1960.	1962.	1964.	1966.	1968.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	Number ..	4,359	5,854	5,272	6,402	5,767
	Per cent ..	12.8	27.6	16.0	17.5	17.7
1	Number ..	244	104	113	129	218
	Per cent ..	0.7	0.3	0.4	0.4	0.7
2 and 3 except 290	Number ..	3414	4,199	3,612	4,396	4,175
	Per cent ..	10.1	9.6	11.0	12.0	12.8
4 except 414, 415	Number ..	130	391	440	234	220
	Per cent ..	0.4	0.9	1.3	0.6	0.7
5	Number ..	35	1,316	115	100	115
	Per cent ..	0.1	3.00	0.4	0.3	0.4
6	Number ..	888	1,699	1,468	2,042	3,398
	Per cent ..	2.6	3.9	4.5	5.6	10.4
7 and 8 except 890, 899	Number ..	2,657	4,629	5,554	5,561	6,707
	Per cent ..	7.8	10.6	16.9	15.2	20.6
9 except 903, 931	Number ..	3	26	62	607	57
	Per cent ..	Nil.	Nil.	0.2	1.7	0.1
290	Number ..	3,346	4,262	3,409	4,149	3,109
	Per cent ..	9.9	9.8	10.4	11.3	9.5
414, 415, 890, 899, 903, 931.	Number ..	18,871	21,111	12,736	12,956	8,850
	Per cent ..	55.6	48.5	38.9	35.4	27.1
Total	Number ..	33,947	43,591	32,781	36,576	32,616
	Per cent ..	100	100	100	100	100

(Source.—Manpower Unit, State Planning Commission.)

There has been a fall in employment in this industry in 1968 as compared with the position in 1960 (32,616 in 1968 as against 33,947 in 1960). 1962 has been the peak year as far as total employment is concerned. In all the reference years, we see that the "Other unskilled" group has been leading in the share of total employment. But again this share has been progressively declining over the years—55.6 per cent in 1960, 48.5 per cent in 1962, 38.9 per cent in 1964, 35.4 per cent in 1966 and 27.1 per cent in 1968. In 1968, where we find a more even distribution of occupation, significant contributions to total employment are made by "craftsmen and production process workers" and by "professional technical and related workers". This is a healthy sign, no doubt.

TABLE 10.

MANNING PATTERN IN GAS, WATER, ELECTRICITY AND SANITARY SERVICES—  
PUBLIC SECTOR.

Occupational Classification Code.		1960	1962	1964	1966	1968
(1)		(2)	(3)	(4)	(5)	(6)
0	Number ..	2,093	2,581	2,741	2,700	3,316
	Per cent ..	5.5	6.6	8.8	7.1	7.9
1 .. .. .	Number ..	33	15	35	117	164
	Per cent ..	0.1	0.4	0.1	0.3	0.4
2 and 3 except 290	Number ..	6,805	5,719	5,455	5,657	8,185
	Per cent ..	17.9	14.5	17.4	14.7	19.5
4 except 414, 415 ..	Number ..	64	72	93	72	96
	Per cent ..	0.2	0.2	0.3	0.1	0.2
5 .. .. .	Number ..	17	28	78	5	1
	Per cent ..	0.05	0.06	0.2	Nil.	Nil.
6 .. .. .	Number ..	281	782	635	690	1,136
	Per cent ..	0.7	2.0	2.0	1.8	2.7
7 and 8 except 890, 899	Number ..	7,036	11,127	9,325	9,999	13,147
	Per cent ..	18.5	28.3	29.9	26.0	31.2
9 except 903, 931 ..	Number ..	18	486	63	21	28
	Per cent ..	0.05	1.1	0.2	Nil.	Nil.
290 .. .. .	Number ..	1,684	3,470	3,305	2,705	2,710
	Per cent ..	4.4	8.8	10.6	7.1	6.4
414, 415, 890, 899, 903, 931.	Number ..	19,940	15,105	9,587	16,434	13,340
	Per cent ..	52.6	38.4	30.6	42.9	31.7
Total ..	Number ..	37,971	39,335	31,317	38,400	42,123
	Per cent ..	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission.)

Total employment in this industry has increased in 1968 to 42,123 from its level of 37,971 in 1960. Regarding the occupational pattern, we notice that here also "other unskilled" has been leading all through the reference years with one exception though viz., that in the later years there has been a close second to this and that is "craftsmen and production process workers". In fact we find that in the year 1968, this category is almost equal to the "other unskilled" category in its share of total employment. So we might perhaps say that here also, as in many other cases, the trend in favour "craftsmen and production process workers", has been established. "Clerical worker account for a sizeable share in all the years.

TABLE 11.

## MANNING PATTERN IN 'TRANSPORT SERVICES—PUBLIC SECTOR.

Occupational Classification Code, (1)		1960	1962	1964	1966	1968
		(2)	(3)	(4)	(5)	(6)
	Number ..	2,984	3,471	765	897	2,340
	Per cent ..	2.7	3.1	2.1	2.2	2.8
1 .. .. .	Number ..	851	296	259	161	621
	Per cent ..	0.8	0.3	0.7	0.4	0.7
2 and 3 except 290 .. ..	Number ..	13,960	14,391	5,335	6,520	10,606
	Per cent ..	12.8	12.8	14.7	15.8	12.6
4 except 414, 415 .. ..	Number ..	48	119	10	19	109
	Per cent ..	Nil.	Nil.	Nil.	Nil.	0.1
5 .. .. .	Number ..	28	468	..	..	221
	Per cent ..	Nil.	0.4	..	..	0.3
6 .. .. .	Number ..	14,485	23,682	10,745	15,968	19,577
	Per cent ..	13.8	21.0	29.6	38.6	23.1
7 and 8 except 890, 899 ..	Number ..	23,832	22,688	4,650	7,135	80,310
	Per cent ..	21.9	20.2	12.8	17.3	35.9
9 except 903, 931 .. ..	Number ..	714	3,387	1,537	740	1,424
	Per cent ..	0.7	3.0	4.3	1.8	1.7
290 .. .. .	Number ..	3,474	3,173	1,334	1,043	3,659
	Per cent ..	3.2	2.8	3.7	2.5	4.3
414, 415, 890, 899, 903, 931.	Number ..	48,509	40,767	11,665	8,839	15,597
	Per cent ..	44.6	36.3	32.1	21.4	18.5
<b>Total .. .. .</b>	<b>Number ..</b>	<b>1,08,880</b>	<b>1,12,402</b>	<b>36,300</b>	<b>41,322</b>	<b>84,464</b>
	<b>Per cent ..</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

(Source :—Manpower Unit, State Planning Commission.)

There has been a decrease in employment in this industry from 108,880 in 1960 to 84,464 in 1968. A sharp fall is in evidence in 1964, with only 36,300. A more detailed probe appears warranted here also as transport has been one of the industries which have generally registered steady progress (taking the economy as a whole) over the years. In 1960, "other unskilled" accounted for 44.6 per cent of the total employment, with 21.9 per cent for "craftsmen and production process workers". In 1962, the share of skilled workers in the industry has gone up with the result that the share of "other unskilled" has come down to 36.3 per cent. This trend stabilises further in 1964 with 29.6 per cent for specialists and only 32.1 per cent for "other unskilled". A positive

turn in favour of transport and communication workers is to be found in 1966 with 38.6 per cent for their share, as against only 21.4 per cent for "other unskilled". In 1968 however, the shift is in favour of craftsmen and production process workers with 35.9 per cent, closely followed by "transport and communication workers" with 23.1 per cent. "Other unskilled" is relegated to a level of 18.5 per cent. All through the reference years "clerical workers" have been maintaining an even keel at about 13 to 15 per cent.

TABLE 12.

## MANNING PATTERN IN COMMUNICATIONS INDUSTRY (PUBLIC SECTOR).

<i>Occupational Classification Code.</i>		1960.	1962.	1964.	1966.	1968.
(1)		(2)	(3)	(4)	(5)	(6)
0	Number ..	251	340	239	606	2,133
	Per cent ..	1.0	1.3	1.0	1.9	3.8
1	Number ..	787	295	285	355	1,436
	Per cent ..	3.2	1.1	1.1	1.1	2.5
2 and 3 except 290	Number ..	7,564	7,402	6,616	8,012	10,959
	Per cent ..	30.7	28.9	26.5	25.7	18.8
4 except 414, 415	Number ..	..	10	13	11	19
	Per cent ..	..	Nil.	Nil.	Nil.	Nil.
5	Number ..	..	..	..	21	..
	Per cent ..	..	..	..	..	..
6	Number ..	7,588	12,274	12,833	16,381	18,938
	Per cent ..	30.8	47.8	51.3	52.4	32.5
7 and 7 except 890, 899	Number ..	1,421	2,093	1,271	1,436	4,722
	Per cent ..	5.8	10.5	5.0	4.7	8.1
9 except 903, 931	Number ..	2	12	26	20	203
	Per cent ..	Nil.	Nil.	0.1	Nil.	0.2
290	Number ..	3,385	1,709	2,735	3,429	4,909
	Per cent ..	13.7	6.7	10.9	10.9	8.4
414 415, 880, 899, 903 and 881.	Number ..	3,653	953	995	1,046	14,986
	Per cent ..	14.8	3.7	4.0	3.3	25.7
Total	Number ..	24,651	25,688	25,013	31,317	58,299
	Per cent ..	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission.)

Employment in this industrial category has more than doubled itself in the year 1968 (58,299) as compared with the position in 1960 (24,651). One special feature of this industry has been that the skilled workers of this industry have been accounting for the major share in employment in this industry all through the years. "Clerical workers" have come next in this order of sharing. There has however, been a significant increase in the share of "other unskilled" in the year 1968.

TABLE 13.

## MANNING PATTERN IN THE ADMINISTRATIVE SERVICES—PUBLIC SECTOR.

Occupational Classification Code.		1960.	1962.	1964.	1966.	1968
(1)		(2)	(3)	(4)	(5)	(6)
0	Number ..	24,187	41,187	40,211	54,956	58,955
	Per cent	11.4	18.6	20.9	23.7	22
1 .. .. .	Number	41,970	42,398	39,034	32,300	49,250
	Per cent ..	19.7	19.1	19.3	13.9	19.0
2 and 3 except 290 .. ..	Number ..	44,138	43,914	35,376	47,605	46,549
	Per cent.	20.8	19.8	17.5	20.5	18.0
4 except 414, 415 .. ..	Number ..	192	1,511	920	1,056	1,339
	Per cent	0.1	0.7	0.5	0.5	..
.. .. .	Number ..	13	9	34	3	61
	Per cent ..	Nil.	Nil.	Nil.	Nil.	Nil.
6 .. .. .	Number ..	1,042	2,284	1,440	3,036	2,852
	Per cent ..	0.5	1.0	0.7	1.3	1.1
7 and 8 except 890, 899 ..	Number ..	2,869	3,618	4,410	3,386	3,960
	Per cent ..	1.3	1.6	2.2	1.5	1.5
9 except 903, 931 .. ..	Number ..	32,980	37,742	32,361	33,808	33,784
	Per cent ..	15.5	17.0	16.0	16.8	13.9
290 .. .. .	Number ..	23,269	21,040	24,004	27,411	29,474
	Per cent ..	10.9	9.5	11.9	11.8	11.4
414, 415, 890, 899, 903 and 931.	Number ..	42,032	28,222	22,346	23,136	32,926
	Per cent ..	19.8	12.7	11.7	10.0	12.7
Total ..	Number ..	2,12,692	2,21,925	2,02,226	2,31,697	2,59,159
	Per cent ..	100	100	100	100	100

(Source: Manpower Unit, State Planning Commission.)

Employment in this industrial category has registered a growth in 1968 (259,159) as compared with the position in 1960 (212,692) whereas "clerical workers have been accounting for the largest single share of total employment in the years 1960 and 1962, "professional technical and related workers" have taken over this position thereafter. "Administrative, executive, and managerial workers" have accounted for the next big share. The shares of "services, sports and recreation workers", and "other unskilled workers" have been considerable, in all the years under reference.

TABLE 14.

## MANNING PATTERN IN EDUCATION AND SCIENTIFIC SERVICES—PUBLIC SECTOR.

<i>Occupational Classification Code.</i>	1960.	1962.	1964.	1966.	1968
(1)	(2)	(3)	(4)	(5)	(6)
0	Number .. 48,255	61,882	66,314	82,671	98,541
	Per cent .. 73.9	77.0	76.9	79.1	78.5
1	Number .. 738	624	681	637	965
	Per cent .. 1.1	0.8	0.8	0.6	0.8
2 and 3 except 290	Number .. 2,786	3,784	3,747	4,770	6,053
	Per cent .. 4.3	4.7	4.3	4.6	4.8
4 except 414, 415	Number .. 380	1,072	968	1,095	1,048
	Per cent .. 0.6	1.3	1.1	1.0	0.8
5	Number .. Nil.	Nil.	7	33	44
	Per cent .. ..	..	Nil.	0.4	Nil.
6	Number .. 167	254	351	454	488
	Per cent .. 0.3	0.3	0.4	0.4	0.4
7 and 8 except 890, 899	Number .. 1,427	1,206	1,192	1,216	1,372
	Per cent .. 2.2	1.5	1.4	1.2	1.1
9 except 903, 931	Number .. 1,183	2,065	2,688	2,920	3,159
	Per cent .. 1.8	2.6	3.1	2.8	2.5
290	Number .. 4,342	5,416	5,732	6,250	8,236
	Per cent .. 6.6	6.7	6.6	6.0	6.6
414, 415, 890, 899, 903, 931.	Number .. 6,021	4,071	4,658	4,497	5,684
	Per cent .. 9.2	5.1	5.4	4.3	4.5
Total	Number .. 65,299	80,374	86,338	1,04,453	1,25,590
	Per cent .. 100	100	100	100	100

(Source : Manpower Unit, State Planning Commission.)



Employment in this category has increased to 125,590 in 1968 from 65,299 in 1960. A very significant feature of this category has been that "professional, technical and related workers" have been accounting for a predominantly large share of the total employment in all the reference years. Thus we see that this occupational category has accounted for 73.9 per cent of total employment in this industrial category in 1960; 77 per cent in 1962; 76.9 per cent in 1964; 79.1 per cent in 1966, and 78.5 per cent in 1968. The shares of the other categories have been relatively insignificant over the years.

TABLE 15.

## MANNING PATTERN IN MEDICAL AND HEALTH SERVICES—PUBLIC SECTOR.

<i>Occupational Classification Code.</i>		1960.	1962.	1964.	1966.	1968
(1)	(2)	(3)	(4)	(5)	(6)	(6)
0 .. .. .	Number ..	12,984	16,400	14,460	22,161	22,436
	Per cent ..	39.1	41.7	44.5	49.8	49.9
1 .. .. .	Number ..	109	65	93	170	271
	Per cent ..	0.3	0.2	0.2	0.4	0.6
2 and 3 except 290, 299 ..	Number ..	1,049	1,380	1,015	1,707	2,445
	Per cent	3.2	3.5	3.1	4.0	5.0
4 except 414, 415 .. ..	Number ..	614	1,305	1,529	2,128	1,689
	Per cent ..	1.9	3.3	4.7	4.8	3.4
5 .. .. .	Number ..	..	..	..	..	2
	Per cent ..	..	..	..	..	..
6 .. .. .	Number ..	571	677	482	984	972
	Per cent ..	1.7	1.7	1.5	2.2	1.8
7 and 8 except 890, 899 ..	Number ..	252	525	575	612	632
	Per cent ..	0.8	1.4	1.8	1.3	1.3
9 except 903, 931 .. ..	Number ..	605	1,036	712	1,971	1,876
	Per cent ..	1.8	2.6	2.2	4.4	3.8
290 .. .. .	Number ..	2,443	2,433	1,414	1,904	3,147
	Per cent ..	7.4	6.2	4.4	4.3	6.4
414, 415, 890, 899, 903, 931.	Number ..	14,519	15,503	12,204	12,847	13,644
	per cent ..	3.8	39.4	37.6	28.8	27.8
Total ..	Number ..	33,146	39,324	32,484	44,574	49,014
	Per cent ..	100	100	100	100	100

(Source: Manpower Unit, State Planning Commission.)

Employment in this category has registered an increase in 1968 as compared with the position in 1960. (49,014 in 1968 as compared with 33,146 in 1960). Though the category "other unskilled" accounts for the largest share in employment in 1960 we find a very close second in "professional, technical and related workers". And in 1962, we find that this "close second" takes over the No. 1 place from "other unskilled" and maintains the lead thereafter. All along, we also find this "other unskilled" closely following the "professional" category.

*Chances in the occupational pattern in private sector employment over the period of reference.* The following is an analysis of the Private Sector employment in Tamil Nadu by the years of reference :—

TABLE 16.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1961.

Occupational classification code and description.		010 to 015 Plantations.	030 to 032 Fishing.	201, Sugar Milling Industry.	200, 203 to 209 Food products.
(1)		(2)	(3)	(4)	(5)
0 Professional, Technical and related workers.	Number	499	..	225	262
	Per cent	0.69	..	3.55	1.07
1 Administrative executive and managerial workers.	Number	1	..	61	1,666
	Per cent	..	..	0.96	6.80
2 and 3 Clerical Sales workers	Number	688	..	757	2,051
	Per cent	0.92	..	11.93	8.37
4 Farmers and related workers	Number	2,270	..	327	6
	Per cent	3.13	..	5.16	0.03
5 Miners, Quarrymen, etc	Number	..	..	..	1
	Per cent	..	..	..	0.01
6 Transport and Communication workers.	Number	139	..	69	116
	Per cent	0.19	..	1.09	0.47
7 and 8 Craftsmen and production process workers.	Number	743	..	2,744	9,647
	Per cent	1.03	..	43.25	39.38
9 Service, Sports and recreation workers except 903 and 931.	Number	26	..	18	75
	Per cent	0.04	..	0.28	0.31
290 Unskilled office workers.	Number	29	..	187	96
	Per cent	0.04	..	2.95	0.39
414, 415, 890, 899 903 and 931 ther unskilled workers.	Number	68,101	..	1,956	10,575
	Per cent	93.96	..	30.83	43.17
Total ..	Number	72 476	..	6,344	24,495
	Per cent	100	..	100	100

TABLE-16—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR, 1961—cont.

Occupational Classification Code.		220 to 226	230 to 239	240 to 279	300 to 308
		Tobacco products.	Cotton spinning and weaving.	Other textiles includes Jute, wool silk and Misc.	Printing and Publishing
(1)—cont.		(6)	(7)	(8)	(9)
0 Professional technical and related workers.	Number	74	1,080	18	457
	Per cent	1.04	0.85	0.21	3.17
1 Administrative executive and managerial workers.	Number	277	1,028	385	506
	Per cent	3.90	0.82	4.56	3.62
2 and 3 Clerical Sales workers .. ..	Number	5.96	5,372	441	1,265
	Per cent	8.40	4.31	5.22	8.79
4 Farmers and related workers .. ..	Number	..	44	..	3
	Per cent	..	0.04	..	0.02
5 Miners, Quarrymen, etc. .. ..	Number	..	..	..	..
	Per cent	..	..	..	..
6 Transport and Communication workers ..	Number	114	250	5	74
	Per cent	1.61	0.20	0.06	0.51
7 and 8 Craftsmen and production process workers.	Number	5444	98,480	7,197	10,922
	Per cent	76.72	79.02	85.25	75.88
9 Service Sports and recreation workers except 903 and 931.	Number	..	276	167	34
	Per cent	..	0.22	1.98	0.24
290 Unskilled Office workers .. ..	Number	99	788	44	598
	Per cent	1.40	0.33	0.53	4.15
414, 415, 890, 899, 903 and 931 .. ..	Number	492	17,337	185	535
	Other unskilled workers .. ..	Per cent	6.98	13.91	2.19
Total ..	Number	7,096	1,24,635	8,442	14,394
	Per cent	100	100	100	100

Occupational Classification Code.		310 to 315	320 to 324	334	341
		Leather Products.	330 to 333 335 to 339 Rubber Chemical and Petroleum and Fertiliser Products.	Mats and Fire Works.	Cement Industry.
(1)—cont.		(10)	(11)	(12)	(13)
Dn. 0 .. ..	Number	23	465	54	179
	Per cent	0.28	2.96	0.65	4.78
Dn. 1 .. ..	Number	216	376	66	86
	Per cent	2.60	2.38	0.79	2.36
Dn. 2 and 3 except 290 ..	Number	410	3,300	311	346
	Per cent	4.93	20.93	3.75	9.24
Dn. 4 except 414, 415 ..	Number	4	24	2	1
	Per cent	0.05	0.15	0.03	0.02
Dn. 5 .. ..	Number	..	..	..	33
	Per cent	..	..	..	0.88
Dn. 6 .. ..	Number	18	140	17	156
	Per cent	0.22	0.89	0.20	4.17
Dn. 7 and 8 except 890 and 899.	Number	7,326	6,637	7,037	1,545
	Per cent	28.06	42.093	84.76	41.27

TABLE-16—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR, 1961—cont.

Occupational Classification Code.		310 to 315 Leather Products.	320 to 334 330 to 333 335 to 339 Rubber Chemical and Petroleum and Fertilisers Products.	334 Matches and Fire Works.	341 Cement Industry.	
(1)—cont.		(10)	(11)	(12)	(13)	
Dn. 9 except 903 and 931	Number ..	2	29	13	18	
931	Per cent ..	0.02	0.18	0.16	0.48	
290	Number ..	6	335	20	76	
	Per cent ..	0.07	2.12	0.24	2.03	
414, 415, 890, 899, 903 and 931	Number ..	314	4,461	782	1,304	
	Per cent ..	3.77	28.30	9.42	34.82	
Total ..		Number	8,319	15,767	8,302	3,744
		Per cent	100	100	100	100

Occupational Classification code.		370 to 373 Machinery other than electricals.	374 to 379 Electrical Machinery industry.	Motor Vehicle Machinery industry 382, 383 and 384.	
(1)—cont.		(14)	(15)	(16)	
Dn. 0	Number ..	108	237	101	
	Per cent ..	1.66	3.32	1.34	
Dn. 1	Number ..	87	82	251	
	Per cent ..	1.38	1.15	3.34	
Dn. 2 and 3 except 290	Number ..	152	600	719	
	Per cent ..	2.41	8.41	9.56	
Dn. 4 except 414 and 415	Number ..	1	Nil	1	
	Per cent ..	0.02	..	0.01	
Dn. 5	Number ..	6	Nil	Nil	
	Per cent ..	0.09	..	..	
Dn. 6	Number ..	43	45	52	
	Per cent ..	0.68	0.63	0.69	
Dn. 7 and 8 except 890 and 899	Number ..	4,478	5,122	5,558	
	Per cent ..	70.85	71.81	73.89	
Dn. 9 except 903 and 931	Number ..	Nil	25	5	
	Per cent ..	..	0.35	0.07	
290	Number ..	97	113	176	
	Per cent ..	1.53	1.59	2.34	
414, 415, 890, 899, 903 and 931	Number ..	1,351	909	659	
	Per cent ..	21.38	12.74	8.76	
Total..		Number	6,320	7,133	7,523
		Per cent	100	100	100

TABLE-16—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR, 1961—cont.

Occupational classification code.		380, 381, 385 to 389 Other transport Equipments.	2 and 3	Dn. 6 Trade	700 to 709	
			Balance Durable, non-durable goods industry (not specified).	and Commerce.	Transport industry.	
(1)—cont.		(17)	(18)	(19)	(20)	
Dn. 0	.. .. .	Number	178	513	3,293	127
		Per cent	2.34	1.65	5.21	0.69
Dn. 1	.. .. .	Number	159	1,957	5,195	739
		Per cent	2.09	6.27	8.22	4.00
Dn. 2 and 3 except 290	.. .. .	Number	936	1,898	89,220	2,285
		Per cent	12.30	6.09	62.06	12.37
Dn. 4 except 414 and 415	.. .. .	Number	6	49	71	2
		Per cent	0.08	0.16	0.11	0.01
Dn. 5	.. .. .	Number	Nil	8	3	Nil
		Per cent	..	0.03	0.01	..
Dn. 6	.. .. .	Number	498	167	1,170	10,332
		Per cent	6.55	0.54	1.85	55.93
Dn. 7 and 8 except 890 and 899	.. .. .	Number	4,524	16,009	3,934	4,068
		Per cent	59.46	51.35	6.23	22.02
Dn. 9 except 930 and 931	.. .. .	Number	9	74	197	13
		Per cent	0.12	0.24	0.31	0.97
290	.... .. .	Number	146	407	5,038	211
		Per cent	1.92	1.30	7.97	1.14
414, 415, 890, 899, 903, and 931	.. .. .	Number	1,152	10,095	5,071	696
		Per cent	15.14	32.37	8.03	3.77
	<b>Total</b>	Number	<u>7,603</u>	<u>31,177</u>	<u>63,192</u>	<u>18,473</u>
		Per cent	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>

Occupational classification code.		810 and 811	820 and 821	890 and 871	
		General educational services.	Medical Services.	production, distribution and exhibition of Motion pictures.	
(1)—cont.		(21)	(22)	(23)	
Dn. 0	.. .. .	Number	37,673	2,008	251
		Per cent	83.70	52.63	4.12
Dn. 1	.. .. .	Number	150	19	478
		Per cent	0.33	0.50	7.84
D. 2 and 3 except 290	.. .. .	Number	1,366	359	1,349
		Per cent	3.03	9.41	22.12

TABLE-16—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR, 1961—cont.

<i>Occupational classification codes.</i>						810 and 811 <i>General educational services.</i>	820 and 821 <i>Medical Services.</i>	890 and 871 <i>production, distribution and exhibition of Motion pictures.</i> (23)
(1)—cont.						(21)	(22)	
Dn. 4 except 414 and 415	..	..	..	..	Number	229	47	24
					Per cent	0.51	1.23	0.39
Dn. 5	..	..	..	..	Number	Nil	Nil	Nil
Dn. 6	..	..	..	..	Number	21	58	87
					Per cent	0.05	1.52	0.98
Dn. 7 and 8 except 890 and 899	..	..	..	..	Number	429	82	1,429
					Per cent	0.95	2.15	29.43
Dn. 9 except 903 and 931	..	..	..	..	Number	1,120	161	188
					Per cent	2.49	4.22	3.05
890	..	..	..	..	Number	2,655	333	116
					Per cent	5.90	8.73	1.96
414, 415, 890, 899, 903 and 931	..	..	..	..	Number	1,366	748	2,206
					Per cent	3.04	19.61	36.19
				Total	Number	45,009	3,815	6,098
					Per cent	100	100	100

(Source : Manpower Unit, [State Planning Commission].)

We find from the above table that in the Plantation Industry, the lion's share of employment goes to the "other unskilled" category of occupations (93.96 per cent). In the Sugar Milling Industry, the largest single share in that of "craftsmen and production process workers" (43.25 per cent), followed by "other unskilled" (30.83 per cent). In the manufacture of Food Products, the largest single share is that of "other unskilled" followed by "craftsmen and production process workers" (43.17 per cent and 39.38 per cent respectively). In the manufacture of Tobacco Products, the largest share is that of "production processors" (76.72 per cent). In "cotton spinning and weaving" also the largest share is that of "production processors" (79.02 per cent). The same is the picture with regard to other textiles manufacture including wool, silk, etc., viz., 85.25 per cent accounted for by "production processors". Printing and Publishing Industry tells the same story with 75.88 per cent production processors and craftsmen in its total employment. Same is the case with the manufacture of leather products (88.06 per cent for production processors). As for the manufacture of rubber, chemicals, petroleum and fertiliser products, though production processors account for the largest single share, there are to be found two other considerable shares in "other unskilled" and in "clerical workers". In "matches and fire workers", it is the production processors who account for the bulk of the total employment (84.76 per cent). In cement Industry, "production processors" lead

(41.27 per cent) and "other unskilled" follow closely (34.82 per cent). In the "manufacture of machinery other than electricals", it is the production processors again who lead the sharing. The same story is repeated in the manufacture of electrical machinery and in motor vehicles machinery industry (71.81 per cent and 73.89 per cent respectively). In the "manufacture of other transport equipments" and "other durable and non-durable goods" the "production processors and craftsmen" lead with a significant following by "other unskilled" (59.46 per cent, 51.35 per cent and 15.14 per cent and 32.37 per cent respectively). In "trade and commerce" category however, it is the "clerical and sales workers" who dominate (62.06 per cent). Another industrial category where there is a shift in emphasis as above, is "Transport Industry" where the shift is in favour of "transport and communication workers" (55.93 per cent). In "general educational services" the bulk of the total employment is accounted for by "professional, technical and related workers". A 52.63 per cent share goes to this category in "medical services". In the "production distribution and exhibition of motion pictures", "other unskilled" account for 36.19 per cent, "craftsmen and production processors" account for 23.43 per cent and "clerical and sales workers" account for 23.12 per cent.

TABLE 17.

MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1963—*cont.*

<i>Occupational classification Code.</i>		010 to 015 <i>Plantations.</i>	030 to 032 <i>Fishing.</i>	201, 202 <i>Sugar Milling industry.</i>	200, 203 to <i>209 Food Products.</i>
(1)	(2)	(3)	(4)	(5)	
Dn. 0 .. .. .	Number ..	537	..	273	313
	Per cent ..	0.68	..	4.16	1.13
Dn. 1 .. .. .	Number ..	63	..	68	1,081
	Per cent ..	0.08	..	1.04	3.92
Dn. 2 and 3 except 290 ..	Number ..	670	..	630	2,072
	Per cent ..	0.84	..	9.59	7.51
Dn. 4 except 414 and 415 ..	Number ..	2,937	..	246	263
	Per cent ..	3.69	..	3.74	0.93
Dn. 5 .. .. .	Number ..	..	..	..	..
Dn. 6 .. .. .	Number ..	154	..	87	192
	Per cent ..	0.19	..	1.32	0.70
Dn. 7 and 8 except 890 and 899.	Number ..	573	..	2,489	9,735
	Per cent ..	0.72	..	37.88	35.26
Dn. 9 except 903 and 931 ..	Number ..	21	..	27	67
	Per cent ..	0.03	..	0.41	0.24
290 .. .. .	Number ..	19	..	..	237
	Per cent ..	0.02	..	..	0.86
414, 415, 890, 899, 903, 931 ..	Number ..	74,620	..	2,750	13,648
	Per cent ..	93.75	..	41.86	49.43
Total ..	Number ..	79,594	..	6,570	27,608
	Per cent ..	100	..	100	100

TABLE 17—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1963—cont.

<i>Occupational Classification Code.</i>		<i>220 to 226 Tobacco products.</i>	<i>230 to 239 Cotton spin- ning and weaving.</i>	<i>240 to 279 Other textiles includes jute wool, silk and misc.</i>	<i>300 to 303 Printing and publishing.</i>
(1) — cont.		(6)	(7)	(8)	(9)
Dn. 0 .. .. .	Number ..	11	1,977	69	438
	Per cent ..	0.15	1.44	0.90	4.23
Dn. 1 .. .. .	Number ..	203	882	260	650
	Per cent ..	2.81	0.64	2.40	6.28
Dn. 2 and 3 except 290 ..	Number ..	553	5,143	411	1,490
	Per cent ..	7.66	3.74	5.39	14.39
Dn. 4 except 414 and 415 ..	Number ..	7	49	2	6
	Per cent ..	0.10	0.04	0.03	0.05
Dn. 5 .. .. .	Number ..	Nil.	Nil.	Nil.	Nil.
	Per cent ..				
Dn. 6 .. .. .	Number ..	131	323	23	112
	Per cent ..	1.81	0.23	0.30	1.03
Dn. 7 and 8 except 890 and 899.	Number ..	6,019	1,12,849	6,405	6,508
	Per cent ..	83.32	81.99	83.81	62.84
Dn. 9 except 903 and 931 ..	Number ..	1	322	131	49
	Per cent ..	0.01	0.23	1.72	0.46
290 .. .. .	Number ..	74	960	35	602
	Per cent ..	1.02	0.70	0.46	5.81
414, 415, 890, 899, 903, 931 ..	Number ..	225	15,130	306	603
	Per cent ..	3.12	10.99	4.00	4.86
Total ..	Number ..	7,224	1,37,635	7,642	10,357
	Per cent ..	100	100	100	100

<i>Occupational Classification Code.</i>		<i>310 to 315 leather products.</i>	<i>320 to 324 330 to 332 335 to 339 Rubber, Chemical and Petroleum and fertiliser products.</i>	<i>333, 334 Matches and Fireworks.</i>	<i>341 Cemen- t industry.</i>
(1)		(10)	(11)	(12)	(13)
Dn. 0 .. .. .	Number ..	16	1,161	..	234
	Per cent ..	0.20	3.52	..	4.14
Dn. 1 .. .. .	Number ..	174	704	..	69
	Per cent ..	2.14	2.14	..	2.13
Dn. 2 and 3 except 290 ..	Number ..	412	2,005	..	427
	Per cent ..	5.66	6.09	..	7.56



TABLE 17—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1963—cont.

Occupational Classification Code.	(1)				313 to 315	320 to 324 330 to 332 335 to 339	333, 334	341
					leather products.	Rubber Chemical and Petroleum and fertiliser products.	matches and fire works.	Cement Industry.
	(10)	(11)	(12)	(13)				
Dn. 4 except 414 and 415	..	Number ..	5	53	..	19		
		Per cent ..	0.06	0.16	..	0.34		
Dn. 5	.. .. .	Number ....	Nil.	2	..	39		
		Per cent ..	..	0.01	..	0.69		
Dn. 6	.. .. .	Number ..	43	375	..	176		
		Per cent ..	0.53	1.14	..	3.13		
Dn. 7 and 8 except 890 and 899.		Number ..	6,752	17,671	..	1,906		
		Per cent ..	82.98	53.62	..	33.74		
Dn. 9 except 903 and 931	..	Number ..	6	155	..	35		
		Per cent ..	0.07	0.47	..	0.62		
290	.. .. .	Number ..	28	659	..	258		
		Per cent ..	0.35	2.00	..	4.51		
414, 415, 890, 899, 903 and 931.		Number ..	701	10,171	..	2,494		
		Per cent ..	8.61	30.86	..	44.16		
Total ..	}	Number ..	8,137	32,955	..	5,649		
		Per cent ..	100	100	..	100		

Occupational Classification. Code.	(1)					370 to 373 machi-	374 to 379	382 383, 384
						nery other than Electricals.	Electrical Machinery industry.	Motor vehicle Machinery industry
	(14)	(15)	(16)					
Dn. 0	.. .. .	Number ..	317	144	469			
		Per cent ..	4.17	2.76	2.75			
Dn. 1	.. .. .	Number ..	112	44	315			
		Per cent ..	1.47	0.84	1.85			
Dn. 2 and 3 except 290	.. .. .	Number ..	550	344	2,102			
		Per cent ..	7.23	6.60	12.34			
Dn. 4 except 414 and 415	.. .. .	Number ..	3	1	25			
		Per cent ..	0.04	0.02	0.15			
Dn. 5	.. .. .	Number ..	..	..	153			
		Per cent ..	..	..	0.89			
Dn. 6	.. .. .	Number ..	60	43	669			
		Per cent ..	0.79	0.83	3.93			

TABLE 17—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR, 1963—cont.

<i>Occupational Qualification Code.</i>	<i>370 to 373 machinery other than Electricals.</i>	<i>374 to 379 Electrical Machinery industry.</i>	<i>382, 383, Motor vehicle Machinery industry.</i>
	(14)	(15)	(16)
Dn. 7 and 8 except 890 and 899 .. .. .	Number .. 5,758	36,40	10,439
	Per cent .. 75.72	69.97	61.27
Dn. 9 except 903 and 931 .. .. .	Number .. 9	15	125
	Per cent .. 0.12	0.29	0.73
890 .. .. .	Number .. 60	91	862
	Per cent .. 0.79	1.55	2.12
414, 415, 890, 899, 903 and 931 .. .. .	Number .. 735	899	2,39
	Per cent .. 9.67	17.24	13.97
Total ..	Number .. 7,604	52,10	17,039
	Per cent .. 100	100	100.0

<i>Occupational classification Code.</i>	<i>380, 381, 385 to 389 Other transport Equipments.</i>	<i>2 and 3 balance Durable—non-durable goods industry (not specified).</i>	<i>Dn. 6 Trade and Commerce.</i>	<i>700 to 709 Transport industry.</i>
(1)—cont.	(17)	(18)	(19)	(20)
Dn. 0 .. .. .	Number .. 85	413	1,014	71
	Per cent .. 2.96	1.50	2.01	0.31
Dn. 1 .. .. .	Number .. 45	725	3,373	807
	Per cent .. 1.57	2.63	6.68	3.48
Dn. 2 and 3 except 290 .. .. .	Number .. 288	3,194	30,593	2,553
	Per cent .. 10.03	11.60	60.54	11.07
Dn. 4 except 414 and 415 .. .. .	Number .. 2	77	122	7
	Per cent .. 0.07	0.29	0.24	0.03
Dn. 5 .. .. .	Number .. ..	2	1	..
	Per cent .. ..	0.01	0.00	..
Dn. 6 .. .. .	Number .. 21	126	1,152	13,444
	Per cent .. 0.73	0.46	2.23	59.06
Dn. 7 and 8 except 890 and 899 .. .. .	Number .. 702	21,239	5,046	4,914
	Per cent .. 24.43	77.14	9.99	21.22
Dn. 9 except 903 and 931 .. .. .	Number .. 9	48	501	7
	Per cent .. 0.31	0.17	0.99	0.03

TABLE 17—*cont.*  
MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1963—*cont.*

Occupational Classification Code.	380, 381, 385 to 389 other transport equipments.	2 and 3 balance durable non-durable goods industry (non-specified).	Division 6 trade and commerce.	700 to 709 Transport Industry.
	(17)	(18)	(19)	(20)
290 .. .. .	Number .. 23	429	4,720	320
	Per cent .. 0.80	1.56	9.34	1.38
414, 415, 890, 899, 903 and 931 ..	Number .. 1,698	1,280	4,006	1,024
	Per cent .. 59.10	4.65	7.93	4.42
Total ..	Number .. 2,873	27,533	50,523	23,157
	Per cent .. 100	100	100	100

Occupational Classification Code.	810 and 811 general educational services.	820 and 821 Medical services.	870 and 871 production, distribution and exhibition of motion pictures.
(1)	(21)	(22)	(23)
Dn. 0 .. .. .	Number .. 4,1013	2,323	306
	Per cent .. 90.85	55.60	6.14
Dn. 1 .. .. .	Number .. 109	43	495
	Per cent .. 0.21	1.03	9.93
Dn. 2 and 3 except 290 .. .. .	Number .. 616	329	1,191
	Per cent .. 3.19	7.89	23.90
Dn. 4 except 414 and 415 .. .. .	Number .. 425	57	44
	Per cent .. 0.84	1.36	0.88
Dn. 5 .. .. .	Number .. 11	..	..
	Per cent .. 0.02	..	..
Dn. 6 .. .. .	Number .. 36	77	65
	Per cent .. 0.07	1.84	1.31
Dn. 7 and 8 except 890 and 899 ..	Number .. 670	524	761
	Per cent .. 1.32	12.54	15.27
Dn. 9 except 903 and 931 .. .. .	Number .. 1,840	187	1,116
	Per cent .. 3.63	4.49	22.40
290 .. .. .	Number .. 3,121	239	45
	Per cent .. 6.15	5.72	0.90
414, 415, 890, 899, 903 and 931 ..	Number .. 1,885	399	960
	Per cent .. 3.72	9.55	19.27
Total ..	Number .. 50,726	4,178	4,983
	Per cent .. 100	100	100

Source: Manpower Unit, State Planning Commission.

A major share of the total employment in Plantation Industry is accounted for by the "other unskilled" category. In Sugar Milling Industry, "other unskilled" leads with 41.86 per cent followed by "craftsmen and production processors", with 37.88 per cent. A similar pattern is reflected in Food Products Industry with 49.43 per cent for "other unskilled" and 35.26 per cent for craftsmen and production processors. In the Tobacco Products Industry, "production processors" account for as much as 83.32 per cent of the total employment in that industry. Same is the pattern in cotton spinning and weaving with 81.99 per cent production processors, in other textiles industry, with 83.81 per cent for production processors, in printing and publishing with 62.84 per cent for this category of workers, and in leather products industry with 83.98 per cent for production processors. In the rubber and petro-chemical industries 53.62 per cent share goes to Craftsmen and production processors, followed by "other unskilled" with a share of 30.86 per cent. In the Cement Industry, however, "other unskilled" lead the share with 44.15 per cent followed by "Craftsmen and production processors" with 33.71 per cent. In the manufacture of machinery other than electricals, in electrical machinery industry, and in motor vehicles machinery industry, the "craftsmen and production processors" account for the major share with 75.72 per cent 69.67 per cent and 61.27 per cent respectively.

In the manufacture of other transport equipments, the "other unskilled" category leads with 59.10 percent followed by "craftsmen and production processors" with 24.43 per cent. In the case of the remaining durable and non-durable goods industries it is again the "craftsmen and production processors" who lead. The Trade and Commerce, we find the "clerical and sales workers" accounting for 60.54 per cent of the total employment in that industrial category. "Transport and communication workers" lead in the Transport Industry with a share of 58.06 per cent. In general educational services, it is the "professional" technical and related workers" who lead with a share of 80.25 per cent of the total. This is the case in respect of medical services also (55.60 per cent). In respect of the motion picture industry however, 23.90 per cent is accounted for by clerical and sales workers" 22.40 per cent by "Service and recreation workers", and 19.27 per cent by "other unskilled workers".

TABLE 18.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1965.

<i>Occupational Classification Code.</i>	010 to 015 <i>Plantations.</i>	030 to 032 <i>Fishing.</i>	201, 202 <i>Sugar Milling.</i>	200, 203 to 209 <i>Food products.</i>
(1)	(2)	(3)	(4)	(5)
Division 0 .. .. .	Number. 275	..	333	30
	Per cent. 0.3	..	4.6	0.1
Division 1 .. .. .	Number. 24	..	18	810
	Per cent. Nil.	..	0.3	4.3
Division 2 and 3 except 290 .. ..	Number. 1,962	..	800	1,041
	Per cent. 1.4	..	11.1	5.5
Division 4 except 414, 415 .. ..	Number. 2,348	..	320	7
	Per cent. 1.7	..	4.5	Nil.

TABLE 18.—*cont.*MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1965—*cont.*

<i>Occupational Classification Code.</i>	010 to 015 <i>Plantations.</i>	030 to 032 <i>Fishing.</i>	201, 202 <i>Sugar Milling.</i>	200, 203 to 209 <i>Food Products.</i>
(1)	(2)	(3)	(4)	(5)
Division 5 .. .. .	Number. Nil.	..	Nil.	Nil.
Division 6 .. .. .	Number. 126	..	95	63
	Per cent. 0.1	..	1.3	0.3
Division 7 and 8 except 890, 899 .. .. .	Number. 15,465	..	3,612	1,228
	Per cent. 11.4	..	50.4	59.2
Division 9 except 903, 931 .. .. .	Number. 128	..	363	158
	Per cent. 0.1	..	5.0	0.8
290 .. .. .	Number. 16	..	178	44
	Per cent. Nil.	..	2.5	0.2
414, 415, 890, 899, 903, 931 .. .. .	Number. 1,15,568	..	1,457	5,609
	Per cent. 85.0	..	20.3	29.6
	Number 1,35,912	..	7,176	18,985
Total ..	Per cent. 100	..	100	100

<i>Occupational Classification Code.</i>	220 to 226 <i>Tobacco products.</i>	230 to 279 <i>Other Textiles.</i>	240 to 279 <i>Other Textiles includes Jute, Wool, Silk and Misc.</i>	300 to 303 <i>Printing and publishing.</i>
(1)	(6)	(7)	(8)	(9)
Division 0 .. .. .	Number. 9	982	64	204
	Per cent. Nil.	0.8	0.8	1.9
Division 1 .. .. .	Number. 184	775	209	544
	Per cent. 2.7	0.6	2.6	5.9
Division 2 and 3 except 290 .. .. .	Number. 518	4,624	518	985
	Per cent. 5.9	3.5	6.4	8.9
Division 4 except 414, 415 .. .. .	Number. Nil.	46	1	4
	Per cent. Nil.	Nil.	Nil.	Nil.
Division 5 .. .. .	Number. Nil.	Nil.	Nil.	Nil.

TABLE 18—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1965—cont.

<i>Occupational Classification code.</i>					<i>220 to 226 Tobacco Products.</i>	<i>230 to 279 Other Textiles.</i>	<i>240 to 279 Textiles includes Jute Wool, Silk and Misc.</i>	<i>300 to 303 Printing and Publishing.</i>	
(1)					(6)	(7)	(8)	(9)	
Division 6	..	..	..	..	Number.	102	303	27	51
					Per cent.	1.2	0.2	0.3	0.5
Division 7 and 8 except 890, 899	..				Number.	7,413	1,02,883	6,164	8,214
					Per cent.	83.9	78.9	76.7	75.0
Division 9 except 903, 931	..	..			Number.	69	3,614	221	180
					Per cent.	0.8	2.8	2.7	1.6
290	..	..	..	..	Number.	69	908	47	206
					Per cent.	0.8	0.7	0.6	1.9
414, 415, 890 899, 903, 931	..	..			Number.	472	16,305	792	566
					Per cent.	5.3	12.5	9.9	5.2
Total ..					Number.	8,836	1,30,440	8,043	10,953
					Percent.	100	100	100	100

<i>Occupational classification code.</i>					<i>310 to 315 Leather products.</i>	<i>320 to 324 330 to 332 335 to 339 Rubber Chemical and Petroleum Chemical and fertilisers products.</i>	<i>333, 334 Match and Fire works.</i>	<i>341 Cement Industry.</i>	
(1)					(10)	(11)	(12)	(13)	
Division 0	..	..	..	..	Number.	29	436	38	210
					Per cent.	0.3	2.8	0.3	2.5
Division 1	..	..	..	..	Number.	172	247	131	46
					Per cent.	1.8	1.6	1.1	0.5
Division 2 and 3 except 290	..	..			Number.	513	1,342	384	321
					Per cent.	5.2	8.8	3.2	3.8
Division 4 except 414, 415	..	..			Number..	3	35	Nil.	24
					Per cent.	Nil.	20	...	0.3

TABLE 18—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1965—cont.

Occupational classification Code	(1)				310 to 315	320 to 324 330 to 332 335 to 339 Rubber, Chemical, and Petroleum Chemical and fertilisers products.	333, 334 Match and Fire Fire works.	341 Cemen Indnstrs.	
					Leather products.	(10)	(11)	(12)	(13)
Division 5	..	..	..	..	Number.	Nil.	Nil.	Nil.	969
					Per cent.	..	..	..	11.6
Division 6	..	..	..	..	Number.	22	147	16	140
					Per cent.	0.2	1.0	1.0	1.7
Division 7 and 8 except 890, 899	..	..	..	..	Number.	7,662	8,448	9,376	3,591
					Per cent.	77.6	55.2	77.0	42.8
Division 9 except 903, 931	..	..	..	..	Number.	173	434	128	299
					Per cent.	1.7	2.8	1.1	3.6
290	..	..	..	..	Number.	19	391	25	98
					Per cent.	0.2	2.6	0.2	1.1
414, 415, 890, 899, 903, 931	..	..	..	..	Number.	1,278	3,831	2,070	2,696
					Per cent.	13.0	25.0	17.0	32.1
Total	..	..	..	..	Number.	9,871	15,311	12,168	8,389
					Per cent.	100	100	100	100

Occupational classification Code.	(1)				370 to 373	374 to 379	382, 383, 384	380, 381, 385	
					Machinery other than Electricals.	Electrical Machinery Industry.	Motor vehicle machinery Industry.	to 389 other Transport equipments.	
					(14)	(15)	(16)	(17)	
Division 0	..	..	..	..	Number.	282	311	673	141
					Percent.	3.4	3.0	3.5	3.4
Division 1	..	..	..	..	Number.	164	108	191	58
					Percent.	2.0	1.0	1.0	1.4
Division 2 and 3 except 290	..	..	..	..	Number.	735	656	1,970	292
					Percent.	8.9	6.2	10.3	7.1
Division 4 except 414, 415	..	..	..	..	Number.	4	18	33	Nil.
					Percent.	Nil.	0.2	0.2	Nil.

TABLE 18—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR—1965—cont.

Occupational classification Code.	370 to 373 Machinery other than Electricals	374 to 379 Electrical Machinery Industry.	381, 383, 384 Motor vehicle Machinery Industry.	380, 381, 385 389 other Transport equipments.
(1)	(14)	(15)	(16)	(17)
<i>2 and 3 Balance.</i>				
Division 5 .. .. .	Number. Nil.	Nil.	Nil.	Nil.
Division 6 .. .. .	Number. 81	56	458	26
	Per cent. 1.0	0.5	2.4	0.6
Division 7 and 8 except 890, 899 .. .. .	Number. 6,019	7,449	12,896	2,395
	Per cent. 72.8	70.8	67.5	58.0
Division 9 except 908, 931 .. .. .	Number. 181	325	662	146
	Per cent. 2.1	3.1	3.5	3.5
290 .. .. .	Number. 65	147	234	285
	Per cent. 0.8	1.4	1.2	6.9
414, 415, 890, 899, 903, 931 .. .. .	Number. 740	1,454	1,997	787
	Per cent. 9.0	13.8	10.4	19.1
Total .. .. .	Number. 8,271	10,524	18,114	4,130
	Per cent. 100	100	100	100

Occupational Classification Code.	2 and 3 Balance. Durable-non- durable goods industry (not specified).	Division 6 Trade and Commerce.	700 to 709 Transport Industry.
(1)	(18)	(19)	(20)
Division 0 .. .. .	Number. 749	617	82
	Per cent. 1.9	1.5	0.3
Division 1 .. .. .	Number. 528	3,430	602
	Per cent. 1.3	8.6	2.0
Division 2 and 3 except 290 .. .. .	Number. 1,442	23,915	2,682
	Per cent. 3.6	59.9	11.4
Division 4 except 414, 415 .. .. .	Number. 52	107	4
	Per cent. 0.1	0.3	Nil.
Division 5 .. .. .	Number. 1,304	Nil.	Nil.
	Per cent. 3.3	Nil.	Nil.



TABLE 18.—*cont.*MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR—1965—*cont.*

<i>Occupational Classification</i>						<i>2 and 3 Balance Durable-non- Durable goods industry</i>	<i>Division 6 Trade and Commers.</i>	<i>700 to 709 Transport Industry.</i>	
(1)						(2)	(3)	(4)	
Division 6	..	..	..	..	..	..Number.	290	658	13,229
						Per cent.	0.7	1.6	56.4
Division 7 and 8 except 890, 899	..	..	..	..	..	..Number.	26,014	3,313	5,599
						Per cent.	65.4	8.3	23.8
Division 9 except 903, 931	..	..	..	..	..	..Number.	864	1,072	319
						Per cent.	2.2	2.7	1.4
290	..	..	..	..	..	..Number.	92	3,707	388
						Per cent.	0.2	9.3	1.7
14,415, 890, 899, 903, 931	..	..	..	..	..	..Number.	8,444	3,120	571
						Per cent.	21.3	7.8	2.4
Total						..Number.	39,779	39,939	23,476
						Per cent.	100	100	100

<i>Occupational Classification Code.</i>						<i>810 and 811 General educational services.</i>	<i>820 to 821 Medical services.</i>	<i>870 and 871 Production distribution and exhibition of motion pictures.</i>	
(1)						(21)	(22)	(23)	
Division 0	..	..	..	..	..	..Number.	30,978	1,614	229
						Per cent.	73.1	51.3	3.6
Division 1	..	..	..	..	..	..Number.	120	14	439
						Per cent.	0.3	0.4	6.9
Division 2 and 3 except 290	..	..	..	..	..	..Number.	1,625	151	1,360
						Per cent.	3.8	4.8	21.3
Division 4 except 414, 415	..	..	..	..	..	..Number.	412	76	29
						Per cent.	1.0	2.4	0.5
Division 5	..	..	..	..	..	..Number.	Nil.	Nil.	Nil.
Division 6	..	..	..	..	..	..Number	32	43	39
						Per cent.	0.1	1.4	0.6

TABLE 18.—*cont.*MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1965—*cont.*

<i>Occupational Classification.</i>		310 and 811 <i>General educational services.</i>	820 to 821 <i>Medical services.</i>	870 and 871 <i>Production distribution and exhibition o motion pictures.</i>	
(1)		(21)	(22)	(23)	
Division 7 and 8 except 890, 799	..	Number.	769	212	1,492
		Per cent.	1.8	6.7	23.4
Division 9 except 903, 931	.. ..	Number.	3,363	408	386
		Per cent.	7.9	13.0	6.0
290	.. ..	Number.	3,070	122	146
		Per cent.	7.3	3.9	2.3
414, 415, 890, 899, 903, 931	.. ..	Number.	2,005	594	2,283
		Per cent.	4.7	16.1	35.4
Total ..		Number.	42,374	3,144	6,383
		Per cent.	100	100	100

[Source : Manpower unit, State Planning Commission.]

It may be seen from the above table that in “plantations” industry, “other unskilled” occupations account for as much as 85.0 per cent of the total employment under that industry. In the Sugar Milling Industry, however, it is the “craftsmen and production process workers” who account for 50.4 per cent of the total employment. “Other unskilled” follow this with a 20.3 per cent share. In Food Products Industry again, we find that “craftsmen and production processors” lead with 59.2 per cent share, followed by “other unskilled” with 29.6 per cent. “Production processors” account for the bulk of the total employment (83.9 per cent) in the tobacco products Industry as well. Similar is the picture in Cotton Spinning and Weaving Industry with 78.9 per cent share for production processors; in other textiles manufacture with 76.7 per cent share for this category of workers; in Printing and Publishing industry with 75.0 per cent share; in leather products manufacture with 77 per cent share; and in Match and Fire works Industry with 77.0 per cent share. In Rubber and Petro-chemical industry, “production processors” lead with 55.2 per cent share followed by “other unskilled” with a 25.0 per cent of the total employment.

As far as the Cement Industry is concerned, we see that the “production processors” account for 42.8 per cent of the total employment, followed by “other unskilled” with 32.1 per cent share. With regard to Machinery other than Electricals, we find that the “production processors” account for as much as 72.8 per cent of the total employment. Similar is the picture with regard to electrical machinery manufacturing industry with 70.8 per cent share for “production processors”; in motor vehicles machinery manufacture with 67.5 per cent in the manufacture of other transport equipment with 58.0 per cent; and in the

manufacture of other durable and non-durable goods industry with 65.4 per cent. In Trade and Commerce, 59.9 per cent share is accounted for by "clerical and sales" workers. In Transport, 56.4 per cent share is accounted for by workers in transport and communication industries, followed by "production processors" with 23.8 per cent. In general educational services and in medical services, "professional, technical and related workers" lead with 73.1 per cent and 51.3 per cent shares of the total employment in those industries respectively. In the motion picture industry, we see "other unskilled with 35.4 per cent share, followed by "production processors" with 23.4 percent and "clerical and sales workers" with 21.3 per cent share.

TABLE 19.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1967.

<i>Occupational Classification Code.</i>					<i>010 to 015 Plantations.</i>	<i>030 to 032 Fishing.</i>	<i>201, 202 Sugar Milling Industry.</i>	<i>202, 203 to 209 Food products.</i>	
(1)					(2)	(3)	(4)	(5)	
Division 0	..	..	..	..	Number.	568	..	417	118
					Per cent.	0.71	..	6.48	0.59
Division 1	..	..	..	..	Number.	3	..	22	656
					Per cent.	0.0	..	0.34	3.26
Divisions 2 and 3 except 290	..	..	..	..	Number.	792	..	951	1,168
					Per cent.	0.99	..	14.78	5.80
Division 4	..	..	..	..	Number.	3,821	..	176	9
					Per cent.	4.80	..	2.73	0.04
Division 5	..	..	..	..	Number.	Nil.	Nil.	Nil.	Nil.
Division 6	..	..	..	..	Number.	161	..	123	107
					Per cent.	0.20	..	1.91	0.53
Divisions 7 and 8 except 890, 899	..	..	..	..	Number.	347	..	3,667	10,038
					Per cent.	0.44	..	56.98	49.81
Division 9 except 903, 931	..	..	..	..	Number.	29	..	31	48
					Per cent.	0.04	..	0.48	0.24
290	..	..	..	..	Number.	40	..	144	82
					Per cent.	0.05	..	2.24	0.41
414, 415, 890, 899, 903 and 931	..	..	..	..	Number.	73,874	..	905	7,927
					Per cent.	92.77	..	14.06	39.32
Total	..	..	..	..	Number.	79,635	..	6,436	20,153
					Per cent.	100	..	100	100

TABLE 19—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR—1967—cont.

<i>Occupational classifications Code.</i>					220 to 226 <i>Tobacco products.</i>	230 to 239 <i>Cotton spinning and weaving.</i>	240 to 279 <i>other Textiles includes Jute wool, Silk and Miscellaneous.</i>	300 to 303 <i>Printing and publishing.</i>
(1)					(6)	(7)	(8)	(9)
Division 0	..	..	..	Number.	41	742	102	337
				Per cent.	0.36	0.75	1.54	2.51
Division 1	..	..	..	Number.	260	424	138	245
				Per cent.	2.28	0.45	2.08	1.83
Divisions 2 and 3 except 290	..	..	..	Number.	575	4,036	409	1,241
				Per cent.	5.04	4.09	6.16	9.25
Division 4	..	..	..	Number.	1	26	Nil.	6
				Per cent.	0.01	0.03	..	0.05
Division 5	..	..	..	Number.	Nil.	Nil.	Nil.	Nil.
Division 6	..	..	..	Number.	115	231	23	94
				Per cent.	1.01	0.23	0.35	0.70
Divisions 7 and 8 except 890 and 899..	..	..	..	Number.	10,069	79,046	5,392	10,618
				Per cent.	88.23	80.17	81.19	79.16
Division 9 except 903, 931	..	..	..	Number.	1	136	56	21
				Per cent.	0.01	0.14	0.84	0.10
290	..	..	..	Number.	69	989	42	40
				Per cent.	0.60	1.00	0.63	3.0
414, 415, 890, 899, 903 and 931	..	..	..	Number.	281	12,974	479	45
				Per cent.	2.46	13.16	7.21	3.3
Total	..	..	..	Number.	11,412	98,604	6,641	13,411
				Per cent.	100	100	100	100

<i>Occupational classifications Code.</i>					310 to 315 <i>Leather Products</i>	320 to 324 <sup>a</sup> 330 to 332 <i>Rubber chemical and Petroleum and Fertilizers Products</i>	323 to 324 <i>Maths and Fireworks</i>
(1)					(10)	(11)	(12)
Division 0	..	..	..	Number.	66	811	6
				Per cent.	0.54	5.52	..
Division 1	..	..	..	Number.	110	288	1
				Per cent.	1.68	1.96	..
Division 2 and 3 except 290	..	..	..	Number.	374	1,322	1
				Per cent.	4.77	13.28	..

TABLE 19—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1967—cont.

<i>Occupational Classification Code.</i>					310 to 315 <i>Leather Products</i>	320 to 324 <i>Rubber chemical and Petroleum and Fertilisers Products</i>	330 to 332 <i>Rubber chemical and Petroleum and Fertilisers Products</i>	333 to 334 <i>Matches and Fireworks</i>
(1)					(10)	(11)		(12)
Division 4 except 414, 415	..	..	..	..	Number.	8	47	Nil.
					Per cent.	0.10	0.32	..
Division 5	..	..	..	..	Number.	Nil.	Nil.	Nil.
Division 6	..	..	..	..	Number.	16	199	12
					Per cent.	0.20	1.35	0.09
Division 7 and 8 except 890, 899	..	..	..	..	Number.	6,758	6,321	11,323
					Per cent.	86.18	43.02	86.34
Division 9 except 903 931	..	..	..	..	Number.	6	23	1
					Per cent.	0.08	0.16	0.01
290	..	..	..	..	Number.	12	316	16
					Per cent.	0.15	2.15	0.12
414, 415, 890, 899, 903, 931	..	..	..	..	Number.	483	4,737	1,271
					Per cent.	6.16	32.24	9.69
				Total	Number.	7,842	14,694	13,115
					Per cent.	100.00	100.00	100.00

<i>Occupational Classification Code.</i>					341 <i>Cement industry.</i>	370 to 373 <i>Machinery other than Electricals.</i>	374 to 379 <i>Electrical Machinery industry.</i>	<i>Motor Vehicle Machinery industry 382, 383, 384.</i>
(1)					(13)	(14)	(15)	(16)
Division 0	..	..	..	..	Number.	368	426	346
					Per cent.	4.92	4.03	4.32
Division 1	..	..	..	..	Number.	48	93	105
					Per cent.	0.64	0.88	1.31
Division 2 and 3 except 890	..	..	..	..	Number.	417	917	714
					Per cent.	5.58	8.67	8.92
Division 4 except 414, 415	..	..	..	..	Number.	14	11	3
					Per cent.	0.19	0.10	0.04
Division 5	..	..	..	..	Number.	104	32	26
					Per cent.	1.39	0.30	0.32

TABLE 19—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1967—cont..

Occupational Classification Code.						341 cement industry.	370 to 373 Machinery other than Electricals.	374 to 379 Electrical Machinery industry.	Motor Vehicle Machinery industry 382, 383, 384.	
(1)						(13)	(14)	(15)	(16)	
Division 6	..	..	..	..	Number.	168	75	51	687	
					Per cent.	2.25	0.71	0.64	7.65	
Divisions 7 and 8	..	..	..	..	Number.	2,362	7,521	5,555	5,384	
					Per cent.	31.60	71.09	69.38	59.99	
Division 9 ..	..	..	..	..	Number.	27	2	4	32	
					Per cent.	0.36	0.02	0.05	0.36	
Division 290	..	..	..	..	Number.	144	371	232	166	
					Per cent.	1.93	3.50	2.90	1.85	
Divisions 414, 415, 890, 899, 903, 931	..	..	..	..	Number.	3,823	1,132	971	967	
					Per cent.	51.14	10.70	12.12	10.77	
Total ..						Number.	7,475	10,580	8,007	8,975
						Per cent.	100.00	100.00	100.00	100.00

Occupational classification Code.						380, 381, 385 to 389 other transport equipment.	2 and 3 Balance Durable non-durable goods indus- try (not specified).	Division 6 Trade and Commerce.	
(1)						(17)	(18)	(19)	
Division 0	..	..	..	..	..	Number.	208	816	1,402
						Per cent.	4.24	2.14	2.53
Division 1	..	..	..	..	..	Number.	47	580	4,234
						Per cent.	0.96	1.52	7.65
Divisions 2 and 3 except 290	..	..	..	..	..	Number.	488	3,314	33,251
						Per cent.	9.95	8.71	60.06
Division 4 except 414, 415	..	..	..	..	..	Number.	1	71	51
						Per cent.	0.02	0.19	0.08
Division 5	..	..	..	..	..	Number.	Nil.	Nil.	Nil.
Division 6	..	..	..	..	..	Number.	53	352	1,159
						Per cent.	1.03	0.93	2.09
Division 7 and 8 except 890, 899	..	..	..	..	..	Number.	2,923	21,394	4,358
						Per cent.	59.58	56.22	7.67

TABLE 19—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1967—cont.

Occupational classification code		380, 381, 385 to 389 other transport equipment.	2 and 3 Balance Durable non-durable goods indus- try (not specified).	Division 6 Trade and commerce.
(1)		(17)	(18)	(19)
Division 9 except 902, 931	.. .. .	Number. 6	68	309
		Percent. 0.12	0.18	0.56
Division 290	.. .. .	Number. 11	513	5,739
		Percent. 0.22	1.35	10.37
Divisions 414, 415, 890, 899, 903 931	.. .. .	Number. 1,169	10,394	4,858
		Percent. 28.88	28.76	8.79
Total	..	Number. 4,906	38,051	55,361
		Percent. 100.00	100.00	100.00

Occupational classification code	700 to 709 Transport industry.	810 and 811 General educational services.	820 and 821 Medical services.	870 and 871 Production, distribution of Motion pictures.	
(1)	(20)	(21)	(22)	(23)	
Division 0	.. .. .	Number 101	47,897	4,118	153
		Per cent 0.41	81.35	55.62	2.08
Division 1	.. .. .	Number 548	64	43	436
		Per cent 2.21	0.11	0.58	5.92
Division 2 and 3 except 290	.. .. .	Number 3,421	2,065	848	1,491
		Per cent 13.82	3.51	11.45	20.25
Division 4 except 414, 415	.. .. .	Number 7	392	62	34
		Per cent 0.03	0.67	0.84	0.46
Division 5	.. .. .	Number Nil.	Nil.	Nil.	Nil.
Division 6	.. .. .	Number 13,921	30	106	50
		Per cent 56.22	0.05	1.42	0.68
Divisions 7 and 8 except 890, 899	.. .. .	Number 5,223	629	72	2,060
		Per cent 21.09	1.07	0.97	27.97
Division 9 except 903, 931	.. .. .	Number 13	2,127	249	1,429
		Per cent 0.05	3.61	3.36	19.40
Division 290	.. .. .	Number 304	3,441	1,344	185
		Per cent 1.23	5.84	15.16	2.51
Division 414, 415, 890, 899, 903, 931	.. .. .	Number 1,224	2,232	562	1,527
		Per cent 4.94	3.79	7.59	26.73
Total	..	Number 24,762	58,877	7,404	7,365
		Per cent 100.00	100.00	100.00	100.00

(Source: Manpower Unit, State Planning Commission)

A predominant share of 92.77 per cent of the total employment in Plantations industry is accounted for by "other unskilled" workers. In Sugar Milling Industry "production processors" lead with 56.98 per cent share of the total. In Food Products Industry, production processors account for 49.81 per cent, followed by "other unskilled" with 39.32 per cent. In tobacco products manufacture, production processors account for as much as 88.23 per cent. Similarly in cotton spinning and weaving, production processors lead with 80.17 per cent in other cotton textiles with 81.19 per cent, in printing and publishing with 79.10 per cent, in leather products with 86.18 per cent in matches and fireworks with 86.34 per cent, in machinery other than electricals with 71.09 per cent in electrical machinery manufacture with 69.38 per cent and in motor vehicles machinery manufacture with 59.99 per cent. In rubber and petro-chemicals, "production processors" account for 43.02 per cent followed by "other unskilled" with 32.24 per cent. In Cement Industry, "other unskilled" lead with 51.14 per cent, followed by "production processors" with 31.60 per cent. In the manufacture of other transport equipments, production processors account for 59.58 per cent, followed by "other unskilled" with 23.83 per cent. In the remaining durable and non-durable goods manufacturing industries, "production processors" account for 56.22 per cent, followed by "other unskilled" with 28.76 per cent. In "Trade and Commerce", "clerical and sales workers" lead with 60.06 per cent—"workers in transport and communication industries" account for 56.22 per cent of the total employment in Transport Industry, followed by "production processors" with 21.09 per cent. In general educational services and in medical services, "professional, technical and related workers" lead with 81.35 per cent and 55.62 per cent shares of total employment in these industries, respectively. In motion picture industry, "production processors" lead with 27.97 per cent followed by "other unskilled" with 20.73 per cent, "clerical and sales workers" with 20.25 per cent and "service and recreation workers" with 19.40 per cent.

TABLE 20.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1969

Occupational classification, code.	(1)	010 to 015	030 to 032	201, 202	200, 203 to
		Plantation.	Fishing.	Sugar Milling Industry.	209 Food Products.
		(2)	(3)	(4)	(5)
Division 0 .. .. .	Number	551	Nil.	489	156
	Per cent	0.73	..	6.12	0.79
Division 1 .. .. .	Number	32	Nil.	65	482
	Per cent	0.04	..	0.81	2.45
Divisions 2 and 3 except 290 .. .. .	Number	646	Nil.	850	1,245
	Per cent	0.86	.. ..	10.65	6.33
Division 4 except 414, and 415 .. .. .	Number	3,952	Nil.	134	2
	Per cent	5.24	..	1.68	0.01



TABLE 20—*cont.*MANNING PATTERN IN INDUSTRIAL, PRIVATE SECTOR—1969—*con.*

Occupational classification code		010 to 015 <i>Plantations.</i>	080 to 082 <i>Fishing.</i>	201, 202 <i>Sugar Milling Industry.</i>	200, 203 to 209 <i>Food Products.</i>
(1)		(2)	(3)	(4)	(5)
Division 5	.. .. .	Number	Nil.	8	Nil.
		Per cent	..	0.10	..
Division 6	.. .. .	Number	168	30	109
		Per cent	0.22	0.38	0.55
Division 7 and 8 except 890 and 899	..	Number	196	3,206	13,058
		Per cent	0.26	40.16	66.42
Division 9 except 903 and 931	..	Number	44	16	35
		Per cent	0.06	0.20	0.18
Division 290	.. .. .	Number	35	196	103
		Per cent	0.05	2.45	0.62
414 415, 890, 899, 903 and 931	..	Number	69,761	2,980	44,70
		Per cent	92.54	37.45	22.75
<b>Total</b>	..	Number	<b>75,385</b>	<b>7,984</b>	<b>19,660</b>
		Per cent	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Occupational classification code		220 to 226 <i>Tobacco Products.</i>	230 to 239 <i>Cotton spinning and weaving.</i>	240 to 279 <i>Other textiles including Jute, wool, silk and Misc.</i>	300 to 303 <i>Printing and publishing.</i>	
(1)		(6)	(7)	(8)	(9)	
Division 0	.. .. .	Number	29	1,291	38	406
		Per cent	0.28	1.13	0.63	3.50
Division 1	.. .. .	Number	286	691	172	312
		Per cent	2.76	0.60	2.87	2.69
Divisions 2 and 3 except 290	..	Number	509	6,012	378	1,469
		Per cent	4.02	5.24	6.31	12.66
Division 4 except 414 and 415	..	Number	1	55	1	1
		Per cent	0.01	0.05	0.01	0.00
Division 5	.. .. .	Number	Nil.	2	Nil.	Nil.
		Per cent	..	0.00	..	..

TABLE 20—cont.

## MANNING PATTERN IN INDUSTRIES PRIVATE SECTOR 1969—cont.

<i>Occupational classification code.</i>						220 to 226 <i>tobacco Products.</i>	230 to 239 <i>cotton spinning and weaving.</i>	240 to 279 <i>other textiles includes jute, wool, silk and misc.</i>	300 to 303 <i>Printing and Publishing.</i>	
(1)						(6)	(7)	(8)	(9)	
Division 6	..	..	..	..	..	Number	103	255	10	71
						Per cent	0.99	0.22	0.17	0.61
Division 7 and 8 except 890 and 899						Number	8,773	93,266	5,020	8,403
						Per cent	84.69	81.24	83.74	72.39
Division 9 except 903 and 931	..					Number	1	324	93	34
						Per cent	0.01	0.28	1.55	0.29
290	..	..	..	..	..	Number	89	1,128	19	280
						Per cent	0.86	0.98	0.32	2.41
414, 415 890, 899, 903 and 931	..					Number	568	11,782	264	632
						Per cent	5.48	10.26	4.40	5.45
<b>Total</b>						Number	10,359	1,14,806	5,995	11,608
						Per cent	100.00	100.00	100.00	100.00

<i>Occupational classification code.</i>						3 10 to 315 <i>Leather Products.</i>	3 20 to 324, 3 30 to 332, 335 to 339 <i>Rubber, chemical and Petroleum and Fertilisers Products.</i>	3 33, 334, <i>Matches and Fireworks.</i>	
(1)						(10)	(11)	(12)	
Division 0	..	..	..	..	..	Number	54	960	65
						Per cent	0.57	5.06	0.46
Division 1	..	..	..	..	..	Number	135	389	151
						Per cent	1.43	2.05	1.08
Division 2 and 3 except 290	..	..	..			Number	517	1,984	370
						Per cent	5.46	10.45	3.64
Division 4 except 414, and 415	..	..	..			Number	6	65	Nil.
						Per cent	0.06	0.34	..
Division 5	..	..	..	..	..	Number	Nil.	Nil.	Nil.
Division	..	..	..			Number	99	253	31
						Per cent	0.95	1.31	0.22

TABLE 20—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1969—cont.

<i>Occupational Classification code.</i>				310 to 315 <i>Leather Products.</i>	320 to 324, 330 to 332, 335 to 339 <i>Rubber Chemical and Petroleum and Fertilisers Products.</i>	333, 334 <i>Matches and Fireworks.</i>
(1)				(10)	(11)	(12)
Division 7 and 8 except 890 and 899	..	..	Number	7,439	8,873	9,991
			Per cent	78.59	46.75	71.27
Division 9 except 903 and 931	..	..	Number	9	41	2
			Per cent	0.09	0.22	0.02
290	..	..	Number	28	308	28
			Per cent	0.30	1.62	0.20
414, 415, 890, 899, 903 and 931	..	..	Number	1,188	6,106	3,380
			Per cent	12.55	32.18	24.11
		Total	Number	9,466	18,979	14,018
			Per cent	100.00	100.00	100.00

<i>Occupational Classification code.</i>				341 <i>Cement Industry.</i>	370 to 373 <i>Machinery other than Electricals.</i>	374 to 379 <i>Electrical Machinery industry.</i>	<i>Motor Vehicle manufacturing industry 382, 383 384.</i>
(1)				(13)	(14)	(15)	(16)
Division 0	..	..	Number	237	376	536	804
			Per cent	4.57	4.71	5.28	3.38
Division 1	..	..	Number	44	237	158	374
			Per cent	0.85	2.96	1.56	1.57
Division 2 and 3 except 290	..		Number	532	686	857	1,873
			Per cent	10.27	8.59	8.44	7.86
Division 4 except 414 and 415	..	..	Number	15	11	5	21
			Per cent	0.29	0.14	0.05	0.08
Division 5	..	..	Number	28	36	..	37
			Per cent	0.54	0.45	..	0.16
Division 6	..	..	Number	208	34	100	682
			Per cent	4.01	0.43	0.98	2.87
Division 7 and 8 except 890 and 899	..	..	Number	1,818	5,076	6,603	14,868
			Per cent	31.23	63.53	65.01	62.47
Division 9 except 903 and 931	..	..	Number	16	82	38	124
			Per cent	0.31	1.03	0.37	0.52
290	..	..	Number	177	120	143	437
			Per cent	3.42	1.49	1.41	1.84
414, 415, 890, 899, 903 and 931	..	..	Number	2,306	1,332	1,717	4,582
			Per cent	44.51	16.67	16.90	19.25
		Total	Number	5,181	7,990	10,157	23,802
			Per cent	100.00	100.00	100.00	100.00

TABLE 20—cont.

## MANNING PATTERN IN INDUSTRIES—PRIVATE SECTOR 1969—cont.

Occupational classification codz.		380, 381, 385 to 389, durable non-durable Other Transport equipments.	2 and ? Balance goods Industry (not specified).	Ln. 6 Trade and Commerce.
(1)		(17)	(18)	(19)
Division 0 .. ..	Number	109	10,42	1,714
	Per cent	2.83	2.74	3.71
Division 1 .. ..	Number	63	625	3,890
	Per cent	1.46	1.64	8.42
Division 2 and 3 except 290 .. ..	Number	293	2,884	27,026
	Per cent	6.80	7.58	58.48
Division 4 except 414 and 415 .. ..	Number	9	43	43
	Per cent	0.21	0.11	0.09
Division 5 .. ..	Number	Nil.	34	1
	Per cent	..	0.09	0.00
Division 6 .. ..	Number	41	322	997
	Per cent	0.95	0.85	2.16
Division 7 and 8 except 908 and 899 .. ..	Number	2,856	20,966	3,395
	Per cent	66.30	55.09	7.35
Division 9 except 903 and 931 .. ..	Number	2	97	134
	Per cent	0.05	0.25	0.29
290 .. ..	Number	47	516	4,526
	Per cent	1.09	1.36	9.78
414, 415 890, 899, 903, and 931 .. ..	Number	888	11,528	4,492
	Per cent	20.61	30.29	9.72
<b>Total ..</b>	<b>Number</b>	<b>4,308</b>	<b>38,057</b>	<b>46,215</b>
	<b>Per cent</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Occupational Classification, codz.	700 to 709 Transport Industry.	810 to 811 General Educational Service.	820 to 821 Medical Services.	870 and 871 Production, distribution and exhibition of motion pictures.
(1)	(20)	(21)	(22)	(23)
Division 0 .. ..	Number	116	52,622	3,333
	Per cent	0.53	83.32	55.38
Division 1 .. ..	Number	466	54	45
	Per cent	2.14	0.09	0.75
Division 2 and 3 except 290 .. ..	Number	2,882	2,223	580
	Per cent	13.20	3.51	9.64
Division 4 except 414, and 415	Number	7	373	32
	Per cent	0.03	0.59	1.36
Division 5 .. ..	Number	Nil.	Nil.	Nil.
Division 6 .. ..	Number	11,930	50	98
	Per cent	54.65	0.08	1.62
Division 7 and 8 except 890 and 899	Number	5,286	686	122
	Per cent	24.22	1.09	2.93
Division 9 except 903 and 931 .. ..	Number	8	570	45
	Per cent	0.04	0.90	6.90
290 .. ..	Number	224	3,519	813
	Per cent	1.03	5.57	14.14
414, 415 890, 899, 903 and 931	Number	909	3,062	430
	Per cent	4.16	4.85	7.18
<b>Total ..</b>	<b>Number</b>	<b>1,828</b>	<b>63,159</b>	<b>6,008</b>
	<b>Per cent</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(Source: Manpower Unit, State Planning Commission.)

"Other unskilled" workers dominate plantation employment with a 92.54 per cent share of the total employment in that industry. In sugar milling industry, "production processors" lead with 40.16 per cent share, followed by "other unskilled" with 37.45 per cent. "Production processors" lead in the following industries also: Food products (66.48 per cent), Tobacco products (84.69 per cent), Cotton, spinning and weaving (81.24 per cent), Manufacture of other textiles (83.74 per cent), Printing and Publishing (72.39 per cent), Leather Products (78.59 per cent), Matches and Fireworks (71.27 per cent), Machinery other than electricals (63.53 per cent), Manufacture of electrical machinery (65.10 per cent), Motor vehicles machinery manufacturing industry (62.47 per cent) and Other transport equipments manufacture (66.30 per cent). In "rubber and petro-chemicals" "production processors" account for 46.75 per cent, followed by "other unskilled" with 32.18 per cent. In the cement industry "other unskilled" account for 44.51 per cent followed by "production processors" with 31.23 per cent.

In the manufacture of the remaining durable and non-durable goods, "production processors" account for 55.09 per cent of the total employment in that industry, followed by "other unskilled" with 30.29 per cent. In Trade and Commerce, "clerical and sales workers" account for 58.48 per cent. "Workers in transport and communication industries" account for 54.65 per cent of total employment in transport industry, followed by "production processors" with 24.22 per cent. "Professional, technical and related workers" account for 83.32 per cent of total employment in general educational services, and for 55.38 per cent in medical services. In the production, distribution and exhibition of motion pictures, "service and recreation workers" account for 27.47 per cent, followed by "clerical and sales workers" with 23.13 per cent, "production processors" with 20.50 per cent and "other unskilled" with 17.14 per cent.

*Manning pattern by the various significant industrial categories in the private sector in Tamil Nadu (over the reference years).*—The following is an analysis of the changes in the occupational pattern of private sector employment viewed from the angle of significant industrial activities in Tamil Nadu. These industrial categories have been selected on the basis of their special significance to the economic development of Tamil Nadu. Though a large majority of industrial activities are covered here, yet a few not very significant industrial activity groups have been left out as they do not lend themselves to an analysis of their occupational patterns. The reference years for this analysis are 1961, 1963, 1965, 1967 and 1969, the years for which the occupational enquiry details have been made available. Now let us examine the position industry-wise.

TABLE 21.

## MANNING PATTERN IN PLANTATIONS INDUSTRY—PRIVATE SECTOR.

Occupational classification.		010 to 015—Plantations.				
		1961.	1963.	1965.	1967	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 0	.. .. . Number	499	537	275	568	551
	.. .. . Per cent	0.69	0.68	0.3	0.71	0.73
Division 1	.. .. . Number	1	63	24	2	32
	.. .. . Per cent	0.00	0.08	Nil.	0.00	0.04

TABLE 21—*cont.*MANNING PATTERN IN PLANTATIONS INDUSTRY—PRIVATE SECTOR—*cont.*010 to 015—*Plantations.*—*cont.*

<i>Occupational classification.</i>		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 2 and 3 except 290	Number	668	670	1,962	792	664
	Per cent	0.92	0.84	1.4	0.99	0.86
Division 4 except 414 and 415	Number	2,270	2,937	2,348	3,821	3,952
	Per cent	3.13	3.69	1.6	4.80	5.24
Division 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	Nil.
Division 6 .. .. .	Number	139	154	126	161	165
	Per cent	0.19	0.19	0.1	0.20	0.22
Division 7 and 8 except 890 and 899	Number	743	573	15,465	347	196
	Per cent	1.03	0.72	11.4	0.44	0.26
Division 9 except 930 and 931	Number	26	19	128	29	44
	Per cent	0.04	0.03	0.1	0.04	0.06
290 .. .. .	Number	29	21	16	40	35
	Per cent	0.04	0.02	Nil.	0.05	0.05
414, 415 890, 819, 903 and 931	Number	68,101	74,620	1,15,568	73,874	69,761
	Per cent	93.96	93.75	85.0	92.77	92.54
Total .. .. .	Number	72,476	79,594	1,35,912	79,635	75,385
	Per cent	100.00	100.00	100.00	100.00	100.00

(Source : Manpower Unit, State Planning Commission.)

The total employment in this industrial activity recorded a growth in 1969 with 75,385 as compared with 72,476 in 1961. There was a peak period in the year 1965 with employment at 135,912. "Other unskilled" a category of workers have been having a predominant share of the total employment in this industry over the reference years (85 to 94 per cent range). The shares of other categories of workers have been relatively insignificant over the years. Therefore, this is a predominantly "unskilled" area.

TABLE 22.

## MANNING PATTERN IN THE SUGAR MILLING INDUSTRY—PRIVATE SECTOR

201, 202—*Sugar Milling Industry.*

<i>Occupational classification.</i>		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Dn. 0 .. .. .	Number	225	273	333	417	430
	Per cent	3.55	4.16	4.6	6.48	6.12
Dn. 1 .. .. .	Number	61	68	18	22	65
	Per cent	0.96	1.04	0.3	0.34	0.81
Dn 2 and 3 except 290 ..	Number	757	630	800	951	850
	Per cent	11.03	9.59	11.1	14.78	10.65

TABLE 22—cont.

## MANNING PATTERN IN THE SUGAR MILLING INDUSTRY—PRIVATE SECTOR—cont.

201, 202, Sugar Milling Industry—cont.

Occupational classification.		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 4 except 414 and 415 .. .. .	Number	327	246	320	176	134
	Per cent	5.16	3.74	4.5	2.73	1.68
Division 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	8
	Per cent	..	..	..	..	0.10
Division 6 .. .. .	Number	69	87	95	123	30
	Per cent	1.09	1.32	1.3	1.91	0.38
Division 7 and 8 except 890 and 899	Number	2,744	2,489	3,612	3,667	3,206
	Per cent	43.25	37.88	50.4	56.98	40.16
Division 9 except 903 and 931.	Number	18	27	363	31	16
	Per cent	0.28	0.41	5.0	0.48	0.20
290 .. .. .	Number	187	Nil.	178	144	196
	Per cent	2.95	Nil.	2.5	2.24	2.45
414, 415 890, 899, 903 and 931.	Number	1,956	2,750	1,457	905	2,990
	Per cent	30.83	41.86	20.3	14.06	37.45
Total .. .. .	Number	6,344	6,570	7,176	6,436	7,984
	Per cent	100.00	100.00	100.00	100.00	100.00

(Source: Manpower Unit Planning Commission)

The total employment in this industry rose from 6,344 in 1961 to 7,984 in 1969. Excepting for the year 1963, in all the other years under reference, "production processors" have accounted for the largest single charge in the total employment in this industry, "other unskilled" have been a close second in all the years except 1963 and 1967. In 1963, this category is found to be the first and in 1967 "clerical workers" come as the second in the rank. Therefore, we may say that this is a potently "skilled" area with an emphasis on craftsmen and production process skills.

TABLE 23.

## MANNING PATTERN IN THE FOOD PRODUCTS MANUFACTURING INDUSTRY—PRIVATE SECTOR.

200, 203 to 209 Food Products.

Occupational Classification.		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 .. .. .	Number	262	313	30	118	156
	Per cent	1.07	1.13	0.1	0.59	0.79
Division 1 .. .. .	Number	1,666	1,081	810	656	482
	Per cent	6.80	3.92	4.3	3.26	2.45
Division 2 and 3 except 290.	Number	2,051	2,072	1,041	1,168	1,245
	Per cent	8.27	7.51	5.5	5.80	6.33

TABLE 23—*cont.*  
**MANNING PATTERN IN THE FOOD PRODUCTS MANUFACTURING INDUSTRY—  
 PRIVATE SECTOR—*cont.***

200, 203 to 209 *Food Products—cont.*

<i>Occupational Classification,</i> (1)	1961. (2)	1963. (3)	1965. (4)	1967. (5)	1969. (6)
Division 4 except 414 and 415. Number	6	263	7	9	8
Per cent	0.03	0.95	Nil.	0.04	0.01
Division 5 .. .. . Number	1	Nil.	Nil.	Nil.	Nil.
Per cent	0.01	..	..	..	..
Division 6 .. .. . Number	116	192	63	107	109
Per cent	0.47	0.70	0.3	0.53	0.55
Division 7 and 8 except 890 and 899. Number	9,647	9,735	11,223	10,038	13,058
Per cent	39.38	35.26	59.2	49.81	66.42
Division 9 except 930 and 931. Number	75	67	158	48	35
Per cent	0.31	0.24	0.8	0.24	0.18
290 .. .. . Number	96	237	44	82	103
Per cent	0.39	0.86	0.2	0.41	0.52
414, 415, 890, 899, 903 and 931 Number	10,575	13,648	5,609	7,927	4,470
Per cent	43.17	49.43	29.6	39.32	22.75
<b>Total .. .. . Number</b>	<b>24,495</b>	<b>27,608</b>	<b>18,985</b>	<b>20,553</b>	<b>19,660</b>
Per cent	100	100	100	100	100

(Source Manpower Unit, State Planning Commission)

There has been a fall in employment in this industry in 1969 as compared with the position in 1961 (19,660 in 1969 and 24,495 in 1961). In 1961 and 1963, we find that "other unskilled" category of workers have accounted for the largest single share in total employment in this industry, followed by "production processors". However, from 1965 onwards, this position has been taken over by "craftsmen and production processors". But then "other unskilled" still continue as a second ranker.

Therefore, we may say that this is an area where "unskilled" is slowly giving way to "semi-skilled" and "skilled" occupations with a stress on production process skills.

TABLE 24.  
**MANNING PATTERN IN TOBACCO PRODUCTS INDUSTRY—PRIVATE SECTOR.**  
 220 to 226 *Tobacco Products.*

<i>Occupational Classification,</i> (1)	1961. (2)	1963. (3)	1965. (4)	1967. (5)	1969. (6)
Division 0 .. .. . Number.	74	11	9	41	29
Per cent	1.04	0.15	Nil.	1.36	.38
Division 1 .. .. . Number	277	203	184	260	286
Per cent	3.90	2.81	2.1	2.28	3.76
Division 2 and 3 except 290 .. Number	596	553	518	575	509
Per cent	8.40	7.6	5.9	5.4	5.2



TABLE 24—cont.

MANNING PATTERN IN TOBACCO PRODUCTS INDUSTRY—PRIVATE SECTOR—cont.  
220 to 226 Tobacco Product—cont.

Occupational Classification.		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 4 except 414, 415.	Number	Nil.	7	Nil.	1	1
	Per cent	Nil.	0.10	Nil.	0.01	0.01
Division 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	Nil.
Division 6 .. .. .	Number	114	131	102	115	103
	Per cent	1.61	1.81	1.2	1.01	0.99
Division 7 and 8 except 890 and 899.	Number	5,444	6,019	7,413	10,069	8,773
	Per cent	76.72	83.32	83.9	88.23	84.69
Division 9 except 903 and 931	Number	Nil.	1	69	1	1
	Per cent	Nil.	0.1	0.8	0.01	0.01
290 .. .. .	Number	99	74	69	69	89
	Per cent	1.40	1.02	0.8	0.60	0.86
414, 415, 890 899, 903 and 931	Number	492	225	472	281	568
	Per cent	6.93	3.12	5.3	2.46	5.48
Total .. .. .	Number	7,096	7,224	8,836	11,412	10,359
	Per cent	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission).

Employment in this industry rose from 7,096 in 1961 to 10,359 in 1969. Occupation-wise, we notice that “ production processors ” have accounted for the largest share in the total employment in all the years.

Therefore it may be said that this is an area where “ skills ” in production processes dominate.

TABLE 25.

MANNING PATTERN IN COTTON SPINNING AND WEAVING INDUSTRY — PRIVATE SECTOR.

230 to 239—Cotton Spinning and Weaving.

Occupational Classification.		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 .. .. .	Number	1,060	1,977	982	742	1,291
	Per cent	0.85	1.44	0.8	0.75	1.13
Division 1 .. .. .	Number	1,028	882	775	424	691
	Per cent	0.82	0.64	0.6	0.43	0.60
Division 2 and 3 except 290	Number	5,372	5,143	4,624	4,036	6,012
	Per cent	4.31	3.74	3.5	4.09	5.24
Division 4 except 414 and 415	Number	44	49	46	26	55
	Per cent	0.04	0.04	Nil.	0.02	0.05

TABLE 25—*cont.*  
**MANNING PATTERN IN COTTON SPINNING AND WEAVING INDUSTRY—PRIVATE  
 SECTOR—*cont.***

230 to 239—*Cotton Spinning and Weaving—cont.*

<i>Occupational Classification.</i>		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 5 .. ..	Number	Nil.	Nil.	Nil.	Nil.	2
	Per cent	..	..	..	..	..
Division 6 .. ..	Number	250	323	303	231	255
	Per cent	0.20	0.23	0.2	0.23	0.22
Division 7 and 8 except 890 and 899	Number	98,480	1,12,849	1,02,883	79,046	93,266
	Per cent	79.02	81.99	78.9	80.17	81.24
Division 9 except 903 and 931	Number	276	322	3,614	136	324
	Per cent	0.22	0.23	2.8	0.14	0.28
290 .. ..	Number	788	960	908	989	1,126
	Per cent	0.73	0.60	0.7	1.00	0.98
414, 415, 890, 899, 903 and 931	Number	17,337	15,130	16,305	12,974	11,782
	Per cent	13.91	10.99	12.5	13.16	10.26
Total .. ..	Number	1,24,635	1,37,635	1,30,440	98,604	1,14,806
	Per cent	100	100	100	100	100

(Source : Manpower Unit State Planning Commission)

Employment in this industry declined from 124,635 in 1961 to 1,14,806 in 1969. Here, again, we find that the occupational category "Craftsmen and production processers" have accounted for the bulk of the total employment in all the reference years and the contributions by the other categories have been relatively insignificant.

Therefore, it may safely be said that this an area where "craftsmen skills" and "production process skills" count much in the pattern.

TABLE 26.

**MANNING PATTERN IN THE MANUFACTURE OF OTHER TEXTILES INCLUDING WOOL,  
 SILK, ETC.,—PRIVATE SECTOR.**

240 to 279—*Other Textiles—including Jute, Wool, Silk and Miscellaneous.*

<i>Occupational Classification.</i>		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 .. ..	Number	18	69	64	102	3
	Per cent	0.21	0.90	0.8	1.54	0.68
Division 1 .. ..	Number	385	260	209	138	172
	Per cent	4.56	3.40	2.6	2.08	2.87
Division 2 and 3 except 290.	Number	441	411	518	409	378
	Per cent	5.22	5.38	6.4	6.16	6.31
Division 4 except 414, and 415	Number	Nil.	2	1	Nil.	
	Per cent	Nil.	0.03	Nil.	Nil.	0.1

TABLE 26—cont.

MANNING PATTERN IN THE MANUFACTURE OF OTHER TEXTILE—INCLUDING WOOL,  
SILK, ETC.—PRIVATE SECTOR—cont.

240 to 279—Other Textiles—including Jute, Wool, Silk and Miscellaneous—cont.

Occupational Classification.		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	Nil.
Division 6 .. .. .	Number	5	23	27	23	10
	Per cent	0.06	0.30	0.3	0.35	0.17
Division 7 and 8 except 890 and 899	Number	7,197	6,405	6,164	5,392	5,020
	Per cent	85.25	83.81	76.7	81.19	83.74
Division 9 except 903 and 931	Number	167	131	221	56	93
	Per cent	1.98	1.72	2.7	0.84	1.55
290 .. .. .	Number	44	35	47	42	0.91
	Per cent	0.53	0.46	0.6	0.63	3.20
414, 415, 890, 899, 903 and 931	Number	185	306	792	479	25
	Per cent	2.19	4.00	9.9	7.21	4.40
<b>Total .. .. .</b>	<b>Number</b>	<b>8,442</b>	<b>7,642</b>	<b>8,043</b>	<b>6,641</b>	<b>65,99</b>
	<b>Per cent</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>140</b>

(Source: Manpower Unit—State Planning Commission.)

Employment in this industrial activity declined from 8,442 in 1961 to 5,995 in 1969. In this area also we find that "Craftsmen and production processors" have been accounting for the largest share in employment in all the reference years.

Therefore, this is another area where we find craftsmen and production process skills appearing prominent in the occupational pattern.

TABLE 27.

## MANNING PATTERN IN PRINTING AND PUBLISHING [INDUSTRY—PRIVATE SECTOR.

300 to 303 Printing and Publishing.

Occupational Classification.		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 0 .. .. .	Number	457	438	204	337	405
	Per cent	3.17	4.23	1.9	2.51	3.50
Division. 1 .. .. .	Number	506	650	544	245	312
	Per cent	3.52	6.28	5.0	1.83	2.60
Division. 2 and 3 except 290.	Number	1,265	1,490	985	1,241	1,469
	Per cent	8.79	14.39	8.9	9.25	12.66
Div. 4 except 414 and 415 ..	Number	3	6	4	6	1
	Per cent	0.02	0.05	Nil.	0.05	0.00
Division. 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	Nil.
Division. 6 .. .. .	Number	74	112	51	9	11
	Per cent	0.61	1.08	0.5	0.70	0.61

TABLE 27—*cont.*  
**MANNING PATTERN IN PRINTING AND PUBLISHING INDUSTRY—PRIVATE SECTOR—*cont.***  
**300 to 303 *Printing and Publishing—cont.***

<i>Occupational Classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 7 and 8 except 890 and 899	Number	10,922	6,508	8,214	10,613	8,403
	Per cent	75.88	62.84	75.0	79.10	72.39
Division 9 except 903 and 931	Number	34	48	180	22	34
	Per cent	0.24	0.46	1.6	0.16	0.29
290 .. .. .	Number	598	602	206	408	208
	Per cent	4.15	5.81	1.9	3.04	2.41
414, 415, 890, 899, 903 and 931	Number	535	503	566	451	632
	Per cent	3.72	4.86	5.2	3.36	5.45
Total ..	Number	14,394	10,357	10,954	13,417	11,608
	Per cent	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission.)

Employment in this industry declined from 14,394 in 1961 to 11,608 in 1969. Here, again it is a picture of production process workers dominating the scene in all the reference years. The relative significance of other categories are not much excepting "clerical and sales workers" who account for a sizable share in all the reference years.

Therefore, we may say that this is an area where the skill component at craftsmen and production process level is quite marked and representative of the general pattern of occupation.

TABLE 28.  
**MANNING PATTERN IN LEATHER PRODUCTS INDUSTRY—PRIVATE SECTOR.**  
**310 to 315—*Leather Products.***

<i>Occupational Classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 .. .. .	Number	23	16	29	66	54
	Per cent	0.28	0.20	0.3	0.84	0.57
Division 1 .. .. .	Number	216	174	172	119	135
	Per cent	2.60	2.14	1.8	1.52	1.43
Division 2 and 3 except 290	Number	410	412	513	374	517
	Per cent	4.93	5.06	5.2	4.77	5.46
Division 4 except 414 and 415	Number	4	5	3	8	6
	Per cent	0.05	0.06	Nil.	0.10	0.06
Division 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	Nil.
Division 6 .. .. .	Number	18	43	22	16	90
	Per cent	0.2	0.53	0.2	0.20	0.91

TABLE 28—cont.

MANNING PATTERN IN LEATHER PRODUCTS INDUSTRY—PRIVATE SECTOR—cont.  
310 to 315—Leather Products—cont.

Occupational Classification.		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 7 and 8 except 890 and 899	Number	7,326	6,752	7,662	6,758	7,439
	Per cent	88.06	82.98	77.6	86.18	78.59
Division 9 except 903 and 931	Number	2	6	173	6	9
	Per cent	0.02	0.07	1.7	0.08	0.09
290 .. .. .	Number	6	28	19	12	28
	Per cent	0.07	0.35	0.2	0.15	0.30
414, 415, 890, 899, 903 and 931	Number	314	701	1,278	483	1,188
	Per cent	3.77	8.61	13.0	6.16	12.55
Total ..	Number	8,319	8,137	9,871	7,842	9,466
	Per cent	100	100	100	100	100

(Source : Manpower Unit—State Planning Commission.)

Employment in this industry picked up from 8,319 in 1961 to 9,466 in 1969. As for the occupational pattern and its changes over the reference years, we find that this is yet another area where production processors dominate the scene.

Therefore it may be said that this is an area where "skills" at the production process level decide the pattern of the occupational mosaic.

TABLE 29.

MANNING PATTERN IN RUBBER, CHEMICAL AND PETROLEUM AND FERTILISERS PRODUCTS INDUSTRY—PRIVATE SECTOR.

320 to 324, 330 to 333, 335 to 339—Rubber, Chemical and Petroleum and fertilisers products.

Occupational Classification.		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 .. .. .	Number	465	1,161	436	811	960
	Per cent	2.96	3.52	2.8	5.52	5.61
Division 1 .. .. .	Number	376	704	247	288	389
	Per cent	2.38	2.14	1.6	1.96	2.05
Division 2 and 3 except 290	Number	3,300	2,005	1,342	1,952	1,984
	Per cent	20.93	6.08	8.8	13.28	10.45
Division 4 except 414 and 415	Number	24	52	35	47	65
	Per cent	0.15	0.16	0.2	0.32	0.34
Division 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	Nil.
Division 6 .. .. .	Number	140	375	147	199	253
	Per cent	0.89	1.14	1.0	1.35	1.33

TABLE 29—*cont.*

**MANNING PATTERN IN RUBBER, CHEMICAL AND PETROLEUM AND FERTILISER  
PRODUCTS INDUSTRY —PRIVATE SECTOR—*cont.***

<i>Occupational Classification</i> (1)	1961. (2)	1963. (3)	1966. (4)	1967. (5)	1969. (6)	
Division 7 and 8 except 890 and 899	Number	6,637	17,671	8,448	6,321	8,873
	Per cent	42.09	53.62	55.2	43.02	46.75
Division 9 except 903 and 931	Number	29	155	434	23	41
	Per cent	0.18	0.47	2.8	0.16	0.22
Division 290 .. .. .	Number	335	659	391	316	308
	Per cent	2.12	2.00	2.6	2.15	1.62
414, 415, 890, 899, 903 and 931	Number	4,461	10,171	3,831	4,737	6,106
	Per cent	28.30	30.86	25.0	32.24	32.18
Total .. .. .	Number	15,767	32,955	15,311	14,694	18,979
	Per cent	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission.)

Employment in this industry went up from 15,767 in 1961 to 18,979 in 1969. In 1963, it reached a peak of 32,955. A study of the occupational distribution of employment shows that "Craftsmen and production processors" having been accounting for the largest single share in employment in this industry in all the reference years. A close second is to be found in the category "other unskilled".

Therefore, it may be said that this is an area with a sizable mix of "skills" (craftsmen and production process) with "non-skills".

TABLE 30.

**MANNING PATTERN IN MATCHES AND FIREWORKS—PRIVATE SECTOR.**

**333, 334—Matches and Fireworks.**

<i>Occupational Classification.</i> (1)	1961. (2)	1963. (3)	1966. (4)	1967. (5)	1969. (6)	
Division 0 .. .. .	Number	54	Nil.	38	12	65
	Per cent	0.65	..	0.3	0.09	0.46
Division 1 .. .. .	Number	66	Nil.	131	160	161
	Per cent	0.79	Nil.	1.1	1.22	1.08
Division 2 and 3 except 290 ..	Number	311	Nil.	384	320	370
	Per cent	3.75	..	3.2	2.44	2.64
Division 4 except 414 and 414	Number	2	Nil.	Nil.	Nil.	Nil.
	Per cent	0.03	..	..	..	..
Division 5 .. .. .	Number	Nil.	Nil.	Nil.	Nil.	Nil.
Division 6 .. .. .	Number	17	Nil.	16	12	21
	Per cent	0.20	..	0.1	0.09	0.22

TABLE 30—cont.

## MANNING PATTERN IN MATCHES AND FIREWORKS—PRIVATE SECTOR—cont.

## 333, 334—Matches and Fireworks—cont.

<i>Occupational Classification.</i>		1961.	1963.	1951.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 7 and 8 except 890 and 899	Number	7,037	Nil.	9,376	11,323	9,991
	Per cent	84.76	..	77.0	86.34	71.27
Division 9 except 903 and 931	Number	13	Nil.	128	1	2
	Per cent	0.16	..	1.1	0.01	0.02
290 .. .. .	Number	20	Nil.	25	16	28
	Per cent	0.24	..	0.2	0.12	0.20
.. .. .	Number	782	Nil.	2,070	1,271	3,380
	Per cent	9.42	..	17.0	9.69	24.11
414 415, 890, 899, 903 and 931	Number	8,302	Nil.	12,168	13,115	14,018
	Per cent	100	..	100	100	100

(Source : Manpower Unit, State Planning Committee.)

Employment in this industry went up from 8,302 in 1961 to 14,018 in 1969. Figures for the year 1963 are not available. This is again an area where "Craftsmen and production process skills" set the marked pattern of occupational distribution.

Therefore, it may be said that this area is predominantly "skilled" at the "production process" level.

Perhaps in this case "skills" should be thought of as inclusive of "semi skills" as well.

TABLE 31.

## MANNING PATTERN IN THE CEMENT INDUSTRY—PRIVATE SECTOR.

## 341—Cement Industry.

<i>Occupational classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 .. .. .	Number ..	179	234	210	368	237
	Per cent ..	4.78	4.14	2.5	4.92	4.57
Division 1 .. .. .	Number ..	86	64	46	48	44
	Per cent ..	2.30	1.13	0.5	0.64	0.85
Division 2 and except 290.. .. .	Number ..	346	427	321	417	532
	Per cent ..	9.24	7.56	3.8	5.58	10.27
Division 4 except 414, 415.. .. .	Number ..	1	19	24	14	16
	Per cent ..	0.03	0.34	0.3	0.19	0.29
Division 5 .. .. .	Number ..	33	39	969	104	28
	Per cent ..	0.88	0.69	11.6	1.39	0.54

TABLE 31—cont.

MANNING PATTERN IN THE CEMENT INDUSTRY—PRIVATE SECTOR—cont.  
341—Cement Industry—cont.

(1) Occupational Classification.	(2) 1961.	(3) 1963.	(4) 1965.	(5) 1967.	(6) 1969.	
Division 6 .. .. .	Number ..	156	176	140	168	208
	Per cent ..	4.17	3.12	1.7	2.25	4.01
Division 7 and 8 except 890 and 899 ..	Number ..	1,545	1,906	3,591	2,362	1,618.
	Per cent ..	41.27	33.74	42.8	31.60	31.23
Division 9 except 903 and 931 .. ..	Number ..	18	35	299	27	16.
	Per cent ..	0.48	0.62	3.6	0.36	0.31
290 .. .. .	Number ..	76	255	93	144	177
	Per cent ..	2.03	4.51	1.1	1.93	3.42
414, 415, 890, 899, 903 and 931 .. ..	Number ..	1,304	2,494	2,696	3,823	2,306
	Per cent ..	34.82	44.15	32.1	51.14	44.51
Total ..	Number ..	3,744	5,649	8,389	7,475	5,181
	Per cent ..	100	100	100	100	100

(Source : Manpower Unit, State Planning Committee.)

Employment in this industry grew from 3,744 in 1961 to 5,181 in 1969, "Craftsmen and production processors" and "other unskilled" have been accounting for the leading shares in the total employment in this industry. In the last two reference years we find the "other unskilled" category leading the account.

We may, therefore, say that this is a patently "unskilled" area with a fair share of "production process" skill-mix.

TABLE 32.

MANNING PATTERN IN THE MANUFACTURING INDUSTRY OF MACHINERY  
OTHER THAN ELECTRICALS—PRIVATE SECTOR.

370 to 373—Machinery other than Electricals.

Occupational classification.	1961	1963	1965	1967	1969	
(1)	(2)	(3)	(4)	(5)	(6)	
Division 0 .. .. .	Number ..	105	317	282	426	376
	Per cent ..	1.66	4.17	3.4	4.03	4.71
Division 1 .. .. .	Number ..	87	112	164	93	237
	Per cent ..	1.38	1.47	2.0	0.88	2.96
Division 283 except 290 .. .. .	Number ..	152	550	735	917	586
	Per cent ..	2.41	7.23	8.9	8.67	8.59
Division 4 except 414 and 415 .. ..	Number ..	1	3	4	11	11
	Per cent ..	0.02	0.04	Nil.	0.10	0.14
Division 5 .. .. .	Number ..	6	Nil	Nil	32	36
	Per cent ..	0.09	..	..	6.30	0.44



TABLE 32—*cont.*  
 MANNING PATTERN IN THE MANUFACTURING INDUSTRY OF MACHINERY  
 OTHER THAN ELECTRICALS—PRIVATE SECTOR—*cont.*  
 370, 373—*Machinery other than Electricals—cont.*

<i>Occupational Classification.</i>		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 6 .. .. .	Number ..	43	60	81	75	34
	Per cent ..	0.68	0.79	1.0	0.71	0.43
Division 7 and 8 except 890 and 899 ..	Number ..	4,478	5,758	6,019	7,521	5,076
	Per cent ..	70.85	75.72	72.8	71.09	63.52
Division 9 except 903 and 931 .. ..	Number ..	Nil.	9	181	2	82
	Per cent ..	..	0.12	2.1	0.02	1.03
290 .. .. .	Number ..	97	60	65	371	120
	Per cent ..	1.53	0.79	0.8	3.50	1.49
414, 415, 890, 899, 903 and 931 .. ..	Number ..	1,351	735	740	1,132	1,332
	Per cent ..	21.38	9.67	9.0	10.70	16.67
Total ..	Number ..	6,320	7,604	8,271	10,580	7,990
	Per cent ..	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission.)

Employment in this industry rose from 6,320 to 7,990 in 1969. "Craftsmen and production processors" have been accounting for the largest single share of total employment in all the reference years. Therefore, it may be said that this is an industry where there the significant feature of the occupational composition is the skill component at craftsmen and production process level.

TABLE 33.

MANNING PATTERN IN ELECTRICAL MACHINERY INDUSTRY—PRIVATE SECTOR.

374 to 379—*Electrical Machinery Industry.*

<i>Occupational classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 .. .. .	Number ..	237	144	311	346	536
	Per cent ..	3.32	2.76	3.0	4.32	5.28
Division 1 .. .. .	Number ..	82	44	108	105	158
	Per cent ..	1.15	0.84	1.0	1.31	1.56
Division 2 and 3 except 290 .. ..	Number ..	600	344	656	714	857
	Per cent ..	8.41	6.60	6.2	8.92	8.44
Division 4 except 414, 415 .. ..	Number ..	Nil.	1	18	3	5
	Per cent ..	..	0.02	0.2	0.04	0.05
Division 5 .. .. .	Number ..	Nil.	Nil.	Nil.	26	Nil.
	Per cent ..	..	..	..	0.32	..
Division 6 .. .. .	Number ..	45	43	56	51	100
	Per cent ..	0.63	0.83	0.5	0.64	0.98

**TABLE 33—cont.**  
**MANNING PATTERN IN ELECTRICAL MACHINERY INDUSTRY—PRIVATE SECTOR—cont.**  
**374, 379—Electrical Machinery Industry—cont.**

<i>Occupational Classification.</i>		1961.	1963.	1965.	1967.	1969.
(1)		(2)	(3)	(4)	(5)	(6)
Division 7 and 8 except 890 and 899 ..	Number ..	5,122	3,640	7,449	5,555	6,603
	Per cent ..	71.81	69.87	70.8	69.38	65.01
Division 9 except 903 and 931 ..	Number ..	25	15	325	4	38
	Per cent ..	0.35	0.29	3.1	0.05	0.37
290 ..	Number ..	113	81	147	232	143
	Per cent ..	1.59	1.55	1.4	2.90	1.41
414, 415, 890, 899, 903 and 931 ..	Number ..	909	898	1,454	971	1,717
	Per cent ..	12.74	17.24	13.8	12.12	16.90
Total ..	Number ..	7,133	5,210	10,524	8,007	10,157
	Per cent ..	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission.)

Employment in this industry registered a growth in 1969, with 10,157 persons as compared with the 7,133 in 1961. A study of the occupational patterns over the reference years reveals a predominant share for skills at the "craftsmen and production processors" level. This share has been maintained with some slight variations through, over the years. Therefore, it may be said that in this industry also the craftsmen and production process skills sets the pattern of the occupational distribution.

**TABLE 34.**

**MANNING PATTERN IN MOTOR VEHICLE MACHINERY MANUFACTURING INDUSTRY.**

**382, 383, 384—Motor Vehicle Machinery Industry.**

<i>Occupational classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division 0 ..	Number ..	101	469	673	2,38	804
	Per cent ..	1.34	2.75	3.5	2.65	3.38
Division 1 ..	Number ..	251	315	191	1,89	374
	Per cent ..	3.34	1.85	1.0	2.11	1.57
Division 2 and 3 except 290 ..	Number ..	719	2,102	1,970	1,340	1,873
	Per cent ..	9.56	12.34	10.3	14.49	7.86
Division 4 except 414 and 415 ..	Number ..	1	25	33	12	21
	Per cent ..	0.01	0.15	0.2	0.13	0.08
Division 5 ..	Number ..	NIL	153	NIL	NIL	37
	Per cent ..	..	0.89	..	..	0.16
Division 6 ..	Number ..	52	669	458	6837	682
	Per cent ..	0.60	3.83	2.4	7.665	2.87

TABLE 34—cont.

MANNING PATTERN IN MOTOR VEHICLE MACHINERY MANUFACTURING INDUSTRY—cont.  
382, 383, 384—*Motor Vehicle Machinery Industry*—cont.

<i>Occupational Classification</i>	1961.	1963.	1965.	1967.	1969.	
(1)	(2)	(3)	(4)	(5)	(6)	
Division 7 and 8 except 890 and 899 ..	Number ..	5,558	10,439	12,896	5,384	14,868
	Per cent ..	73.89	61.27	67.5	59.99	62.47
Division 9 except 903 and 931 ...	Number ..	5	125	662	32	124
	Per cent ..	0.07	0.73	3.5	0.36	0.52
290 .. .. .	Number ..	176	362	234	166	437
	Per cent ..	2.34	2.12	1.2	1.85	1.84
414, 415, 890, 899, 903 and 931 ..	Number ..	659	2,380	1,997	967	4,582
	Per cent ..	8.76	13.97	10.4	10.77	19.25
Total ..	Number ..	7,522	17,039	19,114	8,975	23,802
	Per cent ..	100	100	100	100	100

(Source : Manpower unit, State Planning Commission)

Employment in this industry shot up from 7,522 in 1961 to 23,802—roughly a three fold increase.

Occupational categorywise, we find that it is again the “ craftsmen and production processors ” who set the pattern of distribution. There has been a sizeable contribution by “ other unskilled ”, especially in the later years. It may therefore be said that in this case also the craftsmen skills are predominant.

TABLE 35.

MANNING PATTERN IN OTHER TRANSPORT EQUIPMENT MANUFACTURING INDUSTRY  
—PRIVATE SECTOR.

380, 381, 385 to 389—*Other transport equipment.*

<i>Occupational classification.</i>	1961	1963	1965	1967	1969	
(1)	(2)	(3)	(4)	(5)	(6)	
Division 0 .. .. .	Number ..	178	85	141	208	109
	Per cent ..	2.34	2.96	3.4	4.24	2.53
Division 1 .. .. .	Number ..	159	45	58	47	63
	Per cent ..	2.09	1.57	1.4	0.96	1.46
Division 2 and 3 except 290 .. ..	Number ..	936	288	292	488	295
	Per cent ..	12.30	10.03	7.1	9.95	6.8
Division 4 except 414 and 415 .. ..	Number ..	6	2	Nil.	1	0
	Per cent ..	0.08	0.07	..	0.02	0.21
Division 5 .. .. .	Number ..	Nil.	Nil.	Nil.	Nil.	Nil.
	Per cent ..	..	..	..	..	..
Division 6 .. .. .	Number ..	498	21	26	53	51
	Per cent ..	6.62	0.73	0.6	1.08	0.95

TABLE 35—*cont.*

MANNING PATTERN IN OTHER TRANSPORT EQUIPMENT MANUFACTURING INDUSTRY  
PRIVATE SECTOR—*cont.*

380, 381, 385 to 389—*Other transport equipment—cont.*

<i>Occupational classification.</i>		1161	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 7 and 8 except 890 and 891	Number ..	4,524	702	2,395	2,923	2,856
	Per cent ..	59.46	24.43	58.0	59.58	66.30
Division. 9 except 903 and 931	Number ..	9	9	146	6	2
	Per cent ..	0.12	0.31	3.5	0.12	0.05
290	Number ..	146	23	285	11	47
	Per cent ..	1.92	0.80	6.9	0.22	1.09
414, 415, 890, 899, 903 and 931	Number ..	1,152	1,698	787	1,169	888
	Per cent ..	15.14	59.10	19.1	23.83	20.61
Total	Number ..	7,608	2,873	4,130	4,906	4,308
	Per cent ..	100	100	100	100	10

(Source : Manpower Unit, State planning Commission)

Employment in this industry has registered a decline from 7,608 in 1961 to 4,308 in 1969. A low level of 2,873 is found to have been reached in 1963. The picture of 1961 with "craftsmen and production processors" sharing 59.46 per cent of total employment followed by 15.14 per cent for "other unskilled" is found to have been reversed in 1963 with "other unskilled" at 59.10 per cent and "craftsmen production processors" at 24.43 per cent. This position however is again reversed in 1965 with 58 per cent for 'craftsmen' and it continues to maintain that level in 1967 and 1969. In all these years again "other unskilled" category has continued to contribute a sizeable share to the total employment in this industrial category. We may therefore conclude that this is also a field where "craftsmen" dominate the occupational scene.

TABLE 36.

MANNING PATTERN IN THE REMAINING DURABLE AND NON-DURABLE GOODS  
MANUFACTURING INDUSTRIES—PRIVATE SECTOR.

<i>Occupational classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 0	Number ..	513	413	749	816	1,042
	Per cent ..	1.65	1.50	1.9	2.14	2.74
Division. 1	Number ..	1,957	725	528	580	625
	Percent ..	6.27	2.63	1.3	1.52	1.64
Division. 2 and 3 except 290	Number ..	1,898	3,194	1,442	3,314	2,884
	Per cent ..	6.09	11.60	3.6	8.71	7.58
Division. 4 except 414 and 415	Number ..	49	77	52	71	
	Per cent ..	0.16	0.28	0.1	0.19	0.11
Division. 5	Number ..	8	2	1,304	..	
	Per cent ..	0.03	0.01	3.3	..	0.09
Division.	Number ..	167	126	290	352	3
	Per cent ..	0.54	0.46	0.7	0.93	0.85

TABLE 36.—*cont.*

MANNING PATTERN IN THE REMAINING DURABLE AND NON-DURABLE GOODS MANUFACTURING INDUSTRIES—PRIVATE SECTOR— <i>cont.</i>						
<i>Occupational classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 7 and 8 except 890 and 899	Number ..	16,009	21,239	26,014	21,394	20,966
	Per cent ..	51.35	77.14	65.4	56.22	55.09
Division. 9 except 903 and 931	Number ..	74	48	864	68	97
	Per cent ..	0.24	0.17	2.2	0.18	0.25
290	Number ..	407	429	92	513	516
	Per cent ..	1.30	1.56	0.2	1.35	1.36
414, 415, 890, 899, 903 and 931	Number ..	10,095	1,280	8,444	10,943	11,528
	Per cent ..	32.37	4.65	21.3	28.76	30.29
Total	Number ..	31,177	27,533	39,779	38,051	38,057
	Per cent ..	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission)

Employment has picked up in this cluster of industries from 31,177 in 1961 to 38,057 in 1969. This group actually represents a combination of all the remaining manufacturing industries and hence the analysis of changes in the occupational pattern in this group of industries should be interpreted against this background only. We find that “craftsmen and production processors” have generally accounted for the largest single share in total employment in all the reference years. A close second is to be found in the category “other unskilled”. A peak of 77.14 per cent is observed in 1963 which has however been falling to 65.4 per cent in 1965, to 56.22 per cent in 1967 and to 55.09 per cent in 1969. The share of “other unskilled”, after touching the trough in 1963 with 4.65 per cent only, has been able to pick up again and reach the level of 30.29 per cent in 1969.

Therefore, we may say that this is an area where craftsmen skills have a good say but the total skill-mix tends to lean off as the industries establish themselves. By the same argument we may also say that as and when the industries enter upon effective and considerable expansion programmes, the skill-mix is likely to get recomposed again in favour of craftsmen and production process skills.

TABLE 37.

MANNING PATTERN IN TRADE AND COMMERCE—PRIVATE SECTOR (Dn. 6).						
<i>Occupational classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 0	Number ..	3,293	1,014	617	1,402	1,714
	Per cent ..	5.21	2.01	1.5	2.53	3.71
Division. 1	Number ..	5,195	3,373	3,430	4,234	3,890
	Per cent ..	8.22	6.68	8.6	7.65	8.42
Division. 2 and 3 except 290	Number ..	39,220	30,588	23,915	33,251	27,026
	Per cent ..	62.06	60.54	59.9	60.06	58.48
Division. 4 except 414 and 415	Number ..	71	122	107	51	43
	Per cent ..	0.11	0.24		0.08	0.

TABLE 37--cont.

MANNING PATTERN IN TRADE AND COMMERCE—PRIVATE—SECTOR (DN. 6)—cont.						
<i>Occupational classification.</i>						
(1)						
		1961	1963	1965	1967	1969
		(2)	(3)	(4)	(5)	(6)
Division. 5	.. .. .	Number ..	3	1	Nil.	Nil.
		Per cent ..	0.01	0.00	..	0.00
Division. 6	.. .. .	Number ..	1,170	1,152	658	1,159
		Per cent ..	1.85	2.28	1.6	2.09
Division. 7 and 8 except 890 and 899	.. .. .	Number ..	3,934	5,046	3,313	4,358
		Per cent ..	6.23	9.99	8.3	7.87
Division. 9 except 903 and 931	.. .. .	Number ..	197	501	1,072	309
		Per cent ..	0.31	0.99	2.7	0.56
290	.. .. .	Number ..	5,038	4,720	3,707	5,739
		Per cent ..	7.97	9.34	9.3	10.37
414, 415, 890, 899, 903 and 931	.. .. .	Number ..	5,071	4,006	3,120	4,858
		Per cent ..	8.03	7.93	7.8	8.79
	Total	Number ..	63,192	50,523	39,939	55,361
		Per cent ..	100	100	100	100

(Source : Manpower Unit, State Planning Commission)

Employment in this industrial sector is found to have declined to 46,218 in 1969 from its 1961 level of 63,192. The lowest level of employment in this industry is found to have been reached in the year 1965 with 39,939 persons only to account for under this industry. "Clerical and sales workers" are found to dominate the picture in all the reference years. But then the share has not exceeded 63 per cent in any of the reference years. Next in the rank are the "unskilled office workers" and "other unskilled workers". "Executives and managerial workers" are also found to have contributed considerably to the total share in all the reference years.

Therefore we may conclude that this is an area where "sales skills" set the pattern over the years. This "sales skills" may again be thought of as having three tiers, namely Executive level, sales workers level, sales assistants and unskilled sales assistants level.

TABLE 38.

MANNING PATTERN IN TRANSPORT INDUSTRY—PRIVATE SECTOR 700 TO 709.						
<i>Occupational classification.</i>						
(1)						
		1961	1963	1965	1967	1969
		(2)	(3)	(4)	(5)	(6)
Division. 0	.. .. .	Number ..	127	71	82	101
		Per cent ..	0.69	0.31	0.3	0.41
Division. 1	.. .. .	Number ..	739	807	602	548
		Per cent ..	4.00	3.48	2.6	2.21
Division. 2 and 3 except 290	.. .. .	Number ..	2,285	2,563	2,682	3,421
		Per cent ..	12.37	11.7	11.4	18.82

TABLE 38—cont..

## MANNING PATTERN IN TRANSPORT INDUSTRY—PRIVATE SECTOR 700 to 709—cont.

<i>Occupational classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 4 except 414 and 415	Number ..	2	7	4	7	7
	Per cent ..	0.01	0.03	Nil.	0.03	0.03.
Division. 5	Number ..	Nil.	Nil.	Nil.	Nil.	Nil
	Per cent ..	...	...	...	..	..
Division. 6	Number ..	10,332	13,444	13,229	13,921	11,930
	Per cent ..	55.93	58.06	56.4	56.22	54.65
Division. 7 and 8 except 890 and 891	Number ..	4,068	4,914	5,599	5,223	5,286
	Per cent ..	22.02	21.22	23.8	21.09	24.22
Division. 9 except 903 and 931	Number ..	13	7	319	13	8
	Per cent ..	0.07	0.03	1.4	0.05	0.04
290	Number ..	211	320	388	304	224
	Per cent ..	1.14	1.38	1.7	1.23	1.03
414, 415, 890, 899, 903 and 931	Number ..	696	1,024	571	1,224	909
	Per cent ..	3.77	4.42	2.4	4.94	4.16
Total	Number ..	18,473	23,157	23,476	24,762	21,828
	Per cent ..	100	100	100	100	100

(Source : Manpower Unit, State Planning Commission)

Employment in this industry has been able to pick up from its level of 18,473 in 1961 to 21,828 in 1969. There has been no apparent peak or trough. 55 to 60 per cent of the total employment in this industry has been accounted for by "transport and communication workers". Obviously in this case this must be mainly transport workers with their own distinct skills. Next in the order in the 21 to 25 per cent range is the "craftsmen" category. "Clerical and sales workers" come next in the 11 to 14 per cent range.

Therefore we may say that "transport skills" and "Craftsmen skills" put together decide the texture of this industrial activity in terms of its occupational components and that this is an area with high skill-content.

TABLE 39.

## MANNING PATTERN IN GENERAL EDUCATIONAL SERVICES—PRIVATE SECTOR 810-811

<i>Classification.</i>		1961	1963	1965	1967	1969
<i>Occupational</i>						
(1)		(2)	(3)	(4)	(5)	(6)
Division. 0	Number ..	37,673	41,013	30,978	47,897	52,622
	Per cent ..	83.70	80.85	73.1	81.35	83.32
Division. 1	Number ..	150	109	120	64	54
	Per cent ..	0.33	0.21	0.3	0.11	0.09
Division. 2 and 3 except 290	Number ..	1,366	1,616	1,625	2,065	2,223
	Per cent ..	3.03	3.19	3.8	3.51	3

TABLE 39—cont.  
MANNING PATTERN IN GENERAL ELECTRICAL SERVICES—PRIVATE SECTOR— cont.

Occupational classification.		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 4 except 414 and 415	Number	229	425	412	392	373
	Per cent	0.51	0.84	1.0	0.67	0.59
Division. 5	Number	Nil.	11	Nil.	Nil.	Nil.
	Per cent.	..	0.02	..	..	..
Division. 6	Number	21	36	32	30	50
	Per cent	0.05	0.07	0.1	0.05	0.08
Division. 7 and 8 except 890 and 891	Number	429	670	769	626	608
	Per cent	0.95	1.32	1.8	1.07	1.09
Division. 9 except 902 and 931	Number	1,120	1,840	3,363	2,127	570
	Per cent	2.49	3.63	7.9	3.61	0.90
290	Number	2,655	3,121	3,070	3,441	3,519
	Per cent	5.90	6.15	7.3	5.84	5.57
414, 415, 890, 899, 903 and 931	Number	1,866	1,885	2,005	2,232	3,062
	Per cent	3.04	3.72	4.7	3.79	4.85
Total	Number	45,009	50,726	42,374	58,877	63,159
	Per cent	100	100	100	100	100

(Source : Manpower unit, State Planning Commission)

Employment in this sector went up from 45,009 in 1961 to 63,159 in 1969. Occupational categories-wise, we find that “professional, technical and related workers” have been accounting for the bulk of the total employment in all the reference years. The range of this sharing is 73 per cent to 84 per cent. The shares of the other occupational categories are relatively insignificant. Therefore we may say that this is a sector where professional “skills” are in great demand.

TABLE 40 :

MANNING PATTERN IN THE MEDICAL SERVICES—PRIVATE SECTOR  
820—821

Occupational Classification.		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 0	Number	2,008	2,323	1,614	4,118	3,333
	Per cent	52.63	55.60	51.3	55.62	55.38
Division. 1	Number	19	43	14	43	45
	Per cent	0.50	1.03	0.4	0.58	0.75
Division. 2 and 3 except 290	Number	359	329	151	248	580
	Per cent	9.41	7.88	4.	11.45	9.31



TABLE 40—cont.

## MANNING PATTERN IN THE MEDICAL SERVICES - PRIVATE SECTOR 820 821—cont.

<i>Occupational Classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. 4 except 414 and 415	Number	47	57	76	62	82
	Per cent	1.23	1.36	2.4	0.84	1.36
Division 5	Number	Nil.	Nil.	Nil.	Nil.	Nil
Division 6	Number	58	77	43	106	98
	Per cent	1.52	1.84	1.4	1.43	1.62
Division. 7 and 8 except 890 and 891..	Number	82	524	212	72	122
	Per cent	2.15	12.54	6.7	0.97	2.03
Division. 9 except 903 and 931	Number	161	187	408	249	415
	Per cent	4.22	4.48	13.0	3.36	6.90
290	Number	333	239	122	1,344	863
	Per cent	8.73	5.72	3.9	18.16	14.34
414, 415, 890, 899, 903 and 931	Number	748	399	504	562	480
	Per cent	19.61	9.55	16.1	7.59	7.98
Total	Number	3,815	4,178	3,144	7,404	6,018
	Per cent	100	100	100	100	100

(Source: Manpower Unit, State Planning Commission)

Employment in this field of activity has almost doubled itself in the 1967-69 period (3815 in 1961 and 6,018 in 1969. A study of the occupational pattern reveals that in this field of activity, "professional technical and related workers" have been accounting for the largest single share of the total employment in all the reference years. The next in the order of importance has been the "other unskilled" category up to the year 1965 and the "office unskilled" category thereafter, "clerical workers" are found to contribute a sizable share.

We may therefore say that in this sector the "professionals" are in good demand.

TABLE 41 :

## MANNING PATTERN IN THE PRODUCTION, DISTRIBUTION AND EXHIBITION OF MOTION PICTURES—PRIVATE SECTOR—870 AND 871.

<i>Occupational Classification.</i>		1961	1963	1965	1967	1969
(1)		(2)	(3)	(4)	(5)	(6)
Division. '0'	Number	251	306	229	153	128
	Per cent	4.12	6.14	3.6	2.08	1.74
Division. 1	Number	478	495	439	436	524
	Per cent	7.84	9.93	6.9	5.92	7.11

TABLE 41—cont.

MANNING PATTERN IN THE PRODUCTION, DISTRIBUTION AND EXHIBITION OF MOTION PICTURES—PRIVATE SECTOR—870 and 871—cont.		1961	1963	1965	1967	1979
<i>Occupational Classification.</i>						
(1)		(2)	(3)	(4)	(5)	(6)
Division. 2 and 3 except 290 .. ..	Number ..	1,349	1,191	1,360	1,491	1,705
	Per cent ..	22.12	23.90	21.3	20.25	13.13
Division. 4 except 414 and 415 .. ..	Number ..	24	44	29	34	22
	Per cent ..	0.39	0.83	0.5	0.46	0.30
Division. 5 .. .. .	Number ..	Nil.	Nil.	Nil.	Nil.	Nil.
Division. 6 .. .. .	Number ..	57	65	39	50	28
	Per cent ..	0.93	1.31	0.6	0.68	0.38
Division. 7 and 8 except 890 and 899 ..	Number ..	1,429	761	1,492	2,060	1,511
	Per cent ..	23.43	15.27	23.4	27.97	20.50
Division. 9 except 903 and 931 .. ..	Number ..	188	1,116	386	1,429	2,024
	Per cent ..	3.08	22.40	6.0	19.40	27.47
290 .. .. .	Number ..	116	45	146	185	164
	Per cent ..	1.90	0.90	2.3	2.51	2.23
414, 415, 890, 899, 903 and 931 .. ..	Number ..	2,206	960	2,263	1,527	1,263
	Per cent ..	36.19	19.27	35.4	20.73	17.14
Total .. .. .	Number ..	6,098	4,983	6,383	7,365	7,369
	Per cent ..	100	100	100	100	100

(Source: Manpower Unit, State Planning Commission)

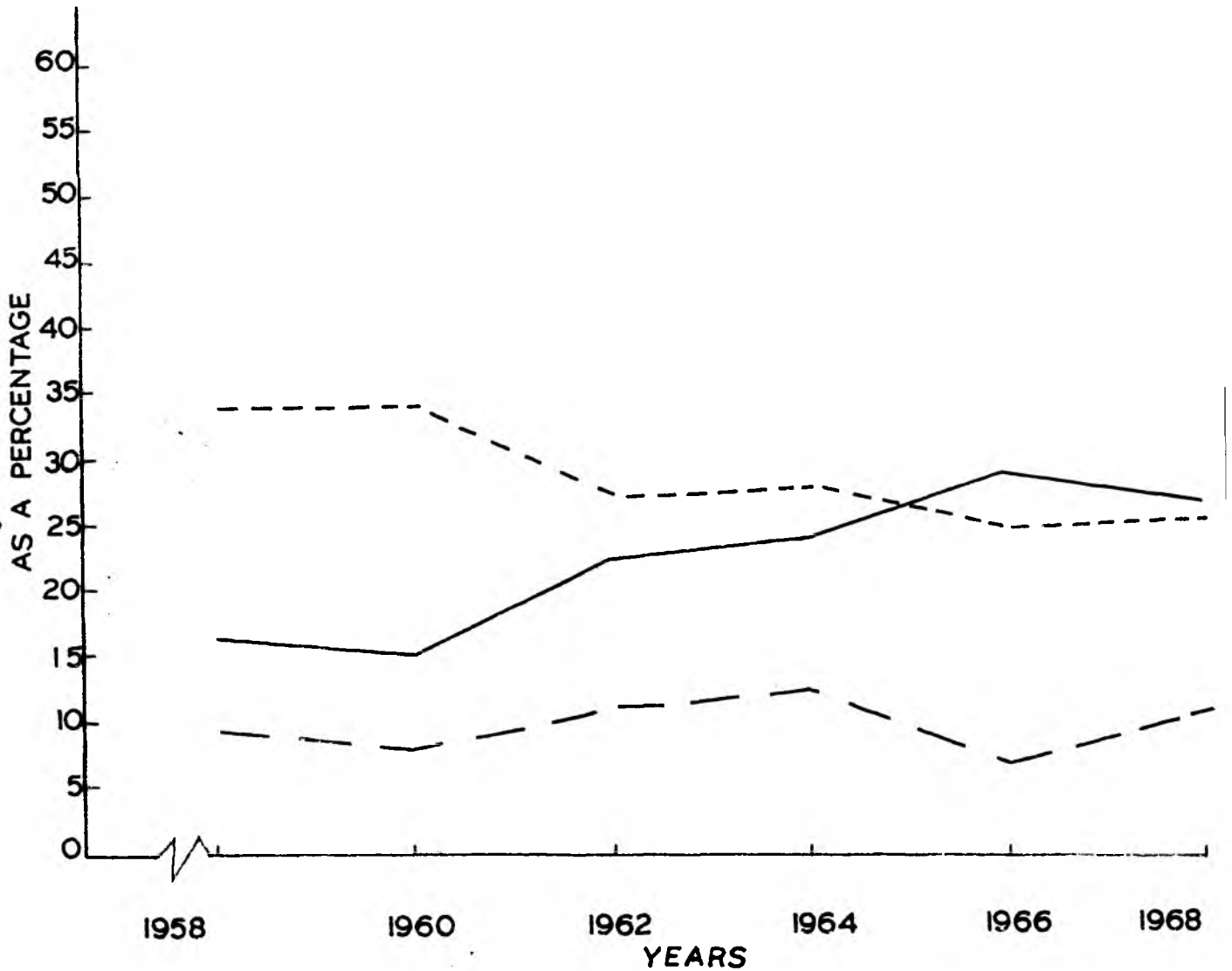
Employment in this industry is found to have registered a growth from 6 096 in 1961 to 7,369 in 1969. An analysis by occupations reveals that "service and recreation workers", "clerical and sales workers", "production processors and craftsmen", and "other unskilled workers"—all these four categories have been contributing sizable shares of almost equal importance, to total employment in this industry, in all the reference years. For "clerical and sales workers", the range of share is from 20 per cent to 24 per cent for "craftsmen and production processors" it is from 15 per cent to 28 per cent; for "service and recreation workers" excepting for 1961 and 1965 it is from 19 per cent to 28 per cent; and for "other unskilled workers", it is from 17 per cent to 37 per cent.

Therefore we may say that this is an area where recreation and production process skills are in good demand with an equally good demand for sales and other semi-skilled workers. No predominant pattern in favour of one Occupational category could be delineated here. This may be perhaps due to the flexible nature of the industrial activity itself.

CHANGES IN THE OCCUPATIONAL  
DISTRIBUTION OF EMPLOYMENT IN THE PUBLIC SECTOR  
ESTABLISHMENTS IN TAMIL NADU.(YEARS:1958-1968)

**LEGEND**

- PROFESSIONAL, TECHNICAL & RELATED WORKERS
- — — CRAFTSMEN & PRODUCTION PROCESS WORKERS
- - - UNSKILLED OFFICE WORKERS & OTHER UNSKILLED WORKERS



(BASED ON THE BIENNIAL OCCUPATIONAL ENQUIRY)

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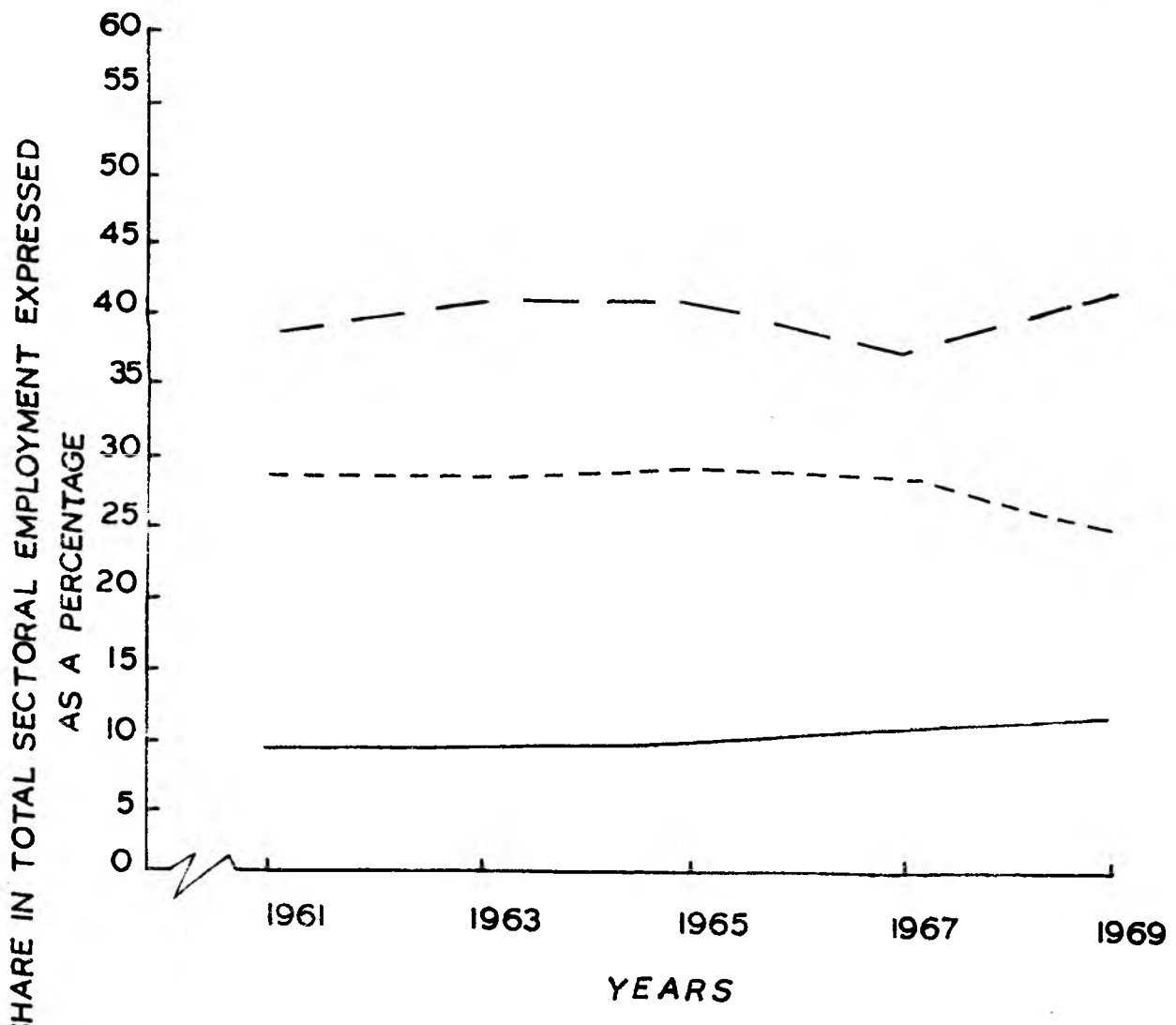
P.Z.P.C.S.O., Madras



CHANGES IN THE OCCUPATIONAL  
DISTRIBUTION OF EMPLOYMENT IN THE PRIVATE SECTOR  
ESTABLISHMENTS IN TAMIL NADU.(YEARS:1961-1969)

LEGEND

- PROFESSIONAL, TECHNICAL & RELATED WORKERS
- - - CRAFTSMEN & PRODUCTION PROCESS WORKERS
- - - UNSKILLED OFFICE WORKERS & OTHER UNSKILLED WORKERS



(BASED ON THE BIENNIAL OCCUPATIONAL ENQUIRY)



**Conclusion.**—The foregoing analysis of the manning patterns in the private sector industries (by significant industries) reveals that generally the “craftsmen and production, processors” have been accounting for a sizable share of the total employment in most of the industries. There has generally been an upward trend in this over the years. This only proves the thesis that as an economy become more and more industrialised, there is generated a need for a broader base of skill availability at the craftsmen and production process level. And thanks to the timely expansion of the craftsmen training and apprenticeship schemes in Tamil Nadu, we have been able to meet this vital need quite successfully. This need is expected to continue and also increase during the Perspective Planning years, thanks to the new plan schemes envisaged, but then the future demand pattern is likely to get further diversified and reoriented due to new priorities and newer technologies. Therefore it becomes very necessary to work out the anticipated manning patterns in the coming plan years based on (i) the trend established above and (ii) on the plan projects and technologies anticipated in future. Such a projection will have to take into account the future anticipated supply of skilled and other types of manpower and arrive at manpower budget. Such a pragmatic manpower budget will certainly help our planning process eminently well. Our next exercise could be on this aspect.

Next in importance, we find, is the occupational category, professional, technical and related workers which showing certain trends of picking up. This is an indication of the trend towards professionalisation of many of our fields of activity such as education, services, health services and other social services. This is a healthy sign and this trend is likely to get further accentuated during the Perspective Plan period with our stress on providing the Basic Minimum Needs to our people. Here again a further probe regarding the anticipated demand by particular professional skills vis-a-vis their anticipated supply seems warranted, based on this review of past performance.

“Clerical and sales workers” seen to maintain a considerable level in all fields of activity and this is likely to continue as such during the perspective plan period, etc.

“Other unskilled and office unskilled workers” have been accounting for sizable shares in many fields of activity. But then we have to interpret this as meaning that actually this category represents a mosaic of skills and semi-skills. However, there is to be delineated a process of “non-skills” metamorphosing into “semi-skills” and evolving later on as “skills”. This process is again a healthy sign for this indicates a general advancement of the economy. And this trend is likely to continue and get further articulated during the perspective plan years. Suitable skill-training programmes will have to be provided for aiding this process.

“Service sports and recreation workers” are found to contribute a sizable share to total employment in certain select industries only. In such cases, special studies of these industries on a time—perspective is recommended.

“Administrators and managers” are found to play an important role again in certain fields of activity. In these cases while the share of total employment is likely to maintain its position evidenced so far, the scope and role of these occupations in the plan years is likely to get reoriented due to new responsibilities and new challenges anticipated.

## 5.2. MANPOWER AND EMPLOYMENT IN ORGANISED SECTOR.

5.2.1. An attempt is made now :

- (i) To estimate the current level of employment in the organised sector, and
- (ii) to estimate the level of employment in the organised sector in 1983-84.

For the purpose of the above estimates the organised sector is defined as the Sector whose activities are governed by statutory regulations.

5.2.2. As far (i) above is concerned, we have to make an estimate of current level of employment in the Organised Sector. "Current level" is interpreted to mean the completed Calendar year 1971. We have relied on published official statistics, particularly (a) Employment Market Information (EMI Returns), (b) the Annual Survey of Industries and (c) the Statistics given in "An Economic Appraisal of Tamil Nadu, 1971". The Organised Sector embraces the nine categories of Industrial Classification (I. C.) from '0' to '8' (see Table I below), omitting I.C. '9'—"Miscellaneous" which in content does not mainly pertain to the Organised Sector as already defined. Some of the categories in '0' to '8' need a word or two of explanation. E.M.I. employment under I.SCI. '0', "Agriculture, Forestry, Plantations, Fishing etc." is in fact confined to employment in Plantations, Fisheries and Forestry in Public Sector only. The figures in the Employment Market Information returns are taken without any change. In the case of ICI '4', "Construction", the figures relate to labour employed by private contractors engaged by the Public Authorities only. In order to take into account employment in construction pertaining to private Sector, it has been resolved after a detailed consideration of relevant facts, to apply the ratio of 1:2 for the proportion of employment in Public and Private Sectors. Hence, the figures given in the E.M.I. returns have been trebled to cover both the sectors.

5.2.3. Under I.Cl. '2' and '3', "Manufacturing", the figures of employment, for some reason or other, appear to be somewhat an under-enumeration compared with the figures furnished by the Annual Survey of Industries covering "all employment in factory establishments of all industries", which are reproduced in "An Economic Appraisal of Tamil Nadu, 1971" (*vide* Table 4.3, page : 185 of the Appraisal). Hence, it has been resolved to substitute the latter figures in the place of figures of E.M.I. returns. The Statistics of Annual Survey of Industries are available up to 1968 and the trend in the six years ending 1968 appear to portray normal conditions of growth in large scale establishments. The subsequent three years 1969 to 1971 witnessed no spectacular expansion of the industries. Hence, these years have been assumed to have had the same rate of expansion, as in the previous six years. In these six years, employment in this sector has increased from 312,000 to 473,000 the average additional employment per year being 27,000, the rate of growth working out to 8.7 per cent. After a consideration of the trend of growth in large scale industries at a lower tempo in 1969-71 and more than a moderate rate of growth in the Small Scale Industries which are covered by the Annual Survey of Industries, it has been resolved to provide an additional employment of 30,000 only per annum for the five years from 1969 to 1973 (*vide* Table IV below), the latter year being the last year of the fourth plan.



5.2.4. Proceeding on the lines indicated in the preceding paragraphs, the level of employment has been estimated for all the nine I.Cl. categories '0' to '8' and for the entire organised sector as shown below :

TABLE 42.

ESTIMATED EMPLOYMENT IN ORGANISED SECTOR IN 1971, 1972 AND 1973.

I.Cl.	Description.	1971	1972	1973
(1)	(2)	(3)	(4)	(5)
		(IN THOUSANDS.)		
'0'	Agriculture, Forestry Plantation, Fishing, etc.	86.6	86.6	86.6
'1'	Mining and Quarrying .. .. .	29.8	29.8	29.8
'2' & '3'	} Manufacturing** .. .. .	5,63.0	5,93.0	6,23.0
'4'	Construction†† .. .. .	1,72.8	1,74.5	1,76.2
'5'	Electricity, Gas Water and Sanitary Services (1 per cent average).	73.8	74.5	75.3
'6'	Trade and Commerce .. .. .	81.7	85.8	89.9
'7'	Transport, Storage and Communication.	1,85.4	1,94.7	2,03.9
'8'	Services .. .. .	6,12.3	6,12.3	8,12.3
	Total ..	18,05.4	18,51.2	18,97.0

\*\*On the basis of A. S. I. figures. ††Includes Private Sector Employment also.

5.2.5. The figures given in the above table are based on Employment Market Information Returns except for I.Cl. '2' and '3' as explained earlier. This table shows an estimate of employment in the Organised Sector in 1973 also, as it happens to be the last year of Fourth Plan. The total employment in 1971 in the Organised Sector is 1,805,400 of which it is noteworthy that 563,000 or nearly one-third belong to "Manufacturing" and 612,300 another one-third to the I.Cl. '8' "Services", by far the two most important categories in this sector.

5.2.6. With regard to (ii) above, we have to estimate the level of employment in the organised sector in 1983-84. This involves a consideration of the following points:—

(i) The rates of growth of employment in all the nine I.Cl. categories.

(ii) The targets of industrial development that will be set for fifth and sixth Five-Year Plans.

(iii) The objective of doubling the per capita income by 1983-84.

(iv) The extent to which the pattern of inter-sectoral employment has to be altered by the process of planned economic development.

5.2.7. We may now turn to a discussion of these points. Among the various I.CI. categories, the determination of the rates of growth has to be done realistically and consistent with the respective targets that will be set by the various Task Forces. In the absence of definite indications of the latter by the various Task Forces, this Task Force has adopted certain rational criteria. This involves assumption of certain targets of the various I.CI. categories. However, one of the major objectives of Perspective Planning has been fairly definitely indicated: it is the doubling of the per capita income at 1970-71 prices by the year 1983-84. To achieve this objective, the State Net Domestic Product will have to be more than doubled. On this broad assumption, this Task Force has proceeded to estimate the natural rates of growth for the various I.CI. categories. The Task Force is of the opinion that there is not much scope for expansion and therefore of additional employment in respect of the Organised sector in the I.CI. Categories '0' and '1' viz., "Agriculture, Forestry, Plantation and Fishing, etc." and "Mining and Quarrying" respectively. As for I. CI. '5' viz., "Electricity, Gas, Water and Sanitation Services", although the scope for expansion in the major items of power and gas is little, it is both possible and desirable to assume a rate of 4 to 5 per cent increase in Water and Sanitation Services. On this assumption, a net growth rate of 1 per cent per annum on the total base of employment of 73,000 for the omnibus I. CI. '5' is adopted for the projection. With regard to I. CI. '4', "Construction", it is estimated that the employment will increase from 172,800 in 1971 to 176,200 in 1973 which will get doubled to 352,400 in 1983-84. In the case of I. CI. '6', viz., "Trade and Commerce", a growth rate of 5 per cent per annum has been adopted for Fifth and Sixth Plan periods. For I. CI. '7' "Transport and Communications", the marketable surplus in agriculture, thanks to Green Revolution, would increase and the output of the Industrial section, thanks to planned development, could also increase. Hence, an average rate of growth of 7.5 per cent per annum has been adopted in both Fifth and Sixth Plan periods. For I. CI. '8', viz., "Services", it is assumed that the employment would remain stable in the remaining years 1972 and 1973 of the Fourth Plan at 612,300. During Fifth and Sixth Plan periods, employment in this category is assumed to increase at 4 per cent per annum. Lastly, in the manufacturing industries (I.CI. 2 and 3) as explained earlier, employment would increase from 473,000 in 1968 to 623,000 in 1973. In Fifth Plan period, it has been assumed that the annual additional Employment would increase from 32,000 in the first year to 40,000 in the last year i.e. 1977-78. Similarly, in Sixth Plan period, the annual additional employment would increase from 42,000 in the first year 1978-79 to 50,000 in 1983-84. See Table IV below. In short, it is expected that the additional employment per year would increase from 27,000 workers in 1968 to 50,000 workers in 1983, in a period of fifteen years. This works out to increase in employment at the rate of 5 per cent in 1983-84 compared with preceding year. This 5 per cent, it is noted, is much lower than the rate of growth of 8.5 per cent attained in the period 1962 to 1968. No higher rate can be attributed to these two categories in the natural growth. This Task Force has also made due allowance for new technology, rationalisation and more capital intensive methods in the normal course of things.

TABLE 43.

## TREND IN EMPLOYMENT IN ORGANISED SECTOR

*Based on natural Growth Rate*

I. Cl.	1971.	1973.	Annual natural growth.		Increase due to Fifth and Sixth Plan Projects.		Estimated employment in 1983-84. (3+5+7).
			Rate of growth.*	Increase in numbers.	Rate of growth.†	Increase in numbers.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			IN PERCENT		IN PERCENT		
0	86,700	86,600	Nil.	Nil.	10	86,600	173,200
1	29,800	29,800	Nil.	Nil.	10	30,000	59,800
2 and 3	563,000	623,000	4.55	283,000	3.5	215,400	11,21,400
4	172,800	176,200	10	176,200	5	88,100	440,500
5	73,800	75,300	1	7,500	3	22,590	105,39
6	81,700	89,900	5	45,000	5	45,000	179,90
7	185,400	203,900	7.5	154,100	5	103,000	461,000
8	612,300	612,300	4	293,700	2	146,800	1,052,800
<b>Total</b>	<b>1,895,400</b>	<b>1,897,000</b>	<b>4.9</b>	<b>959,500</b>	<b>4.4</b>	<b>837,490</b>	<b>3,693,990</b> OR <b>3,694,000</b>

\* Column (4) represents a rate of growth derived by projecting the growth rate in the decennium ending 1973.

† Column (6) represents the derived rate of growth as per Fifth and Sixth Plan objectives.

The above assumed natural rates of growth anticipated to provide additional employment for 959,500 or roughly 1,000,000 workers. This is much too low to provide employment for the natural increase of the labour force in the Organised Sector. (See section below).

5.2.8. This obviously low rate of expansion of employment is expected to be raised by the development projects of Fifth and Sixth Plans. The rates of growth of employment in the various I. Cl. categories are shown in columns (6) in Table II. They need some explanation. In I. Cl. '0', the effects of Green, White and Blue Revolution that could be brought about by those two plans would increase employment through dairying, poultry, piggy, etc. schemes as well as fisheries development schemes with high potential for growth. In view of such developments, employment in this category is assumed to grow at the rate of 10 per cent (simple average). In I. Cl. '1' "Mining and Quarrying", thanks to Salem Iron Ore and extended activities of Ceramic Industry (Production of sanitary ware, electric insulators, crockery, etc., being expected to increase sharply with growing demand), a 10 per cent rate growth of is assumed. In '2' and '3' "Manufacturing", a rate of 8 per cent growth per annum, lesser than 8.5 per cent attained in the middle of sixties is assumed, including the natural rates of growth. If this rate of 8 per cent is not attained, the planning for industrial development would lose its significance. It is hoped that the forward looking Task Forces on Industries would aim at a growth rate of

10 per cent in employment, even allowing for higher and more sophisticated technology involving capital intensive schemes. I. Cl. '4' "Construction",—it is anticipated will be stipulated by plan projects as to allow for an additional 5 per cent rate of growth, over the 10 per cent adopted for natural growth. In I. Cl. '6' and '7', "Trade and Commerce" and "Transport, Storage and Communications", similar logic has led the Task Force to attribute additional 5 per cent to the growth rate to each. As for I. Cl. '8' "Services" a modest 2 per cent rate of growth is attributed to plan schemes.

5.2.9. Consequently, the plan schemes are estimated in the aggregate to generate additional employment for 837,490 workers. Both natural and induced (by Plan schemes) rates of growth, are expected to raise the total employment in the Organised Sector to about 3.9 million in 1983-84 from its 1971 level of 1.89 million, or roughly an increase of 2 million workers. This rate of increase is imperative and that it needs even further stepping up will become clear from a study of the growth of population and labour force, made in the next section.

5.2.10 *Growth of Urban Population by 1983-84*—The natural increase of urban population and in the adults in the period between 1971 and 1983 as worked out are shown below :—

	1983-84	<i>Millions.</i>
(1) Total population .. .. .	.. .. .	52.67
(2) Total Urban population at 33½ per cent .. .. .	.. .. .	17.56
(3) Total Adults in Urban population at 58 percent of item (2) ..	..	10.20
1971-72.		
(4) Total Population .. .. .	.. .. .	41.10
(5) Total Urban population at 32.2 per cent .. .. .	.. .. .	12.44
(6) Total Adults in Urban population at 58 percent of item (5) ..	..	7.21
(7) Excess urban adults in 1983-84 over 1971 i.e. (3)— (6) ..	..	2.99
	or roughly .. ..	3.00

5.2.11 According to the estimate of this Task Force the additional labour force that would be absorbed in the Organised Sector is estimated at 2 millions. Of the additional three million adults entering the age-group of 15 to 59, half is male and the other half is female. It is assumed that 97 per cent of the males or 1,455,000 and 60 per cent of females or 750,000 and both together 2,205,000 workers will seek employment and therefore constitute the additional labour force. If this is accepted, there will yet be unemployment of 05,000 workers.

5.2.12. This hard core of 205,000, not absorbed in spite of the anticipated growth due to development planning will have to be tackled by special projects in the Small Scale Industries sector employing more than 10 workers and falling within the Organised Sector.

5.2.13. To sum up the conclusions :

(i) Employment in the Organised Sector was of the order of 1.805 million in 1971 (the latest completed full year).

(ii) Employment in 1983-84 is expected to increase for two reasons (a) natural growth of the Organised Sector, accounting for 959,500 or nearly a million workers and (b) induced growth (by development schemes of Fifth and Sixth Plans) accounting for 837,500 and in all about 2 million raising the level of employment in the Organised Sector to 3.694 million in 1983-84 or the order of 3.7 million. Additional employment that will be created is estimated at about 2 millions.

(iii) The natural growth of population in this period is estimated to increase the adult population by about 3 million of which adopting 97 per cent for male and 60 per cent for female workers as the ratios of adults seeking employment and entering the labour market, the additional labour force works about to 2,205,000.

(iv) The labour market of the Organised Sector in 1983-84 therefore, shown an excess supply of 205,000. To absorb this hard core of nearly 2 lakhs workers, it is necessary that the small scale industries falling within the organised sector should be adequately expanded with special schemes.

TABLE 44 .

## TOTAL EMPLOYMENT AS PER INDUSTRY DIVISIONS IN TAMIL NADU (IN THOUSANDS)

I. Cl. number.	September 1961.	As on 31st March.										
		1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
·0'	89.1	88.6	87.7	91.6	87.0	91.8	88.8	86.1	87.6	87.6	86.5	81.7
·1'	39.3	35.8	36.0	31.0	32.2	29.6	28.7	27.0	29.0	29.2	29.1	30.5
·2' and ·3'	341.1	351.5	345.7	363.2	381.2	389.6	397.0	392.5	399.7	415.3	424.4	424.9
·4'	47.7	49.0	59.1	52.8	52.2	51.6	48.5	46.5	48.8	52.2	55.0	60.4
·5'	40.8	47.2	45.7	46.8	58.8	55.6	56.3	56.0	55.5	65.8	72.1	77.2
·6'	81.2	81.5	68.0	70.5	72.3	73.9	74.6	75.6	78.5	80.1	80.2	83.4
·7'	158.4	162.2	168.3	173.1	176.4	181.3	181.2	183.4	180.8	184.4	181.2	186.2
·8'	445.8	459.6	471.7	489.1	510.4	535.5	566.6	582.6	590.1	597.4	612.0	629.2
Total	1,243.4	1,275.4	1,282.2	1,318.1	1,370.5	1,408.9	1,441.7	1,449.7	1,470.0	1,512.0	1,541.2	1,573.5

- I.Cl. No. '0' : Agriculture, Forestry, Plantations, fishing etc.  
 „ '1' : Mining and Quarrying.  
 „ '2' & '3' : Manufacturing.  
 „ '4' : Construction  
 „ '5' : Electricity, Gas, Water and Sanitary Services.  
 „ '6' : Trade and Commerce.  
 „ '7' : Transport, Storage and Communications.  
 „ '8' : Services.

TABLE 45.

## ESTIMATED ADDITIONAL EMPLOYMENT IN MANUFACTURING INDUSTRIES.

Year.		<i>Additional number of workers.**</i>	<i>Total number of workers.</i>
(1)		(2)	(3)
Fourth Plan period—			
1968-69	.. ..	..	473,000
1969-70	.. ..	30,000	503,000
1970-71	.. ..	30,000	533,000
1971-72	.. ..	30,000	563,000
1972-73	.. ..	30,000	593,000
1973-74	.. ..	30,000	623,000
Fifth Plan Period—			
1974-75	.. ..	32,000	655,000
1975-76	.. ..	34,000	689,000
1976-77	.. ..	36,000	725,000
1977-78	.. ..	38,000	763,000
1978-79	.. ..	40,000	803,000
Sixth Plan Period—			
1979-80	.. ..	42,000	845,000
1980-81	.. ..	44,000	889,000
1981-82	.. ..	46,000	935,000
1982-83	.. ..	48,000	983,000
1983-84	.. ..	50,000	1,033,000

\*\* Figures rounded off to the nearest thousand.

## 5.3. MANPOWER AND EMPLOYMENT IN UNORGANISED SECTOR.

## 5.3.1. Another attempt is made.—

(i) to estimate the level of employment in the Unorganised Sector in the census year 1971.

(ii) to estimate the level of employment and unemployment in 1983-84, the final year of the period of Perspective Planning, taking into consideration (a) the natural growth rate of employment "without planning," as well as (b) growth rate including the benefits brought about by the Planning strategy, in employment between now and the final year of 1983-84.

5.3.2. *Definition*—“Unorganised Sector” is a nebulous term, used to denote different things by different people, usually governed by the character of the problems to be studied. For our purpose, the Unorganised Sector may be defined to cover the entire economy, urban and rural, excluding (i) the Organised Sector and (ii) agricultural Sector, subject to certain aspects to be explained presently. The organised sector has been defined as the sector whose activities are governed by statutory regulations. This definition is accepted into and all the employment falling within its scope is excluded from the Unorganised Sector.

5.3.3. As for Agriculture, the problem of unemployment is Janus-faced it ; has two aspects. Firstly the absolutely unemployed, or the labour force in excess of the requirements of agriculture. It has been repeated ad nauseam for too long that agriculture is afflicted by too great a pressure of population. It has been devout wish of all reformers and planners to siphon out all this excess out of the agricultural sector. If this should not remain a pious wish even after the implementation of the Perspective Planning now being formulated, the labour force dependent on and necessary for agricultural economy should be studied in depth and it should be frozen at a reasonable level Without this problem into agriculture, which would be encroaching upon the legitimate spheres of another Task Force, this Task Force tentatively resolved to stabilise the agricultural labour force at the level of 1971 for the entire period of perspective planning. This would mean that further expansion of labour force in this sector due to the natural growth of population in the years 1971–1984 needs to be shifted to the non-agricultural sector. This may be called the “surplus” that would naturally enter into the Unorganised Sector and hence we are concerned with this population in our estimates.

5.3.4. Secondly agriculture, even in the best of years with the most favourable seasonal factor, provides only seasonal employment. The number of workers that ought to be in the agricultural sector is determined by the needs of agriculture during the peak seasons of employment such as ploughing sowing, and harvesting. To attain the two major objectives of employment and of doubling the per capita income. This labour force should be provided gainful employment during the off season. With this provision of additional employment in the agricultural sector, we are not directly concerned. But in taking an overall view and the intractable character of under employment during the off season, we cannot afford to ignore it absolutely.

The foregoing outline of the problems helps to spell out the significance and scope of the Unorganised sector ; it embraces the entire economy of the State minus the organised and the Agricultural sectors.

5.3.5. On the basis of the above definition, we will now turn to a study of the size and composition of manpower in the unorganised sector. The estimate of the size is calculated as shown below :

TABLE 46.

CLASSIFICATION OF THE POPULATION IN 1971.

	(Millions.)
(1) Total Population .. .. .	41.10
(2) Total Adults 58 per cent of (1) .. .. .	23.84
(3) Rural Population—69.8 per cent of (1) .. .. .	28.66
(4) Agricultural population at 78.1 per cent of (3) .. .. .	22.38



TABLE 46—*cont.*CLASSIFICATION OF THE POPULATION IN 1971—*cont.*

	(Millions.)
(5) Agricultural Adult population at 58 per cent (4) .. .. .	12.98
(6) Urban population at 30.2 per cent of (1) .. .. .	12.44
(7) Urban adult population 58 per cent of (6) .. .. .	7.21
(8) Rural non-agricultural (3—4) .. .. .	6.28
(9) Rural adult non-agricultural 58 per cent of (8) .. .. .	3.92
(10) Total adult non-agricultural (2—5) .. .. .	10.86

(Source : Census 1971.)

5.3.6. The estimate of labour force employed in the Organised Sector in 1971 is 2.00 millions. Deducting this from item (10) in Table (1) above, the non-agricultural adult population in the Unorganised Sector is estimated at 8.86 mns. Deducting again the labour force employed in the handloom-sector, consisting of 5,64,700 looms and each loom providing employment for two adults, accounting for 11,29,400 workers, the adult population in the Unorganised Sector is further reduced to 8.86 — 1.13 or 7.73 millions. The census of 1971, shows that the sex ratio is nearly 1000; hence the male and female adults would be 3.86 million each. Obviously all the adults do not seek employment, hence in the determination of the labour force, it has been assumed that 90 per cent of the male and 50 per cent of the female adult seek employment. Applying these percentages, the labour force in the Non-agricultural, Unorganised sector is estimated to be composed of 3.47 million males and 1.93 million females, or 5.40 millions in all.

5.3.7. Next point for consideration is the pattern of employment of this labour force of 5.40 millions of the Unorganised Sector in 1971.

TABLE 47.

PATTERN OF EMPLOYMENT IN UNORGANISED SECTOR IN 1971.

<i>Serial number and categories of employment.</i>	<i>Number of workers.</i>
(1)	(2)
1 Village artisans .. .. .	240,000
2 Beedi and other workers in Tobacco industries .. .. .	1,500,000
3 Trade and Commerce .. .. .	474,000
4 Road transport, etc. .. .. .	120,000
5 Other cottage industries/miscellaneous workers .. .. .	1,200,000
Total number employed ..	3,534,000

5.3.8. In table (2), the village artisans include masons, carpenters, potters, barbers, washermen, etc., it is assumed that there would be on an average 20 persons in each of the 12,000 villages in Tamil Nadu. For beedi and tobacco industries, official sources of information such as the Report on Beedi and Tobacco industries and "tobacco utilised" of the Central Excise Department, etc., are adopted to derive the figure of 1,500,000 workers.

The total number employed in the Trade and Commerce Sector is not available but the number of sales-tax assesseees is known to be 237,000. With this as an indicator, the non-assesseees are estimated to be twice as many as the assesseees. Thus the total number is estimated to be 4,74,000. Road Transport includes cartmen, etc., who are not deriving their major income from, agriculture. Other cottage industries consist of metal utensils, icons, etc., basket, coil, palmyrah gur and other fibre workers. The figures in Table (2) are estimates made by this Task Force in the absence of official statistics. They represent in substance the present composition, although they may be subject to marginal changes, not significant enough to affect our major conclusions.

5.3.9. From the labour force of 5.40 millions (*See* paragraph 5.3.6 above), this figure of 3.53 millions of employed workers is deducted to arrive at the number of unemployed. It has been estimated that the Unorganised Sector in 1971 had 1.87 millions unemployed; in other words the unemployed constituted nearly one-third of the labour force.

5.3.10. *Employment in 1983-84.*—With regard to (ii) above viz., to estimate the tents of unemployment and under employment in 1983-84, we require an estimate of labour force and anticipated employment in 1983-84. Factors involved in the estimate are (a) natural growth of population (b) rate of growth of urban centres, (c) natural growth of employment in the various categories and (d) the changing attitude to employment on the part of both men and women.

TABLE-48.

## CLASSIFICATION OF POPULATION IN 1983-84.

	<i>Serial number and classification.</i>	<i>Millions.</i>
1	Total population .. .. .	52.67
2	Total adult population 58 per cent of (1) .. .. .	30.55
3	Total male adults .. .. .	15.44
4	Total female adults .. .. .	15.11
5	Male labour force 97 per cent of (3) .. .. .	14.98
6	Female labour force 60 per cent of (4) .. .. .	9.07
7	Total labour force (5 + 6) .. .. .	24.05
8	Rural population 66 per cent of (1) .. .. .	35.11
9	Agricultural population at 78.1 per cent of (8) .. .. .	27.42
10	Agricultural adult population—58 per cent of (9) .. .. .	15.90
11	Agricultural labour force .. .. .	12.51
	(a) Males at 97 per cent of male adults—7.79.	
	(b) Females at 60 per cent of female adults—4.72.	

TABLE-48—cont.

## CLASSIFICATION OF POPULATION IN 1983-84—cont.

<i>Serial number and Classification.</i>		<i>Millions.</i>
12	Non-agricultural labour force (7-11) .. .. .	11.54
13	Employment in the Organised sector in 1983-84 .. .. .	3.70
14	Employment in the Handloom Sector, stabilised at 1971 level ..	1.13
15	Employment in the Organised Sector and Handloom Sector ..	4.83
16	Rural Population 66.6 per cent of (1) .. .. .	35.11
17	Agricultural Population at 78.1 per cent of (16) .. .. .	27.42
18	Agricultural adults at 58 per cent of (17) .. .. .	15.90
 (a) Male adults in Agricultural Sector—8.03.		
 (b) Female adults in Agricultural Sector—7.87.		
19	Total male agricultural labour force at 97 per cent of (18a) ..	7.79
20	Total Female agricultural labour force at 60 per cent of (18b) ..	4.72
21	Total Male and Female and labour force (19+20) in 1983-84 ..	12.51
22	Total Male and Female agricultural labour force as in 1971 ..	9.06
23	Excess Male and Female agricutrural labour force to be shifted to non-agricultural sector (21—22).	3.45
24	Total labour force in the non-agricultural sector (12+23) .. ..	14.99

(Roundly 15.00 mns.)

5.3.11. In the above table, the urban growth rate in the period from 1971 to 1983-84 is assumed to be higher than the decennium ending 1971, reaching 33.4 per cent of the total population over this period, it is also assumed that sociological, economic and psychological factors would induce a higher percentage of the population to seek employment, viz., 97 per cent of the male adults as against 90 per cent and 60 per cent of the female adults as against 50 per cent in 1971.

5.3.12. The labour force in the non-agricultural sector is estimated in table (3) to be 15 millions. It is variously employed in (i) the organised sector (ii) handloom sector and (iii) in the unorganised non-agricultural sector ; Table 4 presents a forecast of employment and unemployment in the unorganised sector in 1983-84.

TABLE 49.

## PATTERN OF EMPLOYMENT ON THE UNORGANISED SECTOR IN 1983-84.

<i>Serial number and categories of employment.</i>	<i>Millions.</i>
1 Total labour force in the non-agricultural Sector .. .. .	15.00
2 Total Employed in the Organised Sector .. .. .	3.70
3 Total Employed in the Handloom Sector .. .. .	1.13
4 Total Employed in the Organised and Handloom Sectors (2+2) ..	4.83A
5 Total Labour force in the Unorganised Sector (1-4).. .. .	10.17
6 Total Labour force employed in the Unorganised Sector in 1971 ..	3.53
7 Increase in employment due to natural growth of the Cottage, Village and other industries, etc., in the period from 1971 to 1983-84 (an increase of 50 per cent in the employed) at 4 per cent average linear growth [ $\frac{1}{2} \times (6)$ ].	1.77
8 Estimated employment in the Unorganised Sector including the natural rates of growth (6+7).	5.30B
9 Estimated unemployment in the non-agricultural Unorganised Sector (5-8).	4.87mn

5.3.13. In Table (4) the employment in the Handloom sector is assumed to be stabilised at 1971 level. The phased programme of introducing powerlooms is bound to be implemented more earnestly than ever before in the next decade for two reasons :—(1) whatever aids be given to the handloom industry, even at full employment, a handloom weaver's family is not able to take out an income, essential to health and well-being or on par with incomes earned in other occupations of comparable skill, etc.

When the handloom sector production is at its peak, the problem of glut in the market in becoming steadily a more and more hardy annual. Thus the crux of the problem of the Unorganised Sector is to find out the ways and means of providing employment to 4.87 millions of adults, who would be seeking employment in 1983-84.

5.3.14. In this context it may be pointed out that the serious problem of under-employment in the agricultural sector has remained so far intractable. Agricultural statistics (*vide* N.S.S. and Farm Management Studies) indicate that agricultural labour force is employed only up to two-thirds of the working days in a year. In other words, every agricultural labourer is employed only for  $\frac{2}{3}$  of the total number of working days in a year. This tantamounts to, in terms of adult days, one-third of the existing labour force going without employment. Assuming that the Green Revolution and the prospective White and Blue revolutions increase employment, it may reduce but never solve under employment. At least it may hold to provide up to 270 days of employment. This would mean yet 30 to 35 days of unemployment, allowing for 60 holidays in a year.

In term of adult days  $\frac{1}{10}$ , i.e.,  $\frac{30}{300}$  of the working days, unemployment would persist. In terms of the labour force, 9.06 millions will have to be provided employment for 30 more days each to attain full employment.

#### 5.4. A COMPREHENSIVE FORECAST OF EMPLOYMENT.

5.4.1. For purposes of this projection the starting point is the year 1971. Estimates have been made for employment in the year 1973, based on past trends as also on the plant performance during the last years of the Fourth Plan. The entire economy is divided into 8 industrial categories, which incidentally follows the pattern of classification done by the International Labour Organisation and adopted by the Ministry of Labour and Employment of the Government of India and the Department of Employment and Training of the Government of Tamil Nadu. This classification is a little more detailed than the census classification.

5.4.2. The figures in respect of Organised Sector employment have been taken from the Employment Market Information data of the Department of Employment and Training, excepting for the Industrial Categories 2 and 3— "Manufacturing" and 4— "Construction". For manufacturing industries the figures available under the Annual Survey of Industries have been suitably adopted. For construction suitable estimates so as to include private sector employment also has been included.

5.4.3. As for figures in respect of the Unorganised Sector, the figures are based on several official sources of information such as the Report on Beedi and Tobacco Industries, the Central Excise Department Reports the Sales Tax Department figures and other figures available in the Economic Appraisal of Tamil Nadu and the Census Reports. Our main stay however has been on the reports of the Sub-Groups on Employment in Organised and Unorganised Sectors of the Task Force on Human Resources of the State Planning Commission.

5.4.4. The future projection of Employment has been done on two basis, viz., (i) annual natural growth and (ii) anticipated increases in employment due to the implementation of the Fifth and Sixth Five-Year Plans. In respect of the former, past trends and our experience have been mainly relied upon. As for the latter, the estimates given by the Task Force Secretaries regarding employment potential based on a schematic appraisal of their reports and the study of the investment patterns for the Fifth and Sixth Plans envisaged in the Task Force Reports have been made use of.

5.4.5. The rates of growth both for the annual natural growth and for the anticipated increases in employment due to the implementation of the Fifth and Sixth Plans have been considered in depth and in respect of each industrial category and appropriate correctives have been employed where it is felt that the available data is defective.

5.4.6. Care has also been taken to see that where the Task Force estimates of sectoral employment is overlapping or a litter overpitched, suitable correctives are used to render the estimates more realistic. This has particularly been done in respect of estimates of employment under agriculture, construction and services.

5.4.7. Under "Agriculture", care has been taken to incorporate suitably the vast under employment, in estimating the current figure. A 0.5 per cent growth under the annual natural growth has been assumed for the *Unorganised* Sector and no growth rate under the *Organised* Sector. Due to plan implementation, a 10 per cent growth rate in the *Organised* and 5 per cent growth rate in the *Unorganised* Sectors have been worked out based on the available information.

5.4.8. Under "Mining and Quarrying" no natural growth is envisaged in the *Organised Sector* but a 10 per cent growth is envisaged due to plan programmes and the *Unorganised* sector nominal increase of 0.4 per cent and 0.8 per cent have been worked out

5.4.9. Under "Manufacturing" it has been estimated that there will be an increase of 4.55 per cent in natural growth in the *Organised* sector and 4 per cent natural growth in the *Unorganised* Sector. Due to plan investment however these rates are expected to be 3.5 per cent for the *Organised* Sector and 5.5 per cent for the *Unorganised* Sector. While calculating these figures care has been taken to incorporate the estimates of employment made by the Task Forces on Small Industries and Large Industries as also the Plan Outlays under these sectors for the Fifth and Sixth Plans. While calculating the figures for "Construction" employment, a suitable corrective has been added to the figures given by the Employment Department and in working out the future growth rate, the estimates made by the Task Forces on Urban Development, Rural Development and Human Resources has been suitably incorporated and 10 per cent growth rate by the way of natural growth in the *Organised* Sector and 10 per cent growth rate each for both *Organised* and *Unorganised* Sectors due to plan implementation has been worked out.

5.4.10. Under "Electricity, Gas and Sanitary Services", a 1 per cent natural growth and a 3 per cent plan-growth have been worked out. There is not much scope for growth under the *Unorganised* Sector in this category. The estimates of the Task Force on Power and the estimates of the Sub-Group on *Organised* Sector have been suitably incorporated.

5.4.11. Under "Trade and Commerce" 5 per cent natural growth in the *Organised* Sector and a 4 per cent natural growth in the *Unorganised* sector have been worked out. As for the Plan growth a 5 per cent growth in both the sectors has been worked out. The Reports of the Task Force on Large and Small Industries, Transportation and Human Resources have been made use of in working out these growth rates.

5.4.12. Under "Transport, Storage and Communication" estimates have been based on the Task Force on Transportation, Human Resources, Urban Development and Agriculture. It has been estimated that mainly due to marketable surplus in agriculture and the concomitant in the output of industrial sectors there would be a 7.5 per cent growth on its own and a 5 per cent growth due to Plan Programmes. In this field no growth rates are envisaged under the *Unorganised* Sector as this sector is likely to become completely organised by the end of the Perspective Plan period thanks to the overall improvement in the process of modernisation of economic activity.

5.4.13. Under "Services" though stable conditions have been assumed for the year 1972-73, a 4 per cent natural growth and a 3 per cent plan growth have been worked out mainly based on the reports of the Task Forces on Education, Science and Technology Health and Nutrition, Human Resources and Animal Husbandry. The anticipated increases are mainly due to the vast expansion of the Social Service base and the minimum needs programmes contemplated under the Fifth and Sixth Plans.

5.4.14. In fine all these natural growth and planned growth would lead to a total employment of 211,77 by 1983-84. This can be compared with the anticipated labour force in 1983-84 i.e., 2,12,11,000. That leaves us with a balance of a hard core of 33,063 only. This is likely to be absorbed by the spill over effects of the inter-sectoral activities. In any case under the present tempo of economic development and with the addition of induced growth due to plan investments the achievement of near full-employment does not seem to be very much out of our reach by the end of the Perspective Plan period.

TABLE 50

TRENDS IN EMPLOYMENT IN THE ORGANISED AND UNORGANISED SECTORS BASED ON NATURAL AND PLANNING GROWTH RATES.

Industrial classification.	1971.		1973.		Annual natural growth.			
	Organised.	Unorganised.	Organised.	Unorganised.	Organised.		Unorganised.	
	(2)	(3)	(4)	(5)	Rate.	Increase.	Rate.	Increase.
(1)					(6)	(7)	(8)	(9)
					PER CNET.		PER CNET.	
1 Agriculture, Forestry, Plantations, Fishing etc.	86,600	63,34,100	86,600	63,34,100	Nil.	Nil.	0.5	3,16,705
1 Mining and Quarrying .. .. .	29,800	..	29,800	..	Nil.	Nil.	0.4	596
2 and 3 Manufacturing .. .. .	5,63,000	29,40,000	6,23,000	30,00,000	4.55	2,83,000	4	12,00,000
4 Construction .. .. .	1,72,800	61,000	1,76,200	61,000	10	1,76,200	..	..
5 Electricity, Gas, Water and Sanitary Services.	73,800	..	75,300	..	1	7,500	..	..
6 Trade and Commerce .. .. .	81,700	4,74,000	89,900	5,00,000	5	45,000	4	2,00,00
7 Transport, Storage and Communication ..	1,85,400	1,20,000	2,03,900	1,20,000	7.5	1,54,100	..	..
8 Services .. .. .	6,12,300	..	6,12,300	..	4.8	2,93,700	..	..
<b>Total ..</b>	<b>18,05,400</b>	<b>99,29,100</b>	<b>18,97,000</b>	<b>1,00,15,100</b>	<b>5.0</b>	<b>9,59,500</b>	<b>1.7</b>	<b>17,17,201</b>



Industrial classification.

	Increase due to Fifth and Sixth Plan projects.				Estimated total employment in 1983-84 (3+5+7).		
	Organised.		Unorganised.		Organised.	Unorganised.	Total.
	Rate.	Number.	Rate.	Number.	(4+7+11)	(5+9+13)	(14+15)
	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	PER CENT.		PER CENT.				
0 Agriculture, Forestry, Plantation, Fishing, etc. .. ..	10	86,600	5.9	37,63,383	1,73,200	1,04,14,188	1,05,87,388
1 Mining and Quarrying .. .. .	10	29,800	0.8	2,73	59,600	2699	62,569
2 and 3 Manufacturing .. .. .	3.5	2,15,400	5.5	16,50,000	11,21,400	58,50,000	69,71,400
4 Construction .. .. .	10	1,76,200	10	61,000	5,28,600	1,22,000	6,50,600
5 Electricity, Gas, Water and Sanitary Services .. ..	3	22,590	..	..	1,05,390	..	1,05,390
6 Trade and Commerce .. .. .	5	45,000	5	2,50,000	1,79,900	9,50,000	11,29,900
7 Transport, Storage and Communication .. .. .	5	1,03,000	..	..	4,61,000	1,20,000	5,81,000
8 Services .. .. .	3.0	1,83,690	..	..	10,89,690	..	10,89,690
<b>Total .. .. .</b>	<b>4.4</b>	<b>8,62,280</b>	<b>5.7</b>	<b>57,26,756</b>	<b>37,18,780</b>	<b>1,74,59,157</b>	<b>2,11,77,937</b>

## CHAPTER VI.

### PROGRAMMES FOR RELIEVING UNEMPLOYMENT.

#### 6.1. SELF-EMPLOYMENT FOR THE EDUCATED UNEMPLOYED.

6.1.1. Quite a disquieting feature of our economy at the moment is the problem of unemployment which stares it in its face. And the stare is particularly uncomfortable from the angle of the educated unemployed. If unemployment in general is inexpedient that of the educated is unjust a great effort has to be taken now to remove this malady and the effort has to be on a war footing. Within our socio-economic and political framework, what is it that we can do now to generate more employment—employment that is suited to the attainments and skills of the unemployed? Admittedly, long-term measures have to be taken to remove unemployment in the long run and these measures are more on controlling and guiding the supply mechanism. But then this sounds more academic and complacent and is no solution to the immediate problem. So the question now is what is it that we can do right now to provide employment to those who want it now and possess certain skills, education and talents which have been acquired by them already? The question sounds simple. But there cannot be any one simple answer to that. The answer is rather difficult and complex to seek and here is an attempt at finding a solution from at least one particular angle, namely, creating opportunities for self-employment.

6.1.2. *Our employment situation.*—By the end of the Third Plan period, our investment was of the order of Rs. 611 crores. This was to build the necessary infrastructure to sustain the economic growth. There has been in evidence a stupendous growth of electric power which has contributed to the remarkable progress on the food front. And the present programme is to electrify all the villages in the State early. There have been significant growth trends in evidence in the production of compound fertilisers, construction of integral railway coaches, manufacture of surgical tools, teleprinters, heavy pressure boilers, small-arms, photo films, heavy vehicles and refining of oils. In step with this industrial and hence income growth trends have been the expansion evidenced in social services.

6.1.3. There has been 1.8 per cent annual labour force growth rate. The following table indicates the growth trend in educated unemployed.—

Year'	Degree holders.	Matrics.
(1)	(2)	(3)
1961 .. ..	2,987	35,976
1962 .. ..	2,114	40,850
1963 .. ..	2,662	38,524
1964 .. ..	2,346	43,201

<i>Year,</i>	<i>Degree holders.</i>	<i>Matrics.</i>
(1)	(2)	(3)
1965 .. ..	2,801	51,699
1966 .. ..	4,366	56,444
1967 .. ..	6,561	70,937
1968 .. ..	9,486	96,130
1969 .. ..	13,745	98,914
1970 .. ..	12,656*	71,746*

(Figures in respect of Line Registers of Employment Exchanges in Tamil Nadu.)

\* June 1970.

6.1.4. By 1970, there were 1,543,200 persons in non-agricultural wage and salaried employment in the State. As compared with 1969, this was a net gain of 44,600 persons. The future growth in employment is expected in petrochemicals, salt and salt-based Industries, transport and communications and generation of electric energy through nuclear reactors. Simultaneously and as a general support to the industrial growth, there is to be a further strengthening of our agricultural base and social services to sustain the growth.

6.1.5. Against the above general background of employment in the State, we have now to study the problem and find reasonable ways of solving the same.

6.1.6. *Self employment.*—Finding institutional employment to all the educated unemployed is not only impossible but undersirable also. Especially from the point of view of generating more employment and sustaining the same, self-employment is very important. Again, self-employment creates the healthy spirit of enterprises in the community and it is needless to say that it is this healthy spirit that catalyses the otherwise inert capital and converts it into a useful reservoir, productive of goods and services. How best can this be done in the present context ?

6.1.7. There are several agencies and institutions engaged in the task of encouraging, aiding and assisting attempts by young entrepreneurs at self-employment. There are the NSIC, the Industries Department, the SISI, the Industrial Co-operative Banks, the State Bank, the SIDCO, etc. Each one of them specialises in a particular aspect of starting an enterprise and running it profitably. But still, the response from the young educated unemployed to avail themselves of these benefits has been rather unsatisfactory. Why so? What is the reason for this shying away? With a view to finding answers to these questions, the Director of Employment and Training held a series of discussions with these authorities.

6.1.8. An important fact which was discernible in these discussions, was that there was a need for effective liaison between these agencies on the one hand and the aspiring young men on the other. Normally it is thought that lack of finance is the cause for lack of enterprise. This is not so. According to State Bank's version, it is lack of proper

initiative in preparing a viable project that is the cause for the lack of enterprise and not lack of finance, for, according to them, given the submission of an economically viable project, granting of finance is relatively easier. In fact they do not even want collateral security. But there is a good, practical and economically viable project—they ask.

6.1.9. This idea of preparing an economically viable project naturally makes us think of the services of the Small Industries Service Institute and the Industries Department. They have the knowledge, the experience and the expertise which they offer to the youths. They can certainly suggest projects that are viable. But their services are mostly in the nature of assessing the viability of a project if and when prepared and submitted to them based on their suggestions. There is at present none to actually sit with an aspirant and prepare a project and in the event of its rejection, to sit again with him, and prepare another project, and so on, until a finally successful project is prepared. In fact, the Director of Industries and Commerce was mainly stressing this point. According to him there was to be an agency, a counselling agency as it were, for the benefit of these young technocrat. This agency would be responsible for “doing every thing for him (the young technocrat) doing every thing with him, and getting things done by him. It would clear matters for him at every stage and steer him through the complex inter-institutional and intra-institutional formalities and procedures. In short, this agency would be the moving force behind all his actions.

6.1.10. Even assuming that these young technocrats are satisfactorily assisted by this special agency and are enabled to start projects as per programmes, there is still one important factor to be reckoned with, and that is marketing. Marketing is something which is vital to a business. Unless this is streamlined, the enterprise cannot hope to survive. So what is to be done in this regard? The services of SISI, and this special cell may be useful in this. But that is more in the initial stages and given mostly in the form of forecasts. And socio-economic events are so very unpredictable, that they may render productions by agencies outside their main current and made much ahead in the time-schedule quite far from actual happenings, so, what is needed is a continuous follow-up of business. The short-time market trends, the short-term fluctuations in demand, in supply, etc., should be vigilantly studied and meticulously analysed and suitable action taken then and there. There should thus be an intense, keen and continuous followup on the marketing side. It is not the intention here to say that what is wanted is followup on the marketing front alone. Pre-planning, advance forecasting, preparing a viable project, liaison with financial institutions, help in obtaining machinery, assistance in erecting plant—all these are absolutely necessary. What is sought to be impressed here is that over and above all these, and as a continuation of all these, there should also be continuous study of the marketing aspect as it is the sustaining mechanism for the entire project ultimately. This aspect can be looked after by perhaps another special cell which will specialise in this aspect of work.

6.1.11. The next question is, if it is difficult to obtain finance from the State Bank, are there not other sources? The answer is there are other sources. The Industrial Co-operatives are there, for instance, young technocrats can form themselves into co-operative societies and obtain loans from the Industrial Co-operative Banks. The

main difficulty however in this, seems to be the task of getting together the minimum number of share holders. The minimum number fixed by the Departments for the formation of an Industrial Co-operative is 20. This number makes allowance for possible drop-outs. As there will not be any need for 20 graduates to start one enterprise and to have employment for all of them it becomes necessary for them to include others like, diploma and certificate holders also as working share holders. But in practice these different groups never get together and hence there is difficulty even in the initial formation of an industrial co-operative of this sort. If however, through education these different groups are brought together, then starting of enterprises on co-operative basis may become a possibility. Perhaps this may be attempted by suitable liaising agencies (the Directorate of Employment and Training for example).

## 6.2 PROJECTS FOR RELIEVING UNEMPLOYMENT

6.2.1. The problem of unemployment is looming large. This is more marked in the case of the educated unemployed. According to the Live Registers of Employment Exchange in Tamil Nadu the number of unemployed including illiterates amounted to 5,00,000 as on June 1972. Out of these the educated unemployed numbered 2,15,326. But the Employment Exchanges data in general have their own limitations because all those who have registered with the employment exchanges are not really unemployed and all those who have not registered with the employment exchanges are also not fully employed. Government of India and Government of Tamil Nadu have sponsored several schemes to remove/relieve this problem. These schemes have provided the thinking of the Task Force on the subject and enabled it to suggest a set of feasible projects to remove unemployment from Tamil Nadu. The schemes that are suggested under the headings "Government of India Schemes" and "Other Special Employment Schemes" below are to be implemented under the respective sectors with perhaps central assistance in full, excepting perhaps the scheme on special cell to identify entrepreneurs under "Government of India Schemes" which will be financed by the State. These schemes are to be taken as suggestions for consideration to relieve unemployment of specific categories of persons to be suggested to Government of India for full assistance in implementation. These schemes aim at (a) better development of our human implementation resources, (b) considerable reduction in unemployment particularly educated unemployment and (c) a selective attack on the worst form of poverty.

6.2.2 Employment generation is relevant to the context of taking the economy to the level of near full employment. One aim in this connection is to work out of the contours of employment and prospects to improve the capabilities for employment problems concerning the educated unemployed, the under-employed, the agricultural labour and the rural and unorganised labour have been considered in detail while suggesting the projects for relieving unemployment.

### 1. GOVERNMENT OF INDIA SCHEMES

6.2.3. The following are the special schemes formulated by the various Ministries of the Government of India for relieving unemployment of the educated persons :—

- (1) Expansion and improvement of the quality of primary education. Ministry of Education.

- (2) Agro-Service Centres .. .. . Ministry of Agriculture.
- (3) Financial assistance to entrepreneurs for setting up of industries. Ministry of Industrial Development.
- (4) Indian Oil Corporations' scheme for dealership. Ministry of Petroleum and Chemicals.
- (5) Advance action on investigation of road works in the Five-Year Plan in the Central Sector. Ministry of Shipping and Transport.
- (6) Setting up of Design units for rural Water Supply. Ministry of Health and Family Planning.

#### SCHEME 1.

6.2.4 As regards Scheme (1), the Education Division of the Union Planning Commission prepared a detailed note indicating proposals and envisaging an expenditure of Rs. 15.35 Crores proposals provided for the following :—

- (a) Employment of 50,000 elementary school teachers in each of the three years 1971-74.
- (b) Employment of about 1,200 trained graduates to work as Assistant Inspectors of Elementary Schools.
- (c) Distribution of mid-day meals to about 43 lakhs additional pupils.
- (d) Distribution of free text books and stationery to about 90 lakhs pupils.
- (e) Construction of 45,000 addition class-rooms.
- (f) Appointment of 6,000 agricultural graduates, polytechnic and I.T.I. trained persons as instructors for work experience in schools.

Subsequently the size of outlay for the current financial year was reduced and reshaped but the following points were noted, among others :— This scheme would particularly benefit states which were comparatively [advanced in the provision of facilities for the elementary education and where as a result, the pupil-teacher ratio had shot up. A number of teachers would also be appointed in order to upgrade primary schools to middle schools, in the rural areas. In the rural areas, there would be no difficulty of persuading the village community to provide temporary accommodation for starting the new classes. However, there would be some difficulty in providing accommodation in existing schools where teachers would be appointed to improve the teacher-pupil ratio. The revised allocation was fixed at Rs. 4.42 crores in the current year and Rs. 11.94 crores and Rs. 11.84 crores in the subsequent two years respectively.

Seven states and one Union Territory have been identified as backward on the basis of the percentage of non-attending children in classes I to VIII to the population in the age-group 6-14, estimated in 1973-74. These are : Rajasthan, Madhya Pradesh, Bihar, Assam, Orissa, West Bengal, Uttar Pradesh and Union Territory of NEFA. Two thirds of the additional teachers, to be sanctioned under the present scheme will be allocated to

the seven backward states and NEFA while one-third of the additional teachers will be distributed among all the states and Union Territories in the proportion of the unemployed persons with matriculation and higher qualifications. One-third of 50,000 would be 16,667 teachers. Assuming a ten percent share for Tamil Nadu, this would work to about, 1,667 additional teachers. According to our statistics, our current unemployed elementary school teachers are 4,920. In Tamil Nadu the condition of Secondary Grade Teachers is no less deplorable, with the result that they too opt employment on elementary school teachers in the absence of opportunities in Middle Schools. So far our purposes it may not be out of place if we add this number also to the total unemployed elementary school teachers. That would give us a figure of 26,154 as on 31st December 1971 (4,920 + 21,234). This figure represents those who were on the active rolls of the Employment Exchange's in Tamil Nadu as on the above date. So even after availing Government of India's assistance to the tune of 1,667 teachers we will still be left with 24,487 teachers. This may be assumed to have reached 25,000 by now. For the provision of employment for the 25,000 unemployed Elementary School teachers in Tamil Nadu. The Task Force proposes the following scheme.

*Project No. 1.*

6.2.5. *Project to relieve unemployment of Elementary School teachers.*—Under this scheme employment will be provided for about 25,000 unemployed elementary school teachers in Tamil Nadu during the Fifth Plan. By the end of the Sixth Plan all the teachers who come out of the training Schools during the decade will be absorbed that bringing about full employment among Elementary School teachers. This will be done by reducing the teachers pupil ratio and by creating facilities for inspection, distribution of free text books etc.

As for costs, the following rates may be useful :—

- |  |                                    |
|--|------------------------------------|
| (1) For employing one teacher .. .. .        | Rs. 275 per mensem.                |
| (2) For employing one Assistant Inspector .. | Rs. 500 per mensem.                |
| (3) Free Text Books .. .. .                  | Rs. 5 per annum per child.         |
| (4) Work Experience .. .. .                  | Rs. 350 per mensem<br>per teacher. |

In addition Rs. 3,000 per school towards the cost of equipment and workshed, etc. will be required. An outlay of Rs. 2000.00 lakhs each for the Fifth and Sixth Plans is proposed. The perspective Plan outlay will then be Rs. 4000.00 lakhs. Government of India may perhaps be approached for larger outlays on this scheme to absorb teachers.

This Task Force recommends that this scheme may be taken care of by the Task Force on Education, Science and Technology for incorporation and implementation during the perspective plan.

**SCHEME 2.**

6.2.6. Scheme (2) has been prepared by the Ministry of Agriculture. The scheme envisages the setting up of 5,000 Agro Service Centres in rural areas. The Scheme was formulated in consultation with the Department of Banking who felt that with the

nationalisation of banks, the scheme should be purely a financing scheme. It has been decided by the Union Planning Commission to take up the scheme on a pilot basis by setting up 500 centres and the scheme expanded on the basis of experience gained. Though the original scheme was primarily a financing scheme, subsequently Agro-Service Centres were made eligible for training and financial assistance provided to the engineer entrepreneurs in the scheme formulated by the Ministry of Industry. Under this scheme, the institutions imparting training are eligible for Rs. 1,500 per entrepreneur including stipend of Rs. 250 per month during the period of training of three months. The scheme also envisages financial assistance to entrepreneurs in the form of subsidy on interest equivalent to the difference between the normal lending rate of the bank and 5 per cent, the maximum rate payable by the borrower.

The main objective of the scheme is providing employment opportunities and utilising the surplus manpower for providing one or more of the following essential supplies and services depending upon the need of the area :—

*Services :—*

- (i) Agricultural machinery hiring :
  - (a) For land preparation inter-cultivation ;  
harvesting and post-harvest handling.
  - (b) Land development.
  - (c) Tube-well drilling and well-deepening.
- (ii) Installation of pump-sets and other farm equipments, maintenance and servicing ;
- (iii) Equipment and implement rental ;
- (iv) Plan protection services ;
- (v) Facilities for storage and processing ;
- (vi) Consultancy in soil analysis, fertiliser and pesticides selection, irrigation, land improvement, etc.

*Supplies :—*

- (i) Fertilisers, pesticides, seeds, etc.
- (ii) Engineering stores of day to-day use on the farm ;
- (iii) Spare parts of agricultural machinery, servicing tools and other requisites ;
- (iv) Fuel oils and lubricants.

Certain difficulties were found in implementing the above scheme by the State Agro-Industries Corporation. Accordingly the Scheme was revised to provide for :—

- (i) Assistance to Agro-Industries and Corporate bodies in organising institutional and practical training about Rs. 5 lakhs per centre.
- (ii) Grant of allowance to corporations, etc. for meeting expenditure on stipends and other incidentals—Rs. 2,500 per every entrepreneur trained.
- (iii) Incentives to entrepreneurs in the forms of Interest subsidy—at 5 per cent subject to a maximum of Rs. 10,000 per annum per centre.
- (iv) Staff support at Central and State level.



For the establishment of 2,500 centres with an average investment of Rs. 1.5 lakhs during the initial periods, the total investment is Rs. 37.5 crores to be met by the nationalised banks and other financial institutions. It is estimated that on an average each centre would provide employment to 5 technical persons and to an equal number of skilled and semi-skilled persons. With a more ambitious programme, Tamil Nadu could aim at establishing about 1,200 such centres with an investment of about Rs. 1,800.00 lakhs. Accordingly the Task Force has proposed the following special scheme for Tamil Nadu.

*Project No. 2.*

6.2.7. *Setting up of Agro Service Centres.*—The main objects of this scheme is to provide employment opportunities and utilise the surplus manpower for providing agricultural and allied services and supplies according to the needs of the areas. This scheme was originally prepared by the Ministry of Agriculture, Government of India and what the Task Force now proposes is an extension of the above scheme to cover more centre in our rural areas. Finance for this could perhaps be arranged through the nationalised banks and the Industrial Co-operative Bank and also be availing the other financial incentives including staff support from the Government of India as explained earlier. During the Fifth Plan 400 Agro Service Centres will be set up and this will provide employment to about 2,000 technical persons and to about another 2,000 skilled and semi-skilled persons, immediately. During the Sixth Plan 800 such Agro Service Centres will be set up and this will provide employment to 8,000 persons—4,000 technical and 4,000 skilled and semi-skilled.

The outlays for the Fifth and Sixth Plans are Rs. 600.00 lakhs and Rs. 1,200.00 lakhs respectively. The total outlay for the perspective plan will be Rs. 1,800.00 lakhs.

**SCHEME 3.**

6.2.8. This scheme is prepared by the Ministry of Industrial Development and is known as the Scheme for providing financial assistance to entrepreneurs for setting up of Industries. As regards the proposal for participation by State Industrial Development Corporation in the equity or preference capital of small scale industrial ventures by technically qualified entrepreneurs it has been suggested that a suitable upper limit, say 15 per cent may be laid. In case of new projects that are to be developed from the laboratory stage to the stage of commercial concerns, the State Industrial Development Corporations could be asked to assist by participating in the equity capital to the extent of about 30 per cent. Extending of financial assistance for the proposal for assisting technically qualified persons forming co-operatives for producing specific items has been supported. Regarding the formation of commercial Estates, it has been felt that the idea is good, but that it is necessary to develop such estates in suitable growth centres also, with the co-operation of the land banks and the assistance from the IDBI. It has also been suggested that the proposal might be tried on a pilot basis. In view of the present policy of achieving consolidation in the Industrial estates rather than expansion, it has been felt that setting up of any new industrial estates and industrial area would have to be limited to selected

areas which are linked to growth centres. Preference would be given to unemployed engineer and technicians by ear-marking a proportion of the sites for them. The proposal for providing hire purchase facilities to entrepreneurs for indigenous machinery has also been supported.

These facilities for self-employment might be extended in Tamil Nadu with the active co-operation of banks and the IDBI as these facilities would foster increased self-employment opportunities. It is also worthwhile to create a special cell in some suitable Department of the State Government to take up the cases of entrepreneurs seeking self-employment to work with them and assist them in going through the complicated formalities of processing their applications, etc. Accordingly, the Task Force has proposed a scheme for the setting up of a special cell in the Directorate of Employment and Training. This it is hoped would go long way in helping the young entrepreneurs to obtain financial assistance and enter upon suitable self employment.

*Project No. 3.*

6.2.9. *Special cell to identify entrepreneurs.*—During a special meeting with the representatives of the Reserve Bank of India, leading nationalised banks and other connected financial institutions, the Task Force on Human Resources discussed the views expressed by the Expert Committee on Unemployment (Government of India) thoroughly. Arising out of this discussion and with a view to evolving a machinery to identify potential entrepreneurs from among the unemployed engineers, technicians and craftsmen and also with a view to tying up bank loans with the projects of the above entrepreneurs the Task Force recommends the scheme for the setting up a special cell to do this work. This scheme is patterned after scheme prepared by the Ministry of Industrial Development, Government of India known as the scheme for providing financial assistance to entrepreneurs for setting up of Industries.

The facilities of self-employment might be extended in Tamil Nadu with the active co-operation of banks and the IDBI as these facilities would foster increased self-employment opportunities. Hence the Task Force considers worthwhile to create a special cell in the Directorate of Employment and Training to take up the cases of potential entrepreneurs seeking self-employment to identify them, help them in preparing viable projects, assist in getting clearance for licences, loans, etc. and also in marketing their produce. The scheme is expected to create about 15,000 job opportunities during the perspective plan.

The outlay for the Fifth Plan is Rs. 14.50 lakhs and for the Sixth Plan is Rs. 35.50 lakhs. Total outlay for perspective plan is Rs. 50.00 lakhs.

**SCHEME 4.**

6.2.10. The sponsors of this scheme are the Ministry of Petroleum and Chemicals and it is known as the 'Scheme of the Indian Oil Corporation to offer self-employment Opportunities to the Engineering and other Graduates'. This proposal has been supported and put through as a pilot venture. This scheme reserves all its future dealerships for

Petrol/HSD pumps. Kerosene and domestic gas for being awarded to young engineering graduates, etc., belonging to low income families. About 400 to 600 dealerships are contemplated every year under this scheme and employment of about 1,200 graduates and another 200 skilled and semi-skilled workmen per annum are also contemplated. The Corporation has already effected significant relaxation in its commercial policies in order to offer relief to the new class of young dealers. There is however need for soft loans from banks and other financial institutions to help the young entrepreneurs to tide over the "Teething trouble". Tamil Nadu being in the vanguard as far as automobile and road position are concerned, this scheme could be given a further boost so as to absorb more number of engineering and other graduates. The annual allocation for this scheme by Government of India is Rs. 40 lakhs. Tamil Nadu could claim an increased share of this outlay in view of our special position both with regard to automobiles and roads as also with regard to our huge size of unemployed in this category.

#### SCHEME 5.

6-2-11. This scheme is about taking advance action by way of investigations in respect of the roads schemes to be taken up in the Central Sector in the Fifth Plan. This has been prepared by the Ministry of Shipping and Transport. An outlay of Rs. 30 lakhs for the first year (1971-72) has been suggested for this. In terms of employment-generation, it has been indicated that the above expenditure would create employment for 134 graduate engineers, 80 diploma holders, 160 other technicians like Surveyors, draughtsmen and 500 semi-skilled and unskilled workers. Similar scheme in respect of the road scheme for Tamil Nadu has been suggested by the Task Force.

#### Project No. 4.

6-2-12. *Advance action in respect of road schemes.*—This scheme envisages taking advance action by way of investigation in respect of road schemes to be taken up in the State, for an outlay of Rs. 1,500.00 lakhs this project is expected to provide employment for about 1,500 engineers, 900 diploma holders, 1,800 craftsmen and about 45,000 semi-skilled and unskilled persons. The Fifth and Sixth plan outlays are Rs. 500.00 lakhs and Rs. 1,000.00 lakhs respectively.

#### SCHEME 6.

6-2-13. This is a scheme sponsored by the Ministry of Health and Family Planning regarding the creation of Planning and Design units in the states for preparation of Rural Water Supply Projects to be included under the provision of Rs. 25 crores included in the Central Budget. Special studies of the rural water supply problem revealed (i) the number of villages where drinking water is not available within a depth of 50 or a distance of one mile and (ii) the number of villages where protected water-supply is called for due to the following reasons :—

(a) Cholera endemicity.

(b) Guinea-worm infestation.

The number of villages under item (i) for Tamil Nadu has been indicated as 288, 5 under item (ii) (a) and 91 under item (ii) (b). The cost of providing drinking water-supply to these villages has been indicated as Rs. 4.17 crores for item (i) Rs. 0.05 crores for item (ii) (a): and Rs. 0.09 crores for item (ii) (b). That is, for a total of 384 villages, the cost comes to Rs. 5.21 crores. By way of comparison, it is interesting to note that for Bihar for instance, the figures are, 42,450 villages with a total cost of Rs. 36.52 crores: for Madhya Pradesh, they are 20,331 villages and a cost of Rs. 18.52 crores; for West Bengal they are 16,864 villages and Rs. 18.37 crores; for Maharashtra, they are 5,233 villages and Rs. 80.48 crores and for Mysore, they are 1,057 villages and Rs. 7.41 crores. The implementation of the programme would require advance action with regard to identification of villages, conducting survey and investigation work and preparation of detailed plans and estimates. It is also stated that regarding the preparation of plans and estimates the State Governments do not have design and planning units for rural water-supply. So it has been decided by the Government of India to give financial assistance to the State Governments for the creation of Design and Planning units exclusively for the above purpose in respect of schemes to be implemented in the Fifth Five-Year Plan. The assistance will be in the form of 100 per cent grant to the States under a Centrally financed programme. Depending on the work load in different states, these units would be created in two categories (A) and (B). Category (A) has a longer composition of staff than category (B). Expenditure on (A) per annum would be Rs. 3,12,000 in the first year and would give employment to 23 engineers and 28 others—51 in all. For Category (B), the expenditure in the first year would be Rs. 1,65,000 and the employment generated would be 11 engineers and 12 others—23 in all. As far as Tamil Nadu is concerned, we are to have one (A) Category Unit for the present which would give employment to 23 Engineers and 28 others—total 51. This unit is expected to prepare 30 schemes to cover 40 villages per year. It may perhaps be a worthwhile exercise for us to find out if there are more number of villages and areas to be brought under this scheme in view of our recent drought occurrence. The number of units may have to be increased then and their strength also increased perhaps leading to additional employment.

#### OTHER SPECIAL EMPLOYMENT SCHEMES.

##### *Project No. 5.*

6.2.14. *Special Employment Projects for the Educated Unemployed.*—The sub-Group on 'Professional Manpower' formed by the working Group on 'Manpower' of this Task-Force has suggested over 100 employment generation projects. These projects are being examined, processed and costed. As these projects are mainly aimed at relieving unemployment of educated and professional manpower, the number of projects are many though their employment content may be small. Some sample projects are as follows:—

- (1) Guidance Workers in Schools and Colleges.
- (2) Colleges for continuing education.
- (3) Children's Libraries to introduce the Library movement among children.
- (4) Theatres/Opera Houses in districts.

(5) Expansion of Zoos and Acquaria.

(6) Anna Centre for study of Lives of Great people from Tamil Nadu.

(7) Improving Tourism through establishment of Coastal Tourist Centres along the Coastal line of Tamil Nadu and connecting them by ferry service.

(8) A scheme for preparing and publishing local histories in respect of important tourist centres of Tamil Nadu.

(9) Development of health resorts.

(10) Tamil Literature Promotion Trust to undertake translation with a view to bringing latest world knowledge in Tamil and Publication of books.

(11) Self-Employment for small building repairs.

(12) Consumer Advisory Committee.

(13) Opening of Shopping Centres in new residential areas on Co-operative basis.

(14) Opening of Tutorial Colleges on Co-operative basis.

(15) Opening of Hotels on our Highways.

(16) College of Public Speaking.

(17) College of Maritime Courses.

(18) Defence Service Bureau.

(19) Establishment of Film Librarises in the districts.

(20) Hire Purchase organisation for salaried employees.

Apart from these, 'specific labour intensive and employment generating industries are also being studied with a view exploring avenues of greater employment.

The total perspective plan outlay for all the special schemes will be Rs. 3,000-00 lakhs. The outlays for the Fifth Plan and Sixth Plan are Rs. 1,000-00 lakhs and Rs. 2,000-00 lakhs respectively.

#### *Project No. 6.*

6-2-14. *Modernisation of Occupations of washermen, Carpenter, Taxi driver' etc.—*

This scheme aims not only at creating self-employment opportunities but also, at bringing about social change. It is proposed to set up co-operative societies of persons in traditional occupations like, barbers, washermen and other village artisans, so as to enable them to set up modern shops. The assistance will be in the form of deferred payment of about Rs. 5,000 per head. Concept of package. has to be applied to small and unorganised occupations, They need equipment of a good standard, durability and easy maintenance. They require facilities to repay credit over a sufficient long time and accommodation in appropriate places in Cities, large towns and small towns. Different unorganised occupations have different hazards. The vegetable vendor is threatened of violation from pavements.

The barber is not sure of the health and hygienic habits of his day to day customer. A dhoby is not assured of sufficient mechanical equipment and improvement in his skill of occupation. All of them require package of equipment, raw material intermediate goods, finance, accommodation and marketing knowledge. A multi-dimensional attack of the obstacles in their way is a sure method of eliminating the hazards of those in the unorganised sector. The taxi driver is harassed by money lenders on uncertain tenure of service under a small capitalist, and he is also not so much respected as for instance an aeroplane pilot, not does he feel professionally significant. The concept of dignity of labour should permeate the thoughts of all engaged in the work force. The taxi drivers and rickshaw pullers would have to be freed from the clutches of the usurious lending rates of the above money lenders and other forms of exploitation by enabling them to own the taxis and rickshaws. In the case of hand pulled rickshaws they will have to be replaced by cycle or autorickshaws. For this purpose a separate revolving fund will be provided and adequate institutional finance will be raised for the purpose.

An outlay of Rs. 1,500.00 lakhs in the perspective Plan will cover about 50,000 persons falling under the above categories. The outlays for the Fifth Plan and Sixth Plan are Rs. 500.00 lakhs and Rs. 1,000.00 lakhs respectively.

*Project No. 7.*

6.2.15. *An Integrated Scheme for the rural unemployed.*—During the special meeting with the vice-chairman, Commission on Agriculture, New Delhi held by the Working Group on Employment of the Task Force on Human Resources the need for developing livestock, the bringing in of white revolution in, and also the development of poultry, etc. in the rural areas was discussed in detail. Arising out of this discussion and also with a view to enabling the rural unemployed to earn incomes which will raise them well above the poverty line, the integrated scheme for the rural unemployed is being suggested here. Under this Scheme, it is proposed to cover about 5 lakhs of the rural landless unemployed persons during the Fifth Plan by providing them with milch-cows at the rate of 2 per household or the provision of Fowls or other implements needed for the village industries not exceeding the value of Rs. 3,000 per household. During the Six Plan the remaining rural landless unemployed will be covered. The total outlay is expected to be of the order of Rs. 4,500.00 lakhs of which Rs. 1,500.00 lakhs will be the outlay for the Fifth Plan and Rs. 3,000.00 lakhs will be the outlay for the Sixth Plan. It is suggested that bank loans and Government of India assistance may be tied up suitably with this programme.

*Project No. 8.*

6.2.16. *Rural Industrial Estates for Housing.*—Rural housing needs fresh thinking in terms of cost conventional and easily available materials in rural areas. Doors, windows, etc., have to be economically and scientifically fabricated. Experience in research and innovations Tamil Nadu has proved that inexpensive materials could be fabricated for the purpose. Units could be located for areas within a radius of 60 to 75 meter. During the Fifth Plan such units could be started and the entire state covered by the end of the Perspective Plan Period. The total outlay will be Rs. 900.00 lakhs of which Rs. 300.00 lakhs could be spent during the Fifth Plan and Rs. 600.00 lakhs during the Sixth Plan. It is further recommended that for administration facilities this project could be taken up or implementation by the Industries Department.

## 6.3. SPECIAL EMPLOYMENT SCHEMES OF THE GOVERNMENT OF TAMIL NADU

6.3.1. The unemployment problem in Tamil Nadu, as elsewhere, falls under the following two categories :—

- (i) Rural Unemployment ;
- (ii) Urban Unemployment.

Item (i) above can be sub-divided as :—

- (a) Skilled.
- (b) Semi skilled and
- (c) Unskilled Labour

Item (ii) above be sub-divided as :—

- (a) Educated (General education).
- (b) Technically Educated (Graduate Engineer's Diploma holders and Craftsmen).

6.3.2. A programme for Rs. 438.77 lakhs has been drawn up for the benefit of job seekers as under.

Name of the scheme.	Categories of the unemployed who will be benefitted.	cost of the Scheme.
(1)	(2)	(3)
		(RUPEES IN LAKHS.)
1 Rural Roads Programme ..	Skilled, semi-skilled and unskilled labour as also technically qualified.	300
2 Youth Service Corps Volunteer Scheme.	Educated Unemployed .. .. .	61.77
3 Special Apprenticeship Training Programme.	Technically qualified unemployed.	47.00
4 Loan Assistance Scheme for craftsman.	Do.	30

6.3.3. (1) *Rural Roads Programme*.—The proposal of the Scheme is to provide all weather communication facilities (in the form blacktopped roads) to all habitations of population, 1,500 and above. If there are habitations of lesser population on way to the above mentioned bigger ones, they would also be covered in the programme. While implementing the scheme, the roads in which buses are already plying would be given preference ; second preference will be to take over roads already formed. We will take up

missing links as third category. These roads may also be taken over by Highways and Rural works Department. Such a scheme as this would provide employment to skilled and unskilled labour in rural areas. It would also improve agricultural marketing facilities. In order to link all villages and hamlets with population of 1,500 and more with main roads, one suggestions given is to levy a surcharge of 10 per cent on motor vehicles tax and in this ways a revenue of Rs. 1.35 to 1.5 crores roundly is anticipated. This amount would also be utilised for providing employment in rural areas. On a rough reckonings 15,000 unskilled men and a supervisory work force consisting of engineer and administrative personnel will be employed.

6.3.4. (2) *Youth Services Corps Volunteer Scheme*.—The Committee on Unemployment has laid great emphasis on the need for wiping off illiteracy among adults and has recommended a programme to cover four million illiterates, One of the main aims of Youth Service Corps is adult Education with Special reference to functional literacy of adults. Besides teaching the Youth Service Corps Volunteer will also be engaged in disseminating rural industries, family planning, etc. provisions of employment for educated unemployed is one of the important purposes of Youth Service Corps. Unemployment among graduates results not only in frustration among themselves but also breeds indiscipline. Providing employment for unemployed graduates gives them an opportunity for rural reconstruction work. Under this scheme 3,000 volunteers would be recruited during 1972-73. The estimated expenditure for 1972-73 was as follows:—

(i) Stipend of Rs. 175 per mensem for 2,800 volunteers for 10 months.	49,00,000
(ii) Cost of production of 46,000 sets of adult literacy books at an estimated cost of Rs. 12 per set.	5,52,000
(iii) Staff expenditure, personal kit allowances, Posters, Publicity Materials, etc.	3,18,000
(iv) Tools, equipments, sports equipments, Bicycles . . . . .	2,40,000
(v) Printing and publishing monthly Youth Corps Newsletter. Travelling allowance and Women's Training Programme.	1,67,000
	61,77,000

The Task Force views this programme as primarily a special change programme and suggests that the programme may be tied up with the proposed Department of Social Affairs.

*Special Apprenticeship Training Scheme*.—Details of the scheme of Training Programme for the Graduate Engineer, Diploma Holders and Craftsmen :—

As per this scheme, a trainee once appointed will hold his position as trainee for a period of two years unless he is otherwise absorbed by the Department in which he is working or in other department. These Engineers will be attached to different departments and the Heads of Departments will allocate specific items of functions for the period of training. They will be utilised in investigation work, in assisting the regular staff in preparation of estimates, preparation of blue prints, charts, and check measurements in



the field etc. It will be the responsibility of the Heads of Departments to train these graduates/Diploma holders craftsmen in specific allocated items so that at the end of the period of training, they will be suitable for the different items of work. In this scheme, 600 Degree holders 1,000 Diploma holders and 1,000 craftsmen will be trained. The financial implication of this scheme is 47 lakhs as detailed below :—

	RS.
(i) Stipend for 600 Degree holders at Rs. 250 per month for one year $250 \times 600 \times 12$ .	18,00,000
(ii) Stipend for 1,000 Diploma holders at Rs. 150 per month for one year $150 \times 1000 \times 12$ .	18,00,000
(iii) Stipend for 1,000 Craftsmen at Rs. 90 per month for one year $90 \times 1000 \times 12$ .	10,80,000
(iv) To meet the stipends of Degree holders, Diploma holders and Craftsmen who leave the training in the middle of their training.	20,000
	47,00,000

6.3.6. *Loans Assistance Scheme for Craftsmen.*—Details of the Scheme for the grant on loans to craftsmen are as follows :—

There are about 10,000 craftsmen in the Live Registers of the Employment Exchange in Tamil Nadu. Every year about 6,500 trainees are passing out of the Industrial Training Institutes in Tamil Nadu. Besides this, about 1,000 apprentices are also coming out of the various factories and establishments duly trained under the apprentices Act, 1961. It has not been possible for all these trained craftsmen and apprentices to secure gainful employment. This position created a sense of frustration among the passed out trainees and apprentices. To remove the unemployment among the technically qualified persons there is a proposal to give loan assistance to 3,000 craftsmen who had passed out of the Industrial Training Institutes. The craftsmen selected will be given loan assistance in the form of Hand Tools in the following rates :—

<i>Name of Trade.</i>	<i>Amount of loan assistance to each candidate (in the shape of tools and equipments).</i>
(1)	(2)
1 Building Construction .. .. .	} Rs. 1,000 each.
2 Mechanic (Diesel) .. .. .	
3 Draughtsmen (Civil) .. .. .	
4 Draughtsmen (Mechanical) .. .. .	
5 Wireless Operator .. .. .	
6 Non-Engineering Trades in Industrial Training Centre/Industrial Training Institute, Madurai	

<i>Name of trade .</i>	<i>Amount of loan assistance to each candidate (in the shape of tools and equipments).</i>
(1)	(2)
7 Blacksmith .. .. .	} Rs. 2,000 each.
8 Carpenter .. .. .	
9 Plumber .. .. .	
10 Fitter .. .. .	
11 Stenography. .. .. .	
12 Mechanic (Motor Vehicles) .. .. .	} Rs. 5,000 each.
13 Moulder .. .. .	
14 Painter .. .. .	
15 Sheet Metal Worker .. .. .	
16 Welder .. .. .	
17 Wiremen .. .. .	
18 Mechanist (Grinder) .. .. .	
19 Machinist (Miller) .. .. .	
20 Machinist (SSP) .. .. .	
21 Machinist (Composite) .. .. .	
22 Turner .. .. .	} Rs. 5,000 each.
23 Watch and Clock Repairer .. .. .	
24 Mechanic (Instrument) .. .. .	
25 Electrician .. .. .	} Rs. 5,000 each.
26 Mechanic (Radio and Television) .. .. .	
27 Mechanic (Refrigerator and Air-conditioning) .. .. .	
28 Pattern Maker .. .. .	
29 Mechanic (Tractor) .. .. .	

The anticipated expenditure under this scheme is Rs. 30 lakhs.

## CHAPTER VII.

### DEVELOPMENT OF EMPLOYMENT SERVICES AND CRAFTSMEN TRAINING PROGRAMMES.

#### A. APPROACH TO THE DEVELOPMENT OF EMPLOYMENT SERVICES.

##### I. VOCATIONAL GUIDANCE PROGRAMMES:—

இதனை இதனால் இவன்முடிக்கும் என்றாய்ந்து  
அதனை அவன்கண் விடல். —குறள்

7.1.1. Manpower Planning is a function of Economic Dynamics. It is a new-world creed which appeared on the economic horizon with the advent of the thesis that the competence and skill of a nation's people are important in determining the rate of development. It is thus a determinant of economic growth. Gone are the days of the nineteenth-century economists, particularly those trained in the tradition of the British Classical School, who held the view that the best way for a nation, including an underdeveloped nation, to progress was to specialise in the production of commodities for which it had some special advantage. Now it is increasingly realized and admitted especially in developing economies "that the speed of their economic advance depends also on their educating and training a corps of competent managers, administrators, professionals, technicians and skilled workers".\* The absence of such an effective infrastructure is more often the cause for capital's languishing in stagnant pools. This is in evidence in every developing economy, an articulate attempt at building such an effective infrastructure so that the inert capital could be turned into an overt productive reservoir.

7.1.2. In building such an effective infrastructure, several factors and determinants have to be taken stock of. How this shaping shall be done? How the supply of labour shall be transformed? What changes in the economic matrices are to be anticipated? What changes in extra-economic factors are to be contended with? These are some of the basic and difficult questions with which such a shaping and building of an effective infrastructure bristles.

7.1.3. More than a half century ago, the great German sociologist, Max Weber, first propounded his thesis that the acceleration of business enterprise in western and northern Europe was directly associated with the value transformations that accompanied the rise of Protestantism. In his opinion, the new stress on individualism, rationality and salvation through work was basic to unleashing the forces out of which modern capitalism was born. That which becomes clear to us from the above thesis is this: linkages do exist in every society between the dominant traditions and folkways and the ways in which a people commit their time and energy to the pursuit of dominant goals. No manpower planning can remain oblivious to the more important of these linkages. The above is by way of an illustration to bring out the inherent complexity of the programme of manpower planning. It is in fact an attempt at articulating from the nebulous conglomeration of ever so many economic and extra-economic phenomena a sure and set pattern to suit the future requirements of economic growth.

\* "Manpower strategy for Developing Countries" by Eli Ginzberg and Herbert A. Smith.

7.1.4. This chapter sets to adumbrate at some length the vital role played by one such phenomenon and how best to plan and organise it so that it fits effectively into the larger frame of man power planning. And that phenomenon is the Vocational Guidance Programme. The Vocational Guidance Programme plays a vital role in effectively building the infrastructure required to sustain the pace and tempo of economic growth. What is this programme, how it works itself out, and for what ends and by employing what means will constitute the subject-matter of the following digression.

7.1.5. *Definition and Meaning of Vocational Guidance.*—According to the principles adopted by the National Vocational Guidance Association of the U.S.A. in 1921, revised in 1924, in 1930 and again in 1937, “ Vocational Guidance is the process of assisting the individual to choose an occupation, prepare for it, enter upon and progress in it. It is concerned primarily with helping individuals make decisions and choices involved in planning a future and building a career—decisions and choices necessary in effecting satisfactory vocational adjustment ”.\*

7.1.6. The above definition crystallises the writings of several authors on the subject and is “ a concept that has been accepted by a national organisation in the field concerned after careful study and discussion by committees covering a period of more than fifteen years ”. †

7.1.7. Vocational Guidance is a process. And , it is a continuous process. It starts with the childhood of man when he starts forming ideas about the world around him, and as the years roll by, it also grows with him, now changing its meaning, again altering its dimension, according to the changes in the personality development of the individual and his behaviour pattern. The process goes on till the time when the individual finds himself happily settled in a job which he finds he can do, he likes to do, and which gives him satisfaction. At this stage, he is vocationally adjusted and hence socially adjusted as well. We have used the term “socially—adjusted as Well” deliberately because it is a fact that vocational—adjustment or otherwise of individuals when put together and inter-related can show up the larger social adjustments or otherwise on the whole, as also the inter-relationships between the different constituents inside the whole. Viewed from the individual’s angle, vocational guidance ensures happiness in his life through job satisfaction and viewed from the society’s angle, it ensures social harmony and economically it means greater production through the job satisfaction of the constituent producing units.

7.1.8. In a country like ours, with a large human resource any programme of manpower planning should aim at utilising this vast resource in the most profitable—individually and socially—manner. The vocational guidance programme through its matching process helps such a profitable use of the manpower resource and thus constitutes an important part of the entire programme of manpower planning.

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\* The principles and practices of Educational and Vocational Guidance—Report of the Committee of the National Vocational Guidance Association. U.S.A.

† “The Principles and techniques of Vocational Guidance ” George E. Myers (Mc. Graw Hill)

7.1.9. The programme seeks to match the requirements of the economy, more specifically the requirements of the world of work and the latent aptitudes and the required abilities and training of individuals in such a way that inconvenient shortages and wasteful surpluses of skill formations are avoided and the economic process kept at a reasonable equilibrium.

7.1.10. The principle of vocational guidance is based on two sets of differences. Firstly, there are differences as between individuals and second, there are differences between occupations. Because of these differences, the matching of individuals and occupations is rendered difficult and complex. Hence there is the need for an agency, "to advise candidates in the matter of choice of their occupation, based both on an appraisal of their abilities and aptitudes as well as on the basis of the availability of employment opportunities".\* and such an agency is the vocational guidance programme operated through the National Employment Organisation.

7.1.11. Individual differences are based on personality differences and occupational differences are based on differences in the performance requirements of occupations. So, a programme which aims at matching these two sides satisfactorily must obviously make a correct and proper assessment of personality characteristics or personality traits of the individuals on the one hand and the performance requirements of the various occupations in the economy on the other. It should have a full picture of the world of work with all its ramifications and also it should have a correct assessment of the clients with full details on their latent aptitudes, abilities, likes, educational background attitudes, family background and a host of other connected personality traits as also their physical abilities. This entails a detailed study of individuals and a detailed study of occupations.

7.1.12. This takes us to the other important postulate in the practice of Vocational Guidance, viz., the one relating to Occupational Ability Pattern. Otherwise known as 'Job psychographs', these ability patterns follow from the fact of individual differences. Occupations are studied from the point of view of individual abilities and personality qualities.

7.1.13. And, arising out of the above two postulates of Individual Differences and Occupational Differences, is a third postulate, viz., the 'Matching Theory'. This theory is only an elaboration of the contention that the traits in an individual can be matched with the traits that are required for the efficient performance in different occupations. Till recent times, the "Perfect Niche Theory" was the generally accepted postulate in this respect which held that an individual was perfectly suited to perform only one single job. But the "Trait and Factor Theory" improves on the "Perfect Niche Theory" and holds that an individual is suitable for several sets of occupations and not for a single occupation alone. This concept is again based on the theory of multi-potentiality which seeks to establish the comparative job-efficiency and job-satisfaction that may result from different kinds of combination of individual personality traits and the diverse occupational requirement patterns.

7.1.14. Lastly, Vocational guidance is a joint endeavour. It is a joint effort of various bodies and professional and non-professional individuals. The parent, the teacher, the career master, the headmaster, the physician, the psychologist, the psychiatrist, the vocational guidance worker— all these have a role to play in this besides others such as the welfare worker, the industrialist, the employment officer, etc. The above idea has been well expressed in the International Labour Organisation Recommendation :—

7.1.15 “ Vocational guidance policy and programme should be determined through the co-operative efforts of the organisations and services concerned with the young persons in the transition from school to work, to the end that each young person receiving Vocational guidance may have the benefit of unified and co-ordinated assistance. Again, these co-operative efforts should include collaboration with the parents or guardians concerned and with associations of parents where such exist ”.

7.1.16. *Tools employed.*— Measurement conveys a sense of specific quantity. Hence to be useful, it has to be done systematically and scientifically. While measuring skill involvements and assessing specifications in respect of occupations is largely done on the physical plane, that of assessing the personality traits of individuals is done on the psychic plane. Since an absolute psychic plane is out of range for physical measurements, a psychophysical medium is used to achieve the purpose. This medium is what is generally known as psychological testing.

7.1.17. Thanks to the great strides made by Sigmund Freud and his school of thought in the field of psycho-dynamics, this medium of psychological testing has made considerable progress and we are now in a position to obtain a fairly reliable assessment of the personality traits of individuals.

7.1.18. On the occupational side, lot of research has been done and we now have the sophisticated tools of occupational analysis, job-study, job and occupational specifications, performance requirements studies of occupations as also occupational forecasts.

7.1.19. From the schools' side, they make available bio-data of the clients to the Vocational Guidance Programme through Cumulative Record Sheets. These give the much-needed back-ground information on the clients who come for guidance.

7.1.20. *The Techniques of Guidance.*— The essential steps that are involved in any guidance programme are as follows :—

- (1) know about the client.
- (2) know about the occupations.
- (3) match the two.

After knowing about the client and about the occupational world, the next step is to match the two. This matching is the crux of the guidance programme. Though there are different ways of doing this, the best method appears to be what is commonly known as the “ non-directive ” technique of guidance. In this no prescription of a definite Course is made to the client. On the contrary, the technique takes the client along and shows him the different goals suited to his temperament and the different ways leading to it, leaving

the choice of the goal and the way to reach it, to the client himself. Experience has shown that this is the best possible technique as the client is involved in the programme on his volition and hence has a responsibility to achieve the programme charted out by himself. The guidance agency acts only as a referral, as a friend, and guide who has reliable and upto-date information on the world of work and who has the necessary expertise to assess the abilities and the aptitudes of the client himself.

7.1.21. The National Employment Service works this programme of vocational guidance to our youths through its net work of vocational guidance units attached to the Employment Exchanges. Almost every Employment Exchange in our State has a Vocational Guidance Unit attached to it. These units give guidance to the youths who come to the Employment Exchanges seeking jobs and also to the youths who are about to leave their schools/colleges. A specialised guidance service suited to the needs of the alumni of the universities is made available through the University Employment Information and Guidance Bureaux attached to the Universities.

7.1.22. *How is this done?*—One of the main tasks of the counsellor is to assess the strength of the factors within an individual and outside of him, when he seeks individual guidance. In such an assessment, the guidance worker employs some of the tools at his disposal like the psychological tests, the school records in respect of the individual bio-data questionnaires, rating-scales, interviews, etc. But when we pin-point the programme to a determination of the factors that influence his occupational choice, then the following factors come to the foreground :

- General Intelligence ;
- Aptitudes and Abilities ;
- Interests ;
- Personality Traits ;
- Values and Self-concept ;
- Identification ;
- Physical condition ;

There are well-developed and set tests for measuring and assessing all the above factors.

7.1.23. Broadly speaking, there are two methods of guidance ; the individual method and the group method. Of the two, the individual method is more difficult and more technical. Generally, the individual method consists of the following steps :

7.1.24. First is the process of obtaining all available information about the client. Next the individual is provided with relevant information on careers with a view to prodding his thinking. Third he is assisted in developing a plan for a suitable career. Finally, he is helped in translating the plan into execution. For achieving the above steps, the following techniques are employed :

7.1.25. First a *rapport* is established and maintained. This is essential for preparing the client and making him ready to receive the guidance and also to lend himself to assessment. Then comes the 'structuring' of a counselling situation. This follows the

creation of rapport and aims at impressing on the client the difficulty of the task ahead and the need for his whole-hearted participation in it and full co-operation. Next is questioning :

7.1.26. This is employed to elicit answers from clients on aspects that have not been covered properly or on subjects which have not been unveiled to the required extent by the clients.

7.1.27. The next one is the use of *occupational information*. This of course presupposes the collection and maintenance of upto-date and exhaustive occupational information by the counsellor. The counsellor should make use of this information skilfully and at appropriate places.

7.1.28. For arriving at a plan of action, the matching process is very helpful. The client is made to see his own make-up and also see into which groups of occupations he would fit in and arrive at a plan of action. As aides in this self-assessment for the clients, the psychological tests are used by the counsellors. Sometimes, the counsellors may come across situations in which they find that the client suffers from a patent or even a latent conflict of feelings. In such situations, the counsellor may have to help the client in the *release of such conflict of feelings*. This will certainly help in achieving wise and pragmatic decisions.

7.1.29. The Group method of guidance is resorted to wherever this would deliver the goods. Most vocational problems are in fact limited to a more lack of authentic and upto-date information on occupational, apprenticeship and training opportunities available. The group method is more practical in a country like ours with a great mass of unemployed youths as it can be given to a larger number of persons at a given point of time. The group method is usually done through career talks, career conferences, organising career information centres and career exhibitions, career news boards and issue of career bulletins.

7.1.30. In the Vocational Guidance units attached to the Employment Exchanges, the group method is more resorted to than the individual method. Career talks are given by the Vocational Guidance Officers not only to the applicants calling at the Employment Exchanges, but also to School and College leavers in their institutions.

7.1.31. A well-equipped Career Information Room is also maintained in each of these units for the benefit of the applicants. These units besides organising Career Exhibitions their own, also participate in such exhibitions organised by other agencies and institutions.

7.1.32. Some of the other techniques employed in the process of vocational guidance are, occupational course, alumni survey, alumni talk, local occupational surveys, films and filmstrips on occupations, visits to places of occupational interest, etc.

*The Programmes of Occupational Research and Employment Market Information and how they are useful for the vocational Guidance Programme.*—The role played by a public employment agency in a developing economy is like that of a sensory nerve, centre, feeling and regulating the volume and velocity of labour-market trends. It has to take upon itself the tasks of assessing manpower resources as accurately as possible and of planning its utilisation in a pragmatic and useful manner. With the above end in view the service



has been organising its own development and has acquitted through the years, experience in assessing, controlling and guiding the employment market phenomena through some of its sophisticated programmes like the Employment Market Information Programme, the Occupational Research Programme, etc. The vast mass of information collected under the above two programmes are put to effective use in the Vocational Guidance Programme as well

7.1.34. Under the Employment Market Information Programme, studies are made on the changes in the level of employment and trends in labour mobility. It also studies the occupational composition of Industries and their pattern and change trends. Information on wage structure and pay scales in respect of public sector establishments are gathered. Special surveys on demand patterns and forecasts of requirements for manpower are also undertaken on an adhoc basis. All these tell the Vocational Guidance Officers a lot about the composition of the local labour market, the existing hiring practices, the general demand pattern for workers, the Industry-Occupational patterns obtaining, in the Area, the wage structure and the possible trends of future growth and change. It also reveals the occupations for which 'shortages' of qualified personnel is felt. All these are very useful for the Vocational guidance officer to know about the economy of the Area served by his Exchange and also about the world of occupations around.

7.1.35. Under the Occupational Research Programme, extensive occupational studies are made. Occupations are studied, classified and organised in a code structure. The nomenclatures of occupations are standardised. Occupations are also studied intensively to know about their performance requirements, their skill-involvement, occupational hazards, environmental conditions, worker-traits, analysis of physical demands and a host of other allied phenomena. These are extremely useful to the Vocational Guidance worker in knowing about the occupations intimately so as to enable him to undertake the "matching" process effectively.

7.1.36. With the expertise acquired through its occupational studies, the programme is also able to prepare job specifications in respect of significant occupations as also prepare Interview-Aids in respect of occupations in which qualified applicants are frequently registered in the Employment Exchanges. These job specifications and Interview Aids are very useful in the Vocational Guidance Programme in interviewing applicants, in apprising them about jobs, etc.

7.1.37. The programme is again highly useful and can be developed to project employment by occupation in each industry. This requires development of information on the past and present occupational composition of each industry and an appraisal of how these will change. Data on the composition of each industry in the recent past are developed through the systematic compilation of statistics from various sources. The way in which the occupational composition of each industry is changing is projected by means of a study of the technology of the industry, including extensive interviews with firms. "In addition, since the introduction of a new type of technology such as numerical control of machine tools, spreads from industry to industry, separate studies are made of new technologies".

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\* "Outlook for numerical control of Machine tools" Bureau of Labour Statistics Bulletin 1947 (Washington, D. C.)

7.1.38. "The Occupational composition patterns of all industries as of a recent period can be applied to projections of each industry's total manpower requirements to yield a first approximation of projected occupational requirements. A more sophisticated approximation can be made if the patterns have been modified to take into account prospective changes in each industry's occupational composition."\*

7.1.39. *Vocational Guidance, Educational Guidance and Investment in Human Resources.*  
 —Vocational Guidance is at best to be construed only as Educational Guidance extended beyond the portals of the school/college. The one takes over where the other leaves off. Hence they are complementary to each other and have to work in close collaboration with each other. The experience gained in the practice of Vocational Guidance can go a long way in organising Educational Guidance. These two programmes worked properly and in close coordination can effectively aid Investment in Human Resources as an integral part of general manpower planning. Organising education on proper lines to meet the manpower requirements of the country needs no overemphasis. It may also not be out of place to quote from the Report of the Education Commission 1966 here on the need to reorient education :—

7.1.40. "Indian education needs a drastic reconstruction, almost a revolution. we need to bring about major improvement in the effectiveness of primary education ; to introduce work-experience as an integral element of general education to vocationalize secondary education to improve the quality of teachers at all levels and to provide teachers in sufficient strength ; to liquidate illiteracy ; to strengthen centres of advanced study and strive to attain, in some of our universities at least, higher international standards ; to lay special emphasis on the combination of teaching and research ; and to pay particular attention to education and research in agriculture and allied sciences. All this calls for a determined and large-scale action. "

Thus the development of human resources through a properly organised programme of education is contemplated.

7.1.41. This leads us directly to the concept of Investment in Human Resources as an integral part of the general Manpower Planning techniques. In the development of this concept, the contributions made by Prof. T. W. Schultz, Prof. G. B. Becker and others are note-worthy. Broadly, investment in human resources would cover the expenditure on education, on-the-job training, health, sanitation and nutrition and some of the labour and social welfare programmes. Vocational Guidance programme through the experience it drives in its operations and through the expertise gained through the Employment Market Information and the Occupational Research Programmes, can throw considerable light on problems connected with Investment in Human Resources, especially its education and on-the-job training aspects. The programme can advise planners on the types of manpower and the quantities of the said types that will be required over a period of time. It can similarly advise Educational Guidance Programmes on the occupational patterns and their likely changes over a period of years. Such advisory service will go a long way in minimising imbalances due to faulty coordination between the equipping systems of youths and the performance requirements of jobs. A theoretical discussion on the significance of investment in human resources is given in the earlier sections of the Report.

\* "Projection of Manpower Requirements and Supply " by Harold Goldstein.

## II. THE PROGRAMME OF COLLECTION, CLASSIFICATION AND USE OF OCCUPATIONAL INFORMATION.

7.1.42. A distinguishing mark of the human society is its ingenious system of occupations. Starting from the prehistoric hunting, occupations have evolved over the centuries, increasing and multiplying in the process. And what we now have is a vast, sophisticated intricate and ramified net-work of an occupational complex. There have been diverse determinants of this growth of occupations but all these can be conveniently categorised as "socio-economic" causes. The system of occupations has inextricably woven itself into the very fabric of the human society.

7.1.43. Millions of decisions that involve occupational information are made each day. And these are decisions which affect the fortunes of individuals, establishments, education system, industrial growth, nation-building, administration, etc. This chapter seeks to throw some light on this important concept of occupational information and to adumbrate at some length on its collection, classification and use.

7.1.44. *What is Occupational Information?*—An occupation is defined as "a trade, profession or type of work performed by an individual irrespective of the branch of the economic activity to which he is attached". Occupational Information includes accurate and usable information about jobs and occupations. It also includes information about industries, process and training facilities to the extent that such information is related to jobs. It again includes pertinent and usable facts about occupational trends and the supply and demand of labour. It is used in evaluating an individual's capabilities in terms of the work he has performed. And, it is principal tool in the exploring with an individual the jobs, Occupations, families of occupations, industries and relative opportunities that may be ahead for him if he makes certain vocational choices.

7.1.45. In recent years, the development of occupational information in a systematized fashion has progressed considerably. It may be construed as even forming a science of its own. In fact Kitson has proposed the term "Occupationology". Therefore it follows that occupational information is to be collected, processed and used with the same degree of accuracy and care that is characteristic of any scientific investigation in the field of the social sciences.

7.1.46. Occupational Information is ever changing. Every day new jobs are created old jobs combined or broken down. Hiring requirements also change with changes in the supply and demand of labour changes in technology, changes in contract, changes in consumers' preferences, changes in socio-economic policies—all these change the occupational structure. Unless occupational information is obtained quickly and put into usable form, it may be out of date before it has been placed into actual use. Occupational information must first be properly secured. It must then be placed in usable form. And finally it must be properly applied.

7.1.47. To understand the concept of Occupational information better, it may not be out of context here to know, the meaning of a "position", a "job" and an "occupation". A "position" is a group of tasks performed by the person. There are always as many positions as there are workers in a plant or office. A "job" is a group of similar positions in a single plant or office. An "occupation" is a group of similar jobs found in several establishments.

7.1.48. *Collection of Occupational Information.*—Generally speaking, there are two important methods of obtaining occupational information. One is “job analysis” and the other is the “survey methods”. Job Analysis is an intensive, direct method of obtaining the pertinent facts about jobs. Under this, jobs are observed and the facts of the observation are reported. These facts are also obtained through conversation with workers, supervisors and others who have information of value. Job Analysis differs from worker analysis. The items to be covered in the job analysis depend upon the uses to be made of the information. But usually the items include, job name or title; classification title; information on industry, plant, department, division, section, number employed; hires; quits, job absences; work performed; supervision given and received; level of difficulty which includes information on such items as responsibility, knowledge, initiative, mental alertness, judgment, dexterity, accuracy etc; pay rate; hours and shifts output standards; job combination or breakdown; job relationship, machines, tools equipment and material used; working conditions; social environment; physical demands; worker characteristics; previous experience required; training required, whether general, vocational, technical or on the job selection methods; occupational hazards; prospects for advancement etc. The required type of information is usually arranged in the form of a work sheet or a schedule.

7.1.49. The method of obtaining occupational information without observing the job is called a survey. Survey can be either of a questionnaire type or of the personal type. In the questionnaire type, usually the worker fills in the proforma. In the personal survey method, the person talks to workers, foreman, supervisors, etc. who may have occupational information. The enumerator does not usually observe jobs in the case of a job analysis and again the information collected is usually brief.

7.1.50. The information so obtained is seldom used in its original form. It is arranged and written in a systematic and readable style to meet practical needs. Job Descriptions are usually in the form of statements concerning the duties, qualifications, and other factors of jobs in a plant or office. Occupational Descriptions, however, give a composite description of jobs in a number of establishments. The items in such description again are selected and prepared in the light of the uses to be made of the information. When the use is for employing workers, the items which the interviewer should take into consideration in selection will be emphasized. This kind of job description is called job specification. It is called job specification because it specifies the hiring standards. Occupational descriptions can be categorised into Industrial Occupational descriptions, and individual Occupational descriptions. Where the former is limited in its coverage to the occupation as found in a given industry, the latter applies to all industries where jobs in that occupation exist.

7.1.51. The information collected is also used in the preparation of occupational Abstracts, Briefs, short write-ups occupational Monographs, Guides to Careers, Occupational Outlooks, Interview-Aids and other connected occupational literature by the Employment Service.

7.1.52. *Classification of Occupations.*—Why should occupations be classified? This is absolutely necessary because there are so many of them. They run into thousands. It is impossible for any one to keep in mind all the thousands of separate entities. Hence a classification. In the case of an individual plant or establishment, it is necessary to classify jobs in order to determine equitable rates of pay or to indicate groupings of jobs.

that can be performed by women or that can be filled by workers with various types of disabilities.

7.1.53. The choice of a particular system of occupational classification should be related to the uses to which it would be put. To the extent of variations in uses there will be differences in the systems of classification also. The National Classification of Occupations prepared by the Occupational Information Unit of the Directorate-General of Employment and Training has based its classification system on the principle of similarity of the work performed. As pointed out earlier, there may be other bases for classification like branch of industry, degree of skill, qualifications, status, etc. In the National classification of Occupations occupations with similar characteristics of work are grouped together and they are more closely related to one another in any particular family, group or division than to occupations outside of them.

7.1.54. The occupational hierarchy in our classification system, runs upwards from occupations to families, groups and divisions. A number of similar occupations are grouped under one family, a number of families of allied occupations are combined into groups and a number of related groups are assigned to divisions. Thus there are at present 11 divisions consisting of 75 occupational groups divided into 331 families. Under each family there are a number of individual occupations which at present work to over 3,600 occupations.

7.1.55. A numerical coding system is adopted in this classifications. The code number of each occupation consists of 5 digits, the first digit representing the division, the first two digits the group, the first three digits the family within the group and the five digits put together the specific occupation within the family. After the family code of three digit a point is inserted and the last two digits added to form a five digit code for the individual occupation. (e.g.) 641-15—Taxi Driver. The last two digits of the code numbers for individual occupations within a family are numbered in sequence like 10, 15, 20, 25, etc., usually leaving five or ten numbers in between. Shorter intervals indicate closer relationship as compared with other occupations in the family, and *vice versa*.

7.1.56. Broadly, division 0 represents professional, technical and related workers ; divisional administrative, executive and managerial workers ; division 2 clerical and related workers, division 3 sales workers; division 4 farmers, fishermen, hunters, loggers and related workers ; division 5 miners, quarrymen and related workers; division 6 workers in transport and communication occupations ; division 7 and 8 Craftsmen, production process workers and labourers not elsewhere classified ; division 9 service, sport and recreation workers ; and division 10 workers not classifiable by occupation.

7.1.57. For each occupation, first the appropriate code number is given ; then its main title and alternative titles are given ; next comes the description in which tasks performed are stated in the sequence in which tasks performed are stated in the sequence in which they are performed ; the fourth is the " may " portion in which the tasks which are not necessarily part of the job but still may be found to be performed in a good many instances, are included ; and finally in the last part known as the " Record " in which, a note on the machinery and tools used, materials used and special skills if any involved, etc. is added.

7.1.58. *The Occupational Information Programme in India and Tamil Nadu.*—The Occupational Information Programme of the National Employment Service is designed to serve various purposes in manpower planning, employment placement and vocational guidance.

Publications under this programme can be categorised into information pertaining to occupations ; educational and training institutions and qualifications ; employment outlook ; jobs and vacancies ; and other related matters bearing on single occupation or occupational groups or related specific educational levels. The publications so far brought out include the National Classifications of occupations ; Handbook on Training facilities, Directory of qualifications recognised by the Government of India, Educational and training requirements of production process workers ; bulletins on job opportunities, occupational specifications, interview aids ; Employment outlook series ; Career pamphlets, occupational field reviews, occupational Information Series, Vocational Adjustment Series and World of Work Series. Apart from the above, at the State level, Occupational Outlooks ; Career Bulletins ; Career Literature Series ; and Translations of guides to careers are issued. At the State level again, special and adhoc industry-occupation surveys to assess the employment-cum-occupational potential of specific industries as also to assess the occupational pattern, are undertaken.

7.1.59. *Uses.*—In recent years, business and industry have greatly expanded their development and use of occupational information. Since the post-war years it is being increasingly used in employee selection, in evaluating jobs, in merit-rating, in assessing skills, in comparing job contents, in determining lay-offs, and in transferring workers to new jobs with a minimum loss of skill. In an ever-changing and unsettled world, industry must be quick to switch over to new products and services. There is again the problem of technological change whereby the content of jobs must reflect new processes, new machines, and new products and services. Industrial training has occupational information as its foundation. Collective bargaining agreements contain much occupational information. Many contain provisions requiring accurate and upto date descriptions of jobs by the employer.

7.1.60 The National Employment Service operations revolve round the pivot of occupational information. It is the basis for registration, for documentation of vacancies, for placement, for vocational guidance and for employment market information. The data collected by this Department are also used by other agencies like the National Sample Survey, the Census Organisation, the Labour Bureau, the Statistics Department, the wage Boards, etc.

7.1.61. The international aspects of occupational information have been considerable attention by the governments of the world. Occupational and industrial classification are of particular interest in order that census data and other occupational materials may be more easily understood and interpreted. The International Labour Organisation has emphasized vocational guidance and occupational classification, and has adopted recommendations which point out the use of occupational information.

7.1.62. World War II witnessed a vast improvement in the development and use of occupational information by the armed force. During demobilization, again, occupational information, was used to provide advice to the members of the armed services.

7.1.63. The educational institutions of a country have a great use for occupational information in individual and group educational and vocational counselling and in planning and establishing new and revised courses of study.

7.1.64. Perhaps the greatest use for occupational information is to the counsellors and guidance workers, whether in educational institutions or in the Employment Service. Their entire programme hinge very heavily on the availability of up to date, accurate and comprehensive occupational information. They use it in every aspect of their work in interviewing, individual guidance, group guidance, career talks, career conferences, career seminars, career exhibitions, visits to industry, movies, courses in occupations, subject matter courses, etc.

7.1.65. Occupational Information plays a vital role in the planning and execution of community programmes dealing with the occupational adjustment of its citizens.

7.1.66. Occupational Information is very important for manpower planning and manpower development. In fact, Industry Occupation matrices are constructed to determine the manpower requirements of the industry by occupations. And it is through a consolidation of the individual occupational outlooks that a superstructure of general manpower forecasting is attempted for the economy.

7.1.67. In the rehabilitation of the handicapped, occupational information plays a vital role. In this process, the residual physical abilities of the persons are first assessed and then it is matched with the performance requirements of various jobs. In this matching certain adjustments are made both to the ability-patterns of individuals as also the performance side of jobs. In the former case it is done through prosthesis and in the latter, it is done through job-engineering. All this presuppose detailed job analysis, especially, a through analysis of the physical demands involved in the performance jobs.

7.1.68. This listing of uses can go on and on as the subject matter is of such vital importance and has, as already mentioned in the beginning, inextricably woven itself into the very fabric of the human society. What is important to bear in mind is that when one has obtained the original data about occupations, he must place his findings in useable form for practical use depending upon the actual needs.

### III. THE PROGRAMME OF EMPLOYMENT MARKET INFORMATION.

7.1.69. In any programme of Perspective Planning for economic development over a time horizon, the availability of trained manpower will act as a major determinant of the rate of progress that can be achieved in different directions. As the economy advances emphasis will have to be placed in an increasing measures not only on the quantitative, aspect of manpower but also on qualitative improvement. "In the developed countries, economic and social development has revealed chronic shortages of high-level skills, and future requirements of engineers, technicians or physicians have to be forecast. Even in the developing countries, where unemployment and underemployment mean that there is a manpower surplus, the dearth of skilled workers is acknowledged to be one cause for the disappointing results of investment. An increasing number of countries are therefore endeavouring to strike the proper balances between material investment and training of workers. What is new about this concept is that the level of skill of the labour force is now receiving as much attention as is quantitative aspects".\* And in a country like ours with its vast manpower resources, its utilisation through planned programmes needs no overemphasis

\* Michel Debeauvais—"Manpower Planning in developing Countries."

7.1.70. *A digression on the techniques of Manpower Planning.*—In a planned economy manpower resources are carefully assessed, understood, and then allocated purposefully and used, efficiently. It is the aim of manpower planning to forecast the growth of the gross national product and the population. Arising out of this is the need for a measurement of the total requirements of manpower in different years. At this stage, the extent of divergence, if any, between the available working force and additional jobs for each level of skill for different years will be clearly revealed at given rates of economic and population growth. In the next stage, attempts are made to forecast the total requirements of high level manpower, divided into the various special skills or professions. This warrants a close co-ordination between educational policy and economic trends. And then, action is required on certain supplementary measures such as location of educational institutions, student enrolment, etc. Thus manpower planning concerns itself with the demographic, educational and economic aspects of the general economic planning.

7.1.71. There are two main approaches to manpower forecasting. The genesis of one can be traced to the experience of war mobilisation and the problems of demobilisation. This is essentially a "non-economic" approach and tends to base the forecasts on technical-data, leaving aside the effects of the employment market forces on the demand and supply conditions. The other approach is essentially "economic" in nature and contributions by Professors D. Blank and George J. Stigler in this respect are noteworthy. In their work, they have examined the concept of "shortage" critically and have studied the labour market for indications of whether a particular skill is scarce or not.\*

7.1.72. The usual general approach to projecting manpower requirements is through ascertaining the factors affecting demand for the occupation, studying how they have operated by identifying and economic variables that measure or serve as proxy for each factor and that are capable of being projected independently, and then projecting the demand for the occupation on the basis of these relationships. While in some cases, such projections can be made with a simple analysis like projections on the basis of the growth and changing characteristics of the client population in respect of occupations directly serving people, such methods will not deliver the goods in respect of occupations such as engineers, machinists, stenographers, etc. There is, in these cases, a need to project demand for the project of each industry or sector of the economy in which the occupation is located. This means that the patterns of economic growth, the levels of income and the general economic activity will have to be studied and inter-related and the expenditure on each type of goods and services also taken into consideration and studied as an influencing factor. This means that the general level of economic activity, the general character of economic growth, changes in the patterns of consumption, production levels of industries, employment levels in each industry, employment by occupation in each industry will all have to be carefully studied and projected.

7.1.73. Having recounted the above series of steps which "may give the impression of an econometric juggernaut grinding remorselessly to its goal", it should now be added that the calculations are to be "tempered at every step by judgement, and that

\* D. Blank and George J. Stigler:—"The Demand and Supply of Scientific Personnel" (New York National Bureau of Economic Research).



so far as possible, the general economic analysis is supplemented by intensive studies of individual industries—their markets and technology, and the myriad institutional factors which give flavour and character to economic life.”\*

7-1-74. As for projections of manpower supply, it may be approached by making separate estimates of the labour supply in a base year, the major inflows into the supply also the major outflows. However, there is need for lot of research and the making available of information in this projection and a system of employment statistics by occupation, would help to a very great extent in this area of analysis. And for this as also for the projection of manpower requirements, the Area Employment Market Studies, properly organised and oriented, could be relied upon to a very great extent.

7-1-75. *Area Employment Market Studies and their importance in Manpower Planning.*-- The foregoing thoughts have now led us to a consideration of the meaning of the concept of Area Employment Market and an analysis of its role as a source of local information which is indispensable in a geographically large country with major industrial concentrations by area. In economic planning considerable emphasis is now placed on balanced development of different parts of the country. For formulating plans for a balanced regional development simultaneously with increasing national income, a continuous study of the economic trends and rates of growth in different areas is quite essential. In manpower planning there is an equal need for studying the manpower needs of individual regions. Such constituent regions are the Area Employment Markets.

7-1-76. “The concept of an employment market area is that of a concentration of economic activity, usually within the limits of daily travelling distances, in which workers offer their skills and employers seek to use them. Such an area becomes an organised employment market when the employment service provides the focal point at which supply and demand can be identified and measured, where any lack of balance and the factors causing it can be recognised and action can be taken directly or indirectly to bring about adjustments”† The Area Employment Market could also mean “the complex of economic and social factors involved in the process through which employers recruit workers and workers seek employment. It comprehends all the factors involving the demand and supply of labour, wage-differentials, variations in hours of work, employers’ hiring practices and the multitude of other working conditions which shape employers-worker job-relationships.”‡

7-1-77. Thus an Area Employment Market constitutes an integral region of the larger economy of the country. Where macro-economic studies are useful for planning at the national level, Area Market studies are useful for formulating regional plan programmes. Apart from aiding the larger national planning, Area Market Studies also help in the assessment, understanding and regulation of local economic and manpower phenomena with a view to achieving a reasonable level of equilibrium of the various socio-economic forces in the Area.

\* Harold Golst in—“Projections of Manpower Requirements and Supply”—In *Industrial Relations, Cal.*

† I.L.O.—“Report to participating Governments on the Asian Regional Employment Information Training Course”.

‡ *Area Manpower Guide Book*, U.S. Department of Labour.

7.1.78. For purposes of manpower planning in the region as also at the national level it is necessary to develop Area Manpower Information. The Area Market Studies throw open a vast mass of such area manpower information. The Area Employment Market Analysis deals with "the evaluation and measurement of the economic and social forces as they relate to the employment process in the local employment market. Area analysis concerns itself with the quantitative and qualitative aspects of labour demand in all industries and occupations within the geographic boundaries of a local area. It also considers the number and characteristics of the total labour supply and evaluates the factors which affect the demand supply relationship in the area."\*

7.1.79. Under the programme, occupations that are in short supply are studied. What are the different occupations in the different industries in the area, for which employers experience a persistent shortage of qualified personnel and for what reasons? How these shortages are caused, maintained and carried over? What trends have they shown in the past and what trends can be expected of them in future? Which industries experience these shortages more and why? Which occupations and types of personnel are in short-supply and why? These are some of the important posers for which answers will be sought to be found in the Area Shortage analyses. These shortage analysis have to take more and more the role of depth studies to be really useful.

7.1.80. Studies of the manpower problems of enterprises that are important to economic development are useful in assessing the difficulties in the way of development. Manpower problems of enterprises may be in hiring, in training, separation trends, job-analyses, study of job-requirements, skill-levels and wage-structure, etc. Studies in the above aspects would be helpful in organising the productive machinery of these enterprises.

7.1.81. Special studies on the utilisation patterns of skills in short supply, on the training requirements of area skills, future requirements for high level manpower, etc., are essential for developing local manpower programme. The information gathered under the above studies and the conclusions arrived at will form the basis for such manpower programmes. Local manpower programmes can then be tailored to suit the local needs such as specialised recruitment or readjusting the training capacities and skill-formation-capacities. These studies have a regulatory value and if properly undertaken and implemented will relieve the area economy from inexpedient economic frictions.

7.1.82. The Area Employment Market analysis could again produce information that will assist in distributing manpower to essential economic activity. The analysis could locate personnel of the type and number required within the area and find that their training costs, level of skill possessed, productivity level, etc. This information will be useful in effecting a rational distribution of manpower according to the priorities of requirements within the area.

7.1.83. Studies could be organised about areas with surplus Manpower and the characteristics of such manpower. Surplus manpower could mean unemployment and under-employment. To what extent there is unemployment, in

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\* Leo R. Werts—"A Manpower Programme for Economic Development".

what categories of manpower, for what length of time, and in what skill levels or educational levels and age-groups and sex will be some of the useful information that will be made available by such studies. Such information provides a guide to developing employment opportunities that can use the skills of surplus manpower. Use of such studies in Employment Programmes are obvious.

7.1.84. Information on such factors as the numbers and skills of foreign nationals employed in the area, and under-utilisation of equipment and facilities due to lack of manpower, etc., are other possibilities under these studies.

7.1.85. Industry Manpower Surveys are useful to enterprises in the Area to take actions to develop and utilise manpower to achieve production goals. Undertakings in the area find a necessity to build up an experienced workforce. This will be useful to meet their own requirements of expansion. Again, this will also be useful in supplying, expanding and new enterprises with experienced manpower. Reports on industry's manpower problems and efforts to deal with these problems " can stimulate and increase sound actions by managements ".

7.1.86. Such industry manpower surveys aim at determining the manpower requirements of the industry by occupation. Industry—occupation matrices may be useful in this. They also seek to determine the action taken by the industry to meet the manpower requirements and to see what additional actions are needed. Information on the numbers of experienced workers in each occupation which the industry must develop, the action taken to meet the requirements and what additional actions are required, etc., are also brought out in these surveys.

7.1.87. Generally speaking, such studies of industry will deal with—(1) past trends of employment ; (2) required future employment ; (3) labour turnover ; (4) working conditions ; (5) hours of work ; (6) earnings ; (7) wage rates ; (8) technological development ; and (9) changes in skills needed. Again, such analyses done at the local Employment Market Area level could always be added up through co-ordination and used in projections at the regional or the national level as well.

7.1.88. All the above and other allied studies use mostly the projective techniques as explained earlier. The National Employment Organisation through its specialised programmes such as the Employment Market Information, occupational Information, etc., is already undertaking quite a considerable amount of such manpower exercise using the manpower techniques as explained earlier. And Employment Exchanges with their location in the centre of local area Employment Markets, do strive to serve as a the focal points of the Area at which supply and demand can be identified and measured, and where again, any lack of balance and the factors causing it can be recognised and action taken directly or indirectly to bring about necessary adjustments. Thus the Area Market Studies aim at controlling and regulating the volume and velocity of the employment market trends in such a manner that the forward march of economic activities is not hampered.

#### IV. THE PLAN PROJECTS FOR EMPLOYMENT SERVICES.

7.1.89. The role of a public employment agency in controlling and directing the volume and velocity of the employment market trends needs no over-emphasis. In the context of a well-organised and systematic manpower planning framework, the Employment Service acts as a sounding post for all the intricate influencing factors in the Employment Market. Particularly, programmes like the collection of Employment Market Information, Occupational Research and Analysis, and Vocational Guidance assume significance in the context of our widespread unemployment of the educated persons. It is felt that this service needs considerable improvement and expansion during the Perspective Plan in order to play its role in co-ordinating the supply and demand of manpower.

7.1.90. During the Fourth Plan period an outlay of Rs. 19.09 lakhs only was proposed for the improvement of Employment Service which is considered to be very insignificant compared to the vital role that its services will play in manpower planning and eradication of the worst forms of unemployment. Hence greater stress is laid on improving and expanding the activities of the Department of Employment and Training in the Perspective Plan.

7.1.91. *Outlook for the Perspective Plan.*—The activities of the Department can be broadly categorised into : Placement Service, collection of Employment Market Information, Vocational Guidance Service, Occupational Research and Analysis, training and placement of the physically handicapped, training and placement of repatriates from Burmah and Ceylon, implementation of the Compulsory Notification of Vacancies Act, Staff Training, special efforts at placing the educated unemployed, special assistance and guidance to Scheduled Caste/Scheduled Tribe applicants and public relations.

##### EXPANSION OF PLACEMENT SERVICE.

7.1.92. Under 'placement' the problem is one of the staffing. The present staffing in the Employment Exchanges is too low to cope with the ever increasing number of job-seekers who call at these Exchanges. Also there is need to cover the rural areas under its coverage. With these ends in view the following schemes will be implemented during the perspective Plan.

##### *Project No. 9.*

7.1.93. *Establishment of Sub-Employment Offices.*—The object of establishment of Sub-Employment Offices is to bring to the rural population the services of the National Employment Service. The National Commission on Labour has observed that the Employment Service is confined mainly to urban areas and that consequently a large number of employment seekers, particularly in rural areas, are not able to avail themselves of the facilities offered by the Service. The Commission has also stated that this aspect required to be looked into with a view to organising the labour market by extending the operations of the National Employment Service in a phased manner over the next 10 years to all towns with a labour force of ten thousand so that rural workers may take increasing advantage of the service. The Ministry of Labour, Employment and Rehabilitation, Government of India have accepted the recommendations of the Commission and have

also commended it to the State Governments Administrations. Government of Tamil Nadu have stated that after completing the target of 10 Sub-Employment Offices fixed under the Fourth Five-Year Plan, the recommendation of the National Labour Commission will be taken up for implementation within the next 5 years and within the stipulated period of 10 years.

7.1.94. Twenty-five more sub-employment offices will be established in selected towns in Tamil Nadu with a population of 25,000 and above during the Fifth Plan and a few more sub-employment offices will be started during the Sixth Plan besides strengthening the already existing ones. These Employment offices will function as miniature Employment Offices and will attend to all functions of a normal Employment Office including registration and placement but exclusive of collection of Employment Market Information.

7.1.95. The perspective plan outlay on this will be Rs. 111.30 lakhs which could be broken into Rs. 41.30 lakhs and Rs. 70.00 lakhs for the Fifth Plan and Sixth Plan respectively.

*Project No. 10.*

7.1.96. *Strengthening of District Employment Offices.*—Employment Offices in the State do not have at present staff employment as per the staffing formula. Most of them are very much understaffed, affecting the satisfactory working of these offices. Hence, it is very necessary that when the coverage of the service is extended by way of opening more sub-Employment Offices in the districts, the staff strength of the parent office should be suitably strengthened. This is all the more necessary, because after implementation of the proposed schemes, many districts will have 2 or 3 Sub-Employment Offices and such implementation will directly result in an increase in the work load at the present offices which have to deal with all establishment and accounting matters relating to the staff of the Sub-Employment Offices, indenting and procuring of Stationery, furniture, forms, etc. As the District Employment Officer is the immediate superior officer doing inspection, etc., of those offices the clerical work relating to such inspections, their follow up, etc., has also to be attended to. Besides, the statistical data relating to these Sub-Offices have to be obtained and consolidated at the parent offices and consolidated returns rendered to the State Directorate, Directorate-General of Employment and Training, etc. Hence it is necessary to strengthen the staff position at the District Employment Offices in the jurisdiction of which Sub-Employment Offices are established. In view of this, additional posts of Assistants will be created for the Employment Offices.

7.1.97. The Fifth Plan outlay will be Rs. 5.75 lakhs and the Sixth Plan outlay will be Rs. 14.00 lakhs. The Perspective Plan outlay will come to Rs. 19.75 lakhs.

*Project No. 11.*

7.1.98. *Strengthening of existing Sub-Employment Offices.*—The existing staff at the four Sub-Employment Offices at present is inadequate which stands in the way of effective rendition of services to the employment seekers and the employers. It is necessary to strengthen the existing Sub-Employment Offices with adequate staff. Work load in these

Sub-Employment Offices is increasing gradually and it is felt that unless sufficient arrangement of staff is made the objective of establishing the Sub-Employment Offices to bring home to the rural population the services of the National Employment Services will be lost.

The outlay for the Fifth and Sixth Plans will be Rs. 2.97 lakhs and Rs. 7.03 lakhs respectively and perspective plan outlay will be Rs. 10.00 lakhs.

*Project No. 12.*

7.1.99. *Establishment of a Project Employment Office for the proposed Steel Plant at Salem.*—Consequent on the decision of the Government to set up a Steel Plant at Kanjamalai near Salem, there has been very heavy rush of registration at the District Employment Office, Salem. The object of establishing a project Employment Office is to cater specially to the man-power requirements of the proposed Steel Plant. For coping up with such heavy rush of applicants and also for making sustained efforts for getting special and technical categories of employees that the Steel Plant may require, it is necessary to have a Project Employment Office. It may be mentioned here that it has been the policy of the National Employment Service to establish such Project Exchanges when and where necessary. An instance is the Project Office which was established at Neyveli earlier, to cater to the manpower requirements of the Neyveli Lignite Corporation. This Office is now functioning at Neyveli with an extended jurisdiction of three taluks. The location of the proposed Employment Office will be within the campus of the Steel Plant. The proposed Project Employment Office will function as a normal Employment office excluding the Employment Market Information work and its jurisdiction will be decided later in consultation with Steel Plant authorities and the Government. The Office will keep in close touch with the authorities of the Steel Plant, ascertain their manpower requirements and make special efforts in sponsoring suitable candidates. For this purpose, it will work in close co-ordination with other Employment Offices in the State. The Project employment-office will be suitably strengthened during the Sixth Plan.

The outlay for the Fifth Plan will be Rs.2.83 lakhs and for the Sixth Plan the outlay will be Rs. 5.00 lakhs. The Perspective Plan outlay will be Rs. 7.83 lakhs.

*Project No. 13.*

7.1.100. *Establishment of an Employment Office in Madras City exclusively to deal with Technical Categories.*—An Employment Office in Madras City exclusively for the placement of Technical categories of applicants below degree level including Diploma holders will be established during the Fifth Plan. At present persons belonging to all Technical categories of Diploma Standard and below including artisan of various trades are registered at the District Employment Office, Nandanam, Madras-35, along with all non-technical personal other than professional and executive standard and unskilled categories below S.S.L.C. The Live Register of this office contains 32,086 persons as on 31st December 1970. On an average of 3,400 submissions are made per month by the technical section of this office alone to various employers from among those registered in technical categories. Apart from other considerations the quantum of work itself warrants setting up of a separate office to deal with the technical personnel. Such separate offices for technical

personnel are functioning in Delhi, Bombay, etc. The objective is to relieve congestion in the District Employment Office, Nandanam and to render effective placement service to technical personnel including I.T.I. trainees and Diploma holders, there is need for setting up of a separate Employment Office for technical personnel in Madras City. This office will deal with the technical personnel including diploma holders and I.T.I. trainees and would strive to improve the placement of technical personnel. This office will also facilitate the tapping private sector more effectively. During the Sixth Plan such employment offices to deal with technical categories will be established in some of the industrial centres, besides strengthening the employment office in the Madras City.

The Perspective Plan outlay will be Rs. 5.76 lakhs which could be broken into Rs. 1.76 lakhs for the Fifth Plan and to Rs. 4.00 lakhs for the Sixth Plan.

#### PROJECT No. 14.

7-1-101 *Supply of vehicles to Employment Office.*—Employer-contact is one of the main functions of the Employment Officers. Only by frequent contact and constant touch with employers, the Employment Officers can canvass vacancies and publicise the activities of the service. They have also to establish contact with Trade Unions, Schools and Colleges, Rotaries, Lions Clubs, Social Welfare Agencies and Organisation and Associations of Employers, Chambers of Commerce, etc., and enlist their co-operation. Frequently, special drives and campaigns are organised for placement of special categories of applicants such as physically handicapped, engineering graduates, etc. They have also to attend a number of Committee meetings such as District Development Councils, Harijan Welfare Committees, Selection committees, etc. District Employment Officers are touring officers in their jurisdiction which is normally a district. In view of all these reasons it is very essential that each District Employment Officer should be provided with a vehicle to enable him to move about quickly. Depending on public conveyance, results in wastage of time which they could otherwise utilise usefully. Hence one jeep to each of the following Employment Offices will be supplied during the Fifth Plan, Ootacamund, Coimbatore, Salem, Krishnagiri, Vellore, Cuddalore, Thanjavur, Tiruchirappalli, Tirunelveli, Nagercoil, Saidapet, Ramanathapuram at Madurai and Madras. During the Sixth Plan jeeps will be supplied to selected sub-employment Offices.

The Fifth Plan outlay will be Rs. 8.55 lakhs and the Sixth Plan outlay will be Rs. 10.00 lakhs. The Perspective Plan outlay will be Rs. 18.55 lakhs.

#### PROJECT No. 15.

7-1-102 *Appointment of Registration Interviewers.*—Eliciting of correct and complete information from the candidates at the time of registration is very necessary for ensuring effective submissions and ultimate placement. At present registration interviews are done by the District Employment Officers themselves in respect of educated applicants. In view of the large number of applicants reporting at Employment Exchanges, it is not possible for the officers to devote to registration interviews as much time as they deserve. Hence, the need for appointment of competent persons to take charge of this work and to devote undivided attention to it, has been long felt.

Dr. Homer J. Freeman has recommended as follows :—

“The top heavy ration of clerks to Employment Officers in Employment Exchanges makes it extremely difficult to provide a really professional service. Creation of a cadre of registration interviewers could markedly improve the calibre of local exchange personnel.” The above recommendation was considered and accepted at the 11th meeting of the working group of the National Employment Service held at New Delhi.

7-1-103. The object behind appointment of registration interviewers is to tone up the quality of registration at Exchanges and to improve guidance services. Interview techniques are highly sophisticated and trained interviewers can certainly improve the efficiency of the service by helping in a correct and proper assessment of the registrants including their levels of professional knowledge and skill. Such assessment will be highly useful for submissions, for Vocational Guidance as also for Job Development. The professional talents in assessing registrants, skills will also create a confidence on the part of the educated and professional applicants. And in almost all the advanced countries of the world, such trained interviewers play a vital role in Employment Exchange operations and they contribute a lot to the efficient working of the service.

7-1-104 The Exchanges that are selected for the appointment of interviewers during the Fifth Plan are district Employment Offices, Madras-35, Guindy, Vellore, Cuddalore, Thanjavur, Tiruchy, Salem, Krishnagiri, Coimbatore, Madurai, Ramanathapuram, Tirunelveli, Nagercoil and North Madras. During the Sixth Plan Registration Interviewers will be appointed in the Sub-employment Offices also. Scale of pay proposed for this post is Rs. 350-15-500-20-600 in the grade of Junior Employment Officer.

7-1-105 The Perspective Plan outlay will be Rs. 20.29 lakhs which could be broken into Rs. 6.29 lakhs for the Fifth Plan and Rs. 14.00 lakhs for the Sixth Plan.

#### *Project No. 16*

7-1-106 *Upgrading the post of District Employment Officers/Deputy Chiefs into that of Assistant Directors.*— The Scheme is intended to upgrade ten posts of District Employment Officers in charge of District Employment Offices to that of Assistant Directors in 10 major Districts and the three posts of Deputy Chiefs into that of Assistant Directors in the University Employment and Information Bureau at Madras, Madurai and Annamalainagar taking into account the workload at these offices. The workload will be assessed on certain criteria viz., the number of employers/establishments in the District, the volume of vacancy and registration work, size of Live Register, etc. The actual districts will be decided later. This upgrading would help in more effective supervision of work and will also give status to the officers in contacting employers, establishments, etc., besides acting as an incentive for better work. During the Fifth Plan five posts of District Employment Officers and during the Sixth Plan another five posts of District Employment Officers and three posts of Deputy Chiefs in the three University Employment Information and Guidance Bureaux, will be upgraded into that of Assistant Directors.

7-1-107 The Perspective Plan outlay will be Rs. 2.05 lakhs which could be broken into Rs. 0.80 lakh and Rs. 1.25 lakhs for the Fifth and Sixth Plan respectively.



*Project No. 17*

7-1-108 *Assistance to University Employment Bureaux.*—In addition to the existing staff, an officer with the three University Employment Information and Guidance Bureaux at Madras, Madurai and Annamalainagar on a continuing basis during the Fifth Plan to prepare projects on the employability of the youth, to organise publications and to be in charge of audiovisual and library materials for the modernisation of university employment programmes. During the Sixth Plan the above programme will be suitably expanded by strengthening the staff.

7-1-109 A sum of Rs. 2.50 lakhs and Rs. 8.00 lakhs will be made available for the purpose during the Fifth and Sixth Plan respectively. The Perspective Plan outlay will be Rs. 10.50 lakhs.

*Project No. 18*

7-1-110 *Creation of a Public Relations and Publicity Unit.*—The Department of Employment and Training including the Tamil Nadu Soldier's, Sailor's, and Airmen's Board organisation is primarily a "Services" Department serving the community as a whole and as such it has to come into contact and deal with the Public in large numbers. It is, therefore felt that there should be proper liaison between the public and Department and so the need for the services of a Public Relations Officer is keenly felt. He will be entrusted with the activities relating to Publicity and public relations for the three wings of the Department of Employment and Training, viz., (1) Employment Wing, (2) Training Wing and (3) Soldier's, Sailor's and Airmen's Organisation. Without proper publicity, the general public are not in a position to know the activities of the Employment Services. There are District Employment Offices and Sub-Employment Offices in the Districts and important towns in the State for rendering employment assistance for the thousands of candidates who have registered their names in the Employment Exchanges. Equally important are the Industrial Training Institutes wherein students have to be educated on different trades that are available in the 34 Industrial Training Institutes. Demobilised service personnel also need information regarding different types of benefits like grants and loans available to them. Therefore a Public Relations and Publicity Unit will be created with the necessary supporting staff during the Fifth Plan. The scheme will be expanded with the necessary staff during the Sixth Plan.

7-1-111 The outlays for the Fifth Plan and Sixth Plan will be Rs. 1.49 lakhs and Rs. 3.00 lakhs respectively. The Perspective Plan outlay will be Rs. 4.49 lakhs.

*Project No. 19*

7-1-112 *Construction of building for Employment Exchanges in Madras City and in other towns.*—Inadequacy of suitability of accommodation for Employment Exchanges has been a serious handicap in functioning efficiently. All the Employment Exchanges in this state are housed in rented buildings and in recent years rents are soaring high. In Madras City, there are five offices working on a functional basis but located in different localities and different buildings. Barring the District Employment Office for the unskilled and the University Employment Information and Guidance Bureau, Madras, the other three offices, viz., the professional and executive Employment Office, the special

Employment Office for the Physically Handicapped and the District Employment Office, Madras-35 can be housed in one suitably designed premises. Since the total rent paid by these offices is about Rs. 3,500 per mensem and the present premises occupied by them are not very congenial for efficient service to the public, construction of a suitably designed building in a Central locality in Madras City to accommodate those offices is considered necessary. It is a longfelt need and if such a building is constructed, it will not only be conducive to efficient work and better co-ordination among these offices, but would also help in cutting down considerably the heavy expenditure on rent.

7-1-113. During the Fifth Plan pucca buildings will be constructed to accommodate the Employment Offices in the Madras City and during the Sixth Plan similar buildings will be constructed in the important towns in the State. The Fifth Plan outlay on this will be Rs. 5-00 lakhs and the Sixth Plan outlay will be Rs. 20-00 lakhs. The Perspective Plan outlay thus comes to Rs. 25-00 lakhs.

#### *Project No. 20*

7-1-114. *Setting up of a Second District Employment Office in bigger districts.*—Present there is only one District Employment Office in each district except South Arcot district where there is a second employment office at Neyveli which was originally started as a project exchange. Some of the districts are very big in area and therefore applicants and employers in such districts are not in a position to have contacts with the Employment Offices due to the vast distance they may have to travel. Therefore in such big districts, it is necessary to have at least 2 district Employment Offices with properly drawn jurisdiction so that the public can be served better. Even if Sub-Employment Offices are established it will be necessary to have a second full-fledged Employment Office as it is not administratively convenient to cover a vast area by one Employment Office. To begin with it is proposed to have a second District Employment Office in the districts of Ramanathapuram and Coimbatore during the Fifth Plan. Five such Employment Offices will be set up during the Sixth Plan.

7-1-115. The outlays for the Fifth and Sixth Plans will be Rs. 12-00 lakhs and Rs. 30-00 lakhs respectively. The perspective Plan outlay will be Rs. 42-00 lakhs.

#### VOCATIONAL GUIDANCE.

7-1-116 The programme of Vocational Guidance seeks to use the information on job opportunities to the best advantage of the job-seekers. It studies the job-seekers even in their school stages and after assessing their aptitudes, interests and abilities, matches the same with the job requirements of the world of work. The programme has to be developed fully to cover all our youths during the Perspective Plan period. This will avoid wastages to manpower and eliminate large-scale unemployment in course of time.

#### *Project No. 21*

7-1-117. *Setting up a Vocational Guidance Unit in the Employment Exchanges and Sub-employment Offices.*—Separate Vocational Guidance Units are at present functioning in 12 Employment Exchanges in the State, viz., at North Arcot, Neyveli, Chingleput, Coimbatore, Kanyakumari, Madras-35, Madurai, Ramanathapuram, Salem, Thanjavur, Tiruchirappalli and Tirunelveli. The only Employment areas in the State not served

by Vocational Guidance Unit at present are the Nilgiris and Dharmapuri Districts, in the case of the Cuddalore area, even though the taluks covered by the Cuddalore Employment Exchange are to be served by the District Employment Office (Youth Employment Service) Neyveli Office in the practice, this procedure is far from effective. As the District Employment Officer (Youth Employment Service of South Arcot District stationed at Neyveli Exchange) is not in a position to do full justice for vocational guidance work in South Arcot district, as he is already overloaded with normal Employment Exchange work of Neyveli office. Moreover, a valuable part of job counselling is to be imparted to the job-seekers as and when they visit the Employment Offices for registration and eventually this means functioning of as separate vocational guidance unit within the Cuddalore Employment Exchange premises also. The present need of the hour is thus to bridge the guidance gap existing in the Employment Exchanges at Dharmapuri, Ootacamund and Cuddalore by setting up a separate Vocational Guidance Unit in each of them. Such a move has also been recommended in the report sent by the State Government on the Note circulated by the Cabinet Secretariat New Delhi, on the occasion of the conference of the Chief Secretaries held at New Delhi. The report conceded "we agree for the extension of the Vocational Guidance Units in all the districts including Ootacamund, Krishnagiri and Cuddalore subject to availability of funds". Therefore Vocational Guidance Units will be set up in the Employment Exchanges at Nilgiris, Dharmapuri and Cuddalore Offices during the Fifth Plan. During the sixth Plan more Vocational Guidance Units will be started.

7-1-118. The Fifth and Sixth Plan outlays on this will be Rs. 5.69 and Rs. 20.00 lakhs respectively. The total Perspective Plan outlay will be Rs. 25.69 lakhs.

*Project No. 22:*

7-1-119. *Strengthening the present staff of Vocational Guidance Units in the Districts.*—The success of the Vocational Guidance Programme primarily rests on building up a sound information base on topics of occupational and career interest. Besides accumulating a wealth of literature on courses, careers, scholarships, training facilities, foreign studies, etc., such data collected need also to be made up-to-date periodically. Besides, vocational guidance unit in the districts do also bring out periodical career bulletins which to be used as a reference guide should be exhaustively informative. All this implies enormous collection of source materials by post and by visits to various agencies in the field. Over and above the issue of informative bulletins, the multifarious activities of the vocational Guidance Units comprise group guidance, group discussions, individual guidance, individual information collection and display of occupational and training information maintenance of career lectures in schools, organising career exhibitions, students meets, information Gallery Seminars of Parent Teacher's Associations, etc., and last but not the least forging close tie-ups with the allied manpower and related agencies in the field.

7-1-120. The Vocational Guidance Units in the districts, at present headed by a District Employment Officer (Youth Employment Service) and assisted by a Typist [with the sole exception of Madras-35 unit which has a Junior Employment Officer (YES) in addition] are day by day finding it more difficult to meet the growing needs of the Vocational Guidance Programme. Added to this the District Employment Officer (Youth Employment

Service) has to make extensive tours, visiting schools and colleges in his district area delivering talks on which occasions the job seekers calling at Employment Offices are deprived of valued guidance from him. In projects of this type, nothing matters most as the quality of service rendered, which can be stepped up only with adequate staff strengthening. It is therefore, considered high time that each of the 12 existing Vocational Guidance Units in the State may be sanctioned the posts of a Technical Assistant, so that routine matters relating to occupational data collection, dissemination of collected information to visiting job seekers, individual enquiries on job details and other related matters may be attended to by the Junior executive, leaving sufficient time for the District Employment Officer (Youth Employment Service) to concentrate on vital vocational guidance matters such as liaisons with institutions delivering lectures, conduct of career exhibitions/seminars more vigorous follow up individual guidance, assessment of aptitudes, etc.

7.1.121 Of late, with the increasing assignment of various special study, survey, career literature publication, collection of occupational information, etc., the volume of correspondence is mounting up considerably necessitating exclusive attention of a full time clerk. Further the Vocational Guidance Units require the services of one more peon also, as a sizeable portion of Vocational Guidance activity consists of frequent erection of posters, charts, maintenance of career Information Room setting up stalls in exhibitions and transport of chart materials and other necessaries from place to place. Thus in order to overcome the difficulties indicated above it is suggested that the existing staff complement of the Vocational Guidance Unit may be strengthened during the Perspective Plan.

7.1.122 The outlays for the Fifth and Sixth Plans will be Rs. 8.98 and Rs. 20.02 lakhs respectively. The total outlay for the Perspective Plan will be Rs. 29.00 lakhs.

**Project No. 23:**

7.1.123 *Improving the Vocational Guidance and Information Programmes.*—One of the primary objective of the Vocational Guidance Programme is to inculcate in the minds of the present day youth the prospective entrants to Labour market a sense of career consciousness and career planning, somewhat they are motivated to identify, evaluate, and assess their own interests, aptitude and capacity, and fashion their educational plans and job aspirations in close conformity to their interests, tests and talents.

7.1.124 It is only with this idea of propogating the utility of head for and facility available at Employment Exchanges of Career—advice service that periodical career exhibitions, students meets, parents-teachers seminars and other publicity measures are periodically implemented by District Vocational Guidance Officers.

7.1.125 However the matter of publicity is lagging behind and much remains to be done. The Vocational Guidance programme is still to make any big impact in remote rural areas of the Districts, which are however served by a well unit net work of higher secondary and high schools. Even though the Vocational Guidance Officers are expected to cover and deliver career lectures in all the high schools in area once a year a host of hurdles such as a lack of transport staff inadequacy and pressing official commitments has hampered the satisfactory fulfilments of this target. However, even in a

few cases, where the Vocational Guidance Officers have managed to deliver a talk in a remote school area, the influence created by such isolated occurrence could not be kept alive for want of sustained follow up visits. All this have resulted in an inevitable concentration of Vocational Guidance activities in and around cities, towns and other semi-urban areas, rather than in remote parts of the districts.

7.1.126. The operational inadequacy was recognised long since back and the XIIth meeting of the State Co-ordination Committee of the Vocational Guidance and Employment Counselling recommended the setting up a Mobile Career Exhibition unit at the State Headquarters, with a film projector kit ; so that constant tours are performed through the year, periodically covering all the secondary, Higher Secondary and High schools in the state and conducting miniature exhibitions for the benefit of the pupils. However handicapped at that time by uneasy financial position, the Committee suggested invoking the financial help from generous minded social welfare organisation such as Lions Club, Rotary Club, Madras Round Table Club, etc.

7.1.127. It needs hardly any emphasis how invaluable a mobile unit of the type suggested above will prove in the implementation of Vocational Guidance Programme in the State with the audio-visual education equipment in the form of film projector, perhaps it is the most enticing device to impress the youth and school pupils on the indispensability of career-pre-planning for shaping their brighter future. The charts for use by Mobile Exhibition Units will be prepared by the Vocational Guidance Artists. The total outlay for the Perspective Plan will be Rs. 14.05 lakhs. The outlay for the Fifth and Sixth Plan will be Rs. 4.05 and Rs. 10.00 lakhs respectively.

*Project No. 24:*

7.1.128. *Setting up of a State Career Study Centre.*—Publications of exhaustive and upto-date guidance literature on jobs, occupations, careers, educational facilities, training facilities, scholarships, etc., at State level as well as All India level is the backbone of activities of Vocational Guidance Programme, for in the absence of such information base, imparting effective counselling and career advice will be, little better than an enlightened guess work. One of the main functions of the State Vocational Guidance Unit and field units in the districts is therefore to bring out various literatures of occupational importance, which is useful for the school leavers and college leavers in planning their future career by acquainting themselves with the world be work. Eventhough the State Vocational Guidance unit brings out some literature of this kind, much headway is yet to be made in this direction. With the increasing inflow of source data on occupations, careers, courses and training, consequent on accentuation of Vocational Guidance activities in the Employment Exchanges, the need for a specialised State level agency for studying and processing occupational and training materials collected and for editing and issuing reports of guidance interest is becoming and more apparent.

7.1.129. Sanction has already been accorded for the establishment of an adequately staffed career Study Centre at the C.I.R.T.E.S., New Delhi and it is recommended that similar centres are established at States' Headquarters of the Vocational Guidance Units also, for maintaining close co-ordination with the centre at C.I.R.T.E.S. There is expected to be a constant feed back of information from State Centres to Central Centre

and these are to be done by the Government Press. The career literature in the next few years is bound to increase with the expansion and intensification of the activities under the Vocational Guidance Programme. A number of reports, pertaining to Surveys and Studies—Both ad hoc and regular—under the E.M.I. Programme is also required to be printed. Besides, the printing works of the training wing, T.N.S.S. and a Board Organisation and Amalgamated fund have got to be done. In case the career Study Centre is established as suggested by Government of India, the printing work would considerably increase. Due to the pressure of work at the Government Press, it has been our experience that the printing of these various items is considerably delayed and very often the Director of Stationery and Printing advises us to get them printed outside. If there is a printing Unit attached to the Department of Employment and Training all the items of printing for the Department can be done speedily which in turn would ensure the time value of the reports relating to Employment Market Information and Vocational Guidance and Occupational Information Programme. Further it may be added, there will be enough work for this Unit, throughout the year.

7.1.140. The perspective Plan outlay on this scheme will be Rs. 18.00 lakhs. The Fifth and Sixth Plan outlays will be Rs. 10.00 and Rs. 8.00 lakhs respectively.

7.1.141. *Occupational Research and Analysis.*—Occupational Research and Analysis is the pivot around which all the Employment Service activities revolve. It studies, classifies, and analysis information on the different occupations in the economy and prepares these information into suitable forms for consumption by employment officers, guidance workers, and consellers, students, teachers, parents, job-seekers, personnel managers, research workers, etc. As the information will be extremely useful in man-power planning, this programme will be developed suitably.

*Project No. 29*

7.1.142 *Development of jobs and improved services to industries.*—In the courses of its working for well over two decades now, the Employment Organisation has developed considerably expertise through the operation of special schemes like the Employment Market Information, Occupational Research and Analysis and Vocational Guidances. This expertise can now be used to offer consultancy service to employers. The employment services can assist the employers in job analysis, analysis of physical demands, skill-survey, interviewing techniques. By offering such consultancy, employers are likely to get confidence in the effectiveness of the services as a whole and such a confidence will lead to a possible channelising of all their recruitment through the Employment Exchanges. With the above background in view, it is proposed to establish a machinery for offering Industrial consultancy and for the development of jobs with a Headquarters Unit as State Directorate and Zonal Units.

7.1.143 Job development is an accepted technique to be used by the Employment Organisation for placing special types of applicants and the hard-to-place applicants like the professionals, the highly qualified, those with special training or skills, the physically handicapped, etc. Normally, this is done through telephone and personal contacts with employers on an exploratory basis and by forwarding "resumes" of indivi-

duals to employers. These techniques are meant to develop a job for an individual. All these techniques inform the employer that the Employment Service has a professional and skilled placement programme, that the employment office has qualified professionals or skilled applicants and that the interviewers know how to evaluate their skills and know where they are likely to be needed. In soliciting opening for specific applicants, complete information about such applicant is to be made readily available and is to be presented in a well organised fashion designed to interest employer in terms of the needs of his establishment. Thus it could be seen that the two programmes of Industrial consultancy and job development are complementary to each other.

7.1.144 The efficient performance of the above jobs can be done through a machinery with a headquarters cell in the Directorate and Zonal Units in the districts. The Headquarters Cell can incidentally be in charge of a Zone also, namely the Madras Zone which will comprise Madras City and Chingleput District.

7.1.145 The other zones, numbering four, will be in the mofussil. The zonal areas have been determined taking into account the number of employers in the area, the total strength of Live Registers of the Employment Exchanges in the area and the relative importance of the areas comprising the zones. The districts, the strength of Live Registers, the total number of establishments comprising the different zones and their headquarters towns are indicated below:

<i>Serial number and name of the Headquarters Coverage.</i>	<i>Total on Live Register.</i>	<i>Total establish- ments in Public and Private Sectors.</i>
(1)	(2)	(3)
(FIGURES AS ON OCTOBER, 1970)		
1 Madras (will be located at the State Directorate).	92,942	4,331
2 Salem .. .. . Salem, Dharmapuri and North Arcot.	92,552	4,781
3 Tiruchy .. .. . Tiruchy, Thanjavur and South Arcot.	92,801	5,686
4 Madurai .. .. . Madurai, Ramnad, Tirunelveli and Kanyakumari.	90,741	7,427
5 Coimbatore .. .. . Coimbatore and Nilgiris	43,803	3,632

7.1.146. The Coimbatore Zone is accorded the status of a Zone even though the number of establishments and Lives Registers are comparatively less, because of its importance from the point of view of concentration of textile and machine tool industries as also because of its comparatively bigger number of larger sized establishments and its being a centre of

technical education. To discharge the duties effectively, each zone needs a vehicle. Without a jeep, it will not be possible for them to undertake promotional contacts with employers, industries, executive, and technical institutions which will be not only continues, but intensive also.

7-1-147. The Fifth and Sixth Plan outlays on this Scheme will be Rs. 27.23 and Rs. 35.00 lakhs respectively. The Plan outlay will be Rs. 62.23.

*Project No. 30*

7-1-148. *Extension of Occupational Research and Analysis Programme.*—It is proposed to expand the State Occupational Research and Analysis Unit so as to include the following additional programmes in its scope:—

- A. Occupational Forecasting.
- B. Preparation of Occupational specifications and Interview Aids.
- C. Developing an Employer's Service Cell.

7-1-149. The existing programme of preparation of occupational outlooks by the State Occupational Research and Analysis Unit may be developed into an Occupational forecasting programme which would issue reliable forecasts on future occupational patterns and requirements of personnel in specific occupations which will be very useful in any planning of manpower.

7-1-150. In the "Report to the Government of India on the Development of Programmes of Occupational Information and Youth Employment Service, Vocational Guidance and Employment Counselling" I.L.O report, it was said "when the occupational sphere had thus been covered, first by the classification of Occupational and then by the Occupational Field Reviews, it would be time to take up selected occupations and publish more detailed data in new series of loose-leaf issues to be called occupational specifications and Interview Aids". And such a stage has for long been reached now and the occupational sphere already covered as stated. These specifications and Interview Aids would be prepared only for selected occupation that are particularly important or likely to cause special difficulties in employment service work. The main sections of each issue would be :—

- (i) Definition of occupations ;
- (ii) Work performed ;
- (iii) Working conditions and hazards ;
- (iv) Physiological and psychological requirements ;
- (v) Related occupations ;
- (vi) Training for entering the occupations ;
- (vii) Trade questions and answers ;

(viii) Guidance point for interviewing employers. The uses of the preparation of such occupational specifications and Interview Aids in the context of general programme of Job Development needs no over emphasis.



7-1-151. The existing tools of occupational study used by the Occupational Information Unit could successfully be developed into a programme of Employment Service for the benefit of employers in matters like Job Analysis; Analysis of Physical Demands; Job Classification and general job study. Thus this programme can directly help the Industrial consultancy service, by paving the way for its ultimate emergence through an efficient employer Service.

7-1-152. The perspective Plan outlay on this will be Rs. 21.40 lakhs. The Fifth and Sixth Plan Outlays will be Rs. 6.40 and Rs. 15.00 lakhs.

7-1-153. *Implementation of Compulsory Notification of Vacancies Act.*—The Compulsory Notification of Vacancies Act is helpful in accurating manpower studies, in the absence of an effective implementation machinery, the information collected remain highly unreliable and incomplete. There will therefore be suitable strengthening of this programme.

*Project No. 31*

7-1-154. *Establishment of a machinery for the enforcement of the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959.*—Benefit could be realised fully only if its provisions of the Employment Exchange (Compulsory Notification of Vacancies) Act, 1959 and its rules are implemented fully.

7-1-155. Under the above Act, all establishments in public sector and establishments in the private sector employing 25 or more persons are to render quarterly employment returns and biennial occupational returns. Also, the notification of vacancies arising in the above establishments to the employment exchange of the area and recruitment of all workers through the Employment Exchanges in respect of Public Sector establishments alone, are compulsory under the Act.

7-1-156. Thus the Act seeks to achieve the following results ;

- (i) to get periodical (quarterly) report on the employment position ;
- (ii) to study the changes in the level of employment with reasons therefor ;
- (iii) to study the occupational pattern (one in two years) along with particulars of educational qualifications required for holding these occupations ;
- (iv) to study the changes in the pattern of occupations by themselves and with reference to the various industries ;
- (v) to know about the difficulties experienced by employers to filling up certain vacancies due to shortage of qualified and suitable persons ;
- (vi) to study the quantum and pattern of women employment ;
- (vii) to enforce recruitment of personnel compulsorily through the Employment Exchange in respect of Public Sector establishments ;
- (viii) to encourage the recruitment of personnel through the Employment Exchange in respect of private sector establishments on a voluntary basis.

Apart from the above the information collected through the returns prescribed under the Act also throw open a great mass of useful data on occupations, qualifications, required for holding them, particulars of emoluments, training and apprenticeship possibilities, occupations in short supply etc., which are so very useful in other Employment Service Programme like Employment Market Information, Vocational Guidance, Occupational Research, Placement and Registration, etc.

7.1.157. Even after well over a decade since the passing of the Act, the enforcement side of the Act has not made satisfactory progress with the result that the implementation of the provisions of the Act and the rules have not been effective. Hence the urgent need for an enforcement Machinery. Since the function of enforcement and the prosecution of defaulters under the Act cannot be performed by the Employment Exchange Staff as the same could cause incalculable harm to the service, it is proposed to create a separate Enforcement Machinery ;

7.1.158. The proposed machinery will have a Headquarters unit and zonal units. While the Headquarters unit will be in overall charge of the programme for the State as a whole and will co-ordinate and guide the activities of the zonal units, the latter will be responsible for identifying the defaulters and launching proceedings against them etc. The Headquarters unit will incidentally be in charge of the zonal functions in respect of the Madras zone, comprising Madras City and Chingleput District.

7.1.159. Since the work of the zonal units involve frequent visits to establishments coming under the purview of the Act, the provision of a motor vehicles to each unit is absolutely necessary. While jeeps may be provided to mufussil units, a staff car may be provided to the Madras Unit which will also be the Headquarters Unit.

7.1.160. The zonal areas have been determined taking into account the number of establishments in the Area, coming under the purview of the Act. The yardstick of 2,000 establishments has been taken as a rough standard. But areas with lesser and more number of establishments have been determined as Zones on the basis of other factors also like geographical contiguity, administrative convenience, relative industrial importances of the areas and the relative establishments-importance of the areas, etc. Consequently, the following zones with their revenue areas and Act establishments strength, indicated against each have been determined.

<i>Serial number, name and Headquarters, town and Zone.</i>	<i>Comprising districts.</i>	<i>Number of Act establishments.</i>
(1)	(2)	(3)
1 Madras (will be located at the State Directorate).	Madras and Chingleput	1,891
2 Salem .. .. .	Salem, North Arcot and Dharmapuri.	1,339

Serial number, name and Headquarters, town and Zone	Comprising districts.	Number of Act establishments.
(1)	(2)	(3)
3 Tiruchirappalli .. ..	Tiruchirappalli, Thanjavur and South Arcot.	1,628
4 Coimbatore .. ..	Coimbatore and Nilgiris ..	1,364
5 Madurai .. ..	Madurai, Ramanathapuram, Tirunelveli and Kanyakumari	2,355

Bearing the above described aspects of work involved for each unit in mind, and also bearing the fact that the Headquarters unit, in addition to its Headquarters functions will also act as Madras Zonal unit, etc. the additional staff complements for the Headquarters unit (including Madras Zonal Unit) and the 4 mofussil units are considered absolutely essential, during the Fifth Plan. During the Sixth Plan the scheme will be suitably improved to cover more mofussil units.

7.1.161. The perspective Plan outlay will be Rs. 84.00 lakhs, which could be broken into Rs. 34.00 lakhs for the Fifth and Rs. 50.00 lakhs for the Sixth Plan.

#### MANPOWER RESEARCH.

##### *Project No. 32.*

*State Manpower Division.*—This is a new scheme. Manpower has been the most neglected subject of study in our State. Because of lack of proper and upto-date manpower planning, we are left with a paradoxical situation where we find “men without jobs and jobs without men”. This type of inconvenient shortages and inexpedient surpluses of manpower could be avoided through manpower planning based on applied manpower research. This division will undertake the study and forecasting of manpower supply and demand over the perspective plan years in respect of all the occupations and the sections of the economy. In fine, this research division will prepare manpower budget on an year to year basis in respect of the economy of Tamil Nadu. The preamble, objectives etc., of the Division have already been discussed in chapter III of this Report.

The outlay on this will be Rs. 322.95 lakhs during the Fifth plan which includes the cost of a computer also and costs of publications. The sixth plan outlay will be Rs. 600.00 lakhs. Thus, the perspective plan outlay comes to Rs. 922.95 lakhs.

##### *Project No. 33.*

*Project for the development job profiles in Tamil Nadu.*—This is a new scheme. This project rises out of the situation in which the world of work changes continuously with the changes in technology the discovery of and substitution of new materials demanding new or changed skills and talents. For up-to-date job description specifications and definitions, for planning manpower, recruitment, selection, placement and training, labour

relations, wage and personnel administration, education, curricula development, etc. job profiles will be useful. The occupational and educational profiles of France and the functional classifications of occupations of the U.S.A. are instances in point. The outlay for the scheme will be Rs. 16.00 lakhs during the Fifth Plan and Rs. 20.00 lakhs for the Sixth Plan. The perspective plan outlay will be Rs. 36.00 lakhs.

#### PLACEMENT OF PHYSICALLY HANDICAPPED.

##### PROJECT No. 34

*Setting up of a Workshop for Blind.*—The scheme “Setting up of a Workshop for the blind” is intended to provide employment to the blind who have already received training in some trade or other. Under this scheme it is intended to have hostel with boarding and lodging facilities for the blind, work centres for training/re-training and employing of the blind persons, an office and residential accommodation for the warden.

The perspective plan outlay will be Rs. 37.00 lakhs. The Fifth and Sixth Plan outlay will be Rs. 7.00 and Rs. 30.00 lakhs respectively.

### B. APPROACH TO APPRENTICESHIP AND CRAFTSMEN TRAINING PROGRAMMES.

#### I. APPRENTICESHIP AND TRAINING PROGRAMME.

7.2.1. These are days of planning. We in Tamil Nadu have taken up perspective planning for our economic development. In this context, it is pertinent to note that the availability of trained manpower will act as a major determinant of the rate of progress that can be achieved in different directions. As the economy advances, emphasis will have to be placed in an increasing measure not only on the quantitative aspect of manpower but also on qualitative improvement. There is, in evidence, in modern economics, more especially in developing economics an articulate attempt at building up such competence and skill in its people. The building of such an infrastructure mean, to use the words of Eli Ginzberg “educating and training of corps of competent managers, administration professionals technicians, and skilled workers.” It is the last one of the above group viz., “technicians and skilled workers” that is covered under craftsmen training programmes. We also notice that an increasing number of countries are endeavouring to strike a proper balance between material investment and training of workers. What is new about this phenomenon is that the level of skill of the labour force is now receiving as much attention as its quantitative aspect. And in a country like ours with its vast manpower resources, its utilisation through planned training and apprenticeship programmes needs no over-emphasis.

7.2.2. As the modern production process is complex and inter related with other environmental factors, we have to think of any training programme only within the context of over all area employment market. This concept of an area Employment Market assumes significance in this context as a source of local information which is indispensable in a geographically large country such as ours with major industrial concentrations by area. The employment market area could be thought of as a concentration of economic activity,

usually within the limits of daily travelling distances in which workers offer their skills and employers seek to use them. Such an area becomes an organised employment market when the employment service provides the focal point at which supply and demand can be identified and measured, where any lack of balance and the factors causing it can be recognized and action can be taken directly or indirectly to bring about adjustments.

7.2.3 Thus we can glean in an Employment Market Area information regarding the skill demand and skill supplies also.

7.2.4 As industrial growth is largely dependent on the availability of skills, there is in evidence in modern economics, particularly in developing economies, an articulate attempt at building up such competence and skill as infrastructure for industrial growth.

7.2.5 The importance of craftsmen skills in industry needs no over emphasis. Realising this importance, the Government of India introduced the Craftsmen Training Programme as part of the Plan programme in 1956. With the active collaboration of the State Governments, the scheme has, over the years, developed and expanded into a vast network of a training complex imparting education in basic Craftsmen skills; affording opportunities for apprenticeship in the above skills; offering retraining facilities for workers; and undertaking training of instructors in the crafts.

7.2.6 The State of Tamil Nadu, as it is wont to in other fields, has made a mark in this field also. With a view to ensuring a steady flow of skilled workers to the industry, to raising the quality and quantity of production through systematic training of workers, and to reducing frictional unemployment among educated youth by equipping them for Industrial employment, the scheme has been implemented in this State with zeal and rapidity. As a result, there are at present 31 Industrial Training Institutes in this State with an intake capacity of 13,112 trainees.

7.2.7 The future programmes in this direction are to introduce 1,000 additional seats under the expansion programme of the existing Industrial Training Institutes. Another proposal is to diversify the existing training programmes to suit the requirements of industries in consultation with the State Council for Training in vocational trades, employers organisations, industrialists, etc.

7.2.8 As the aim of the scheme is to help industrial growth, the courses of training, the trades and their syllabus, etc., have all been tailored to suit the needs of the industries surrounding the locations of the various training centres. The programmes are constantly studied, reviewed and improved upon to suit the changing needs of the industries.

7.2.9 After the institutional training, some students undergo an apprenticeship training with a view to acquiring an industrial orientation. This is arranged under the Apprentices Act, 1959. Industries are covered under this Act and 61 trades have been designated. Under the above Act, it is obligatory on the part of establishments to train apprentices according to a fixed ratio, varying between 1 : 1 and 1 : 7. The duration of apprenticeship also varies between six months and four years depending upon the skill-involvement of various trades. Minimum age for engagement of an apprentice is 14 years with no maximum limit. Recruitment can be from out of Ex-Industrial Training Institute boys or

from open market. The guiding factor is that the recruits should undergo the basic training in Craftsmanship for the prescribed period for each trade. Related instructions are given to these apprentices at Government cost at the Industrial Training Institutes. In Tamil Nadu, 4,344 establishments are covered under this Act with an intake capacity of 3,417 apprentices.

7-2-10 The trades taught in an area, be it under the I.T.I's or under the Apprentices Act, are so arranged that they meet the craftsmen requirements of the industries in the area. Close co-ordination with industrialists is sought to be maintained in programming the training and in giving an Industrial orientation to the trainees. This coordination helps a great deal in making the syllabus comprehensive and the training upto-date and pragmatic. Small industries may also avail themselves of these facilities besides large industries.

7-2-11 It has been noticed that some industries, especially those run on small scales, find it difficult to get skilled workmen because there is a constant movement of skilled workers from small scale industries to the large scale ones. These driftings are motivated by reasons of higher remuneration better prospects and working conditions, as, also the halo effect held out by large concerns. The obvious remedy for this melody lies in undertaking a systematic and continuous training of craftsmen by all industries, large and small. The group apprenticeship programmes is mainly intended for the small-scale industries. Under this programme, two, three or four undertakings get together and pool their facilities for giving training to apprentices covering the whole range of the training programme. This is done by rotating the apprentices among the participating firms. Under this scheme, an apprentice is attached to one firm but gets his training in other firms also in respect of those portions of his training in which his own firm is unable to train him. If two or more firms think of starting such a scheme, all they have to do is to get in touch with the State Apprenticeship Adviser through the Principal of the local Industrial Training Institute. The department thereupon undertakes a depth survey and advises.

7-2-12 The apprentices at the end of their training appear for the final trade test conducted by the National Council for Training in Vocational Trades and those successful are awarded the National Apprenticeship Certificates. The holders of these certificates are normally taken as skilled workers in factories.

7-2-13 The same of Apprentices training is found to be useful to establishments as well-planned apprenticeship ensures quality work-manship, cuts production costs, ensures efficiency, assures job satisfaction to employees introduces a dynamism in the skills acquired, encourages the growth of Secondary industries, makes employer-participation in the society's training programme possible, and generally increases productivity and profits. A well trained worker is an asset to the establishment, to the industry and to the Society.

7-2-14 The Government of Tamil Nadu have sanctioned a special scheme for training displaced goldsmiths, handloom weavers and pattern makers in craftsman skills. The scheme is in operation in the Industrial Training Institutes at Salem, Pettai, Madurai and Tiruchirappalli. The duration of the course is two years with evening classes and applicants should be able to read and write.

7-2-15 With a view to helping the industrial workers to get a better theoretical background of their respective trades, evening classes are arranged at the Industrial Training Institutes. This training is available in Madras, Coimbatore, and Madurai. For all trades except welding and cutting and tailoring, the duration of the course is two years. For the exceptions, the duration is one year. This programme can take 1,050 trainees at present.

7-2-16 For such of those who want to start enterprises on their own, there is a need to give some training on how to run a commercial enterprise. With this end in view commercial units have been started in North Madras and Coimbatore in the carpentry trade. These units will try to provide the industrial experience to the trainees, so that they can embark upon their ventures with more confidence.

7-2-17 In the private sector, there are 59 Industrial Schools recognised by the Department with an intake capacity of 4,894 trainees. These schools are given financial assistance for their maintenance and the students are eligible for industrial scholarships. Scheduled Castes/Backward Class students get the usual benefits of fee concessions under the Madras Education Rules. The training function of these schools are reviewed, guided and controlled by the Department of Employment and Training. Uniform standards of teaching and a minimum level of efficient functioning are sought to be achieved through constant follow up.

7-2-18 Craftsmen form an important part of the manpower of any nation. They form the basis on which an efficient industrial superstructure could be built. Hence for the health and sustenance of this superstructure, it is essential to keep the base in good shape. It should further be kept flexible and at the same time strong enough to take in any type of change in its superstructure, i.e., from gradual changes in production processes to spasmodic convulsions caused by unexpected changes in techno-economic conditions. All this means a continuous assessment of the requirements for craftsmen and their level of skills and types of skills. A concomitant constant vigil on the industrial growth production process, job content, job market, etc., is also necessary. The department of Employment and Training seeks to achieve this end through the functions of its two wings namely the Employment and Training Wings. Where the former watches the labour market, studies its inner trends, perceives its outer movements, discerns its job-pattern carefully and generally feels the pulse of the entire economic complex in the Area, the latter adjusts its supply function with reference to a main group of participants in the labour force, namely, the Craftsmen, in accordance with the advices given by the former as to the quality, the quantity and the when and where of craftman requirements of the Area.

## II. CRAFTSMAN REQUIREMENTS DURING THE PERSPECTIVE PLANS.

7-2-19 Under the Training Wing of the Directorate of Employment and Training comes the control of all the Industrial Training Institutes/Centre in Tamil Nadu, where training is imparted in 28 Engineering Trades and in six non-engineering trades, annually about 8,000 craftsmen are turned out from the Industrial Training Institutes. This outturn of craftsmen upto the end of Third Five-Year Plan and during the Annual Plans have steadily kept up the tempo of Industrial Development up to the Annual Plans of 1966-67 and 1967-68. But during the subsequent recession period, there was a standstill. Due to the present sanction of new schemes, mechanisation of farming and starting up of Fertiliser

plants and development of petro-chemical complex the tempo of industrial development is picking up. To meet the rising demand for the new types of trades, that are likely to come up the personnel required therefore and also to maintain pool of trained craftsmen to suit any industry, organised expansion and consolidation of programmes of training is necessary.

7.2.20 We are now in an era of mass education in schools and only a fraction of the pupils go on to higher studies; it should be possible to divert the majority to practical vocational education at a fairly early stage. In the year 1970, 103,974 candidates passed out, out of 191,853 candidates that appeared in the S.S.L.C. examination and in 1971, 111,823 passed out, out of 1,93,059 that appeared. It may not be possible for all of them to get admission in the Colleges for P.U.C. and higher studies. Therefore suitable facilities and avenues must be created for the candidates who cannot afford or find seats for University education after passing S.S.L.C. and those who failed in S.S.L.C. as also those who stopped their education in the middle of secondary education. In Tamil Nadu, 60.6 per cent of illiterates will be slowly picking up education and they are all from poorer sections of society. All these categories have necessarily to be provided training facilities in the Industrial Training Institutes to gain useful employment. These numbers will swell considerably by ex-servicemen, Burma and Ceylon repatriates and those who come within the purview of the rehabilitation programme of Government.

7.2.21. There are 6,100 factories in Tamil Nadu and it is 8.5 per cent of the total factories in India. Tamil Nadu ranks third in the total number of factories in India. The number of workers in factories in Tamil Nadu in the year 1969, were 4.04 lakhs; in 1970, 4.08 lakhs and during this year 4.32 lakhs. Against the total population in Tamil Nadu 8.7 per cent are employed in factories. This reveals a steady increase of about 4,000 workers in the year 1970 and a steep rise has been registered in the last year as a result of setting up of new industries in Tamil Nadu. The increase in factory employment will depend upon mainly upon the craftsmen produced in the Industrial Training Institutes. Out of the jobs available even in middle level technicians according to Damodaran Committee's Reports, only 36 per cent were filled by Diploma holders, while 48 per cent were filled by craftsmen from Industrial Training Institutes in the factories and the remaining 16 per cent by Engineering Graduates. This is in addition to the operative level in Industry wholly manned by craftsmen. Thus the skilled craftsmen constitute an indispensable pre-requisite for the development of the industry in the country.

7.2.22. At the beginning of the Second Five Year Plan there were six Industrial Training Institutes with 768 seats in this state. At the end of Second Plan, the number of institutions was raised to 10 with 3,368 seats. During Third Five-Year Plan against the target of 14 new Industrial Training Institutes with 3,500 seats, 20 new Industrial Training Institutes were started with 6,224 seats. Thus at the end of Second Five-Year Plan period, there were 30 Industrial Training Institutes/Centre with a total sanctioned seating capacity of 9,592.

7.2.23. In the Annual Plans 1966-67 and 1967-68, 3,530 additional seats were introduced and one more Industrial Planning Training Institute was started. At present there are 31 Industrial Training Institutes in Tamil Nadu with a seating capacity of 12,112 seats with an annual outturn of about 8,000 craftsmen.



7.2.24. Demand for craftsmen is a complex function of several inter-related factors like volume of investment and production type of factors like volume of investment etc. It is also difficult to estimate the demand for craftsmen and in particular categories that would be required during the Perspective Plan period by building up the demand from each industry or even sector-wise. In the absence of any definite statistical knowledge of the several factors, affecting the demand for craftsmen, it is not possible to fix the number of craftsmen required in the Perspective Plan period from the demand point of view. The only other approach that can be made to assess the magnitude of the problem is from the labour force point of view. There is necessity to progressively shift the percentage of workers from Agricultural sector to non-Agricultural sector in order to achieve a higher rate of production and national income.

7.2.25. In arriving at the estimate of craftsmen for the perspective plan, the following assumptions are made :

(1) There will be an annual decrease of 0.5 per cent of workers in Agriculture during 1974-79. According to the Report of Economic Appraisal of Tamil Nadu 1971, 60.11 per cent are occupied in cultivation and as agricultural labour. The percentage of workers employed in agriculture was reduced by 2 per cent only between 1961 and 1971. The rate of shift is slow inspite of the green revolution. This back log has been maintaining in this activity and the Union Planning Commission has already accepted the need for the shift and has set the target as 10 per cent over a period of 15 years. Thus it is seen that there is a decline of 0.2 per cent only as against 0.66 per cent recommended by the Union Planning Commission per year.

(2) The total manpower (male) resources excluding agriculture, trade and commerce as on 1974 would be 48.59 lakhs and at the end of 1981 it would be 58.29 lakhs. There will be an increase of 9.7 lakhs of workers in these sectors. Applying the Union Planning Commission's assumption that 17 per cent of the addition of male labour force will be craftsmen, we shall be requiring additional 1.649 lakhs of craftsmen for Tamil Nadu from 1974 to 1981 which necessitates an annual increase of 23,000 every year.

It is not possible to achieve this needed skill training and may not be necessary also in the Industrial Training Institutes alone. In fact, the accepted mode of training in several foreign countries is to train in institutes as well as in factories and applying a ratio of 1 : 1 as between institutional and implant training. We have to train nearly 11,500 craftsmen every year during the perspective plan period.

(3) At present there are plans to set up Petro-Chemical complexes costing about Rs. 200 crores. A Fertiliser Plant is to come up at Tuticorin. A Pharmaceutical Project is being set up by I.C.I. at Ennore. The Salem Steel Plant is under way and the ultimate employment potential for the Salem Steel Plant alone will be 5,000. We are also likely to have an Atomic Power Plant at Kalpakkam. The expansion of mining activities at Neyveli Lignite Corporation also is going to be taken up and many new plastic, rubber and other chemical factories are likely to come up. There are also ambitious schemes for Road Development. This may also increase the need for trained craftsmen.

Because of the fillip given by the Government of Tamil Nadu the number of small scale industries unit are increasing by leaps and bounds. For this, a large number of craftsmen would be required. Further due to mechanisation of farms, a large number of craftsmen will be required to produce and maintain the agricultural machines and implements. This fact has also to be taken note of. Apart from this, the scheme provides scope for self employment for those who are in a position to start industries.

(4) At present, out of the total number of trainees admitted, about 18 per cent are reserved for Scheduled Castes and 31 per cent for Backward Classes. It is seen that only poorer section of the community which includes more Backward Classes and Scheduled Castes join the industrial training Institutes. These poorer sections, if trained properly in the right trades will be in a position to have better status in life and improve their economic conditions and status in society. In order to arrive at the right type of trades and for giving them effective training, a Planning Division for headquarters is essential. This division is essential for initial organisation for the preparation of perspective plan detailed schemes. Thus it may be seen that apart from providing the necessary trained force, this scheme provides for the uplift of the economic and social standards of the poorer sections of the society. Following are the conclusions.

(a) Annual requirement of craftsmen per year during the perspective Plan.	11,500
(b) Present output per year	8,000
(c) Additional facilities required	3,500

### III. THE PLAN PROJECTS FOR APPRENTICESHIP AND CRAFTSMEN TRAINING.

#### Project No. 35

7.2.26. *New Industrial Training Institute.*—Twenty eight Industrial Training Institutions with a total sanctioned capacity of 7,000 seats which includes four institutes with an intake of 1,000 seats exclusively for women will be started during the perspective plan. New trades will be introduced to meet the changing needs of industry towards State and All India needs. The starting of the new industrial training institutes will be considered based on the demand and the backwardness of the area. The total cost of starting 28 new Industrial Training Institutes during Perspective Plan will be Rs. 1,022.00 lakhs as given under—

	(RUPEES IN LAKHS)
Land	56.00
Buildings	300.00
Tools and equipment	240.00
Furniture	6.00
	<hr/>
Recurring expenditure for Perspective Plan period	420.00
	<hr/>
Total	1,022.00

7.2.27. Under this scheme, acquisition of land at 15 acres per institute, construction of buildings, procurement of tools and equipment, furniture and recurring cost in establishment are also proposed. Funds required for advance action, towards the acquisition of land, construction of buildings, procurement of tools and equipment and training of Craft Instructors would be Rs. 1,67.00 lakhs each for the Fifth and Sixth Plans as detailed below :—

RUPEES IN LAKHS.					
1	Lands	..	..	28.00	} Non-recurring expenditure.
2	Buildings	..	..	75.00	
3	Tools and Equipment	..	..	60.00	
4	Training of Instructors	..	..	4.00	Recurring expenditure.
				167.00	Each for the fifth and Sixth Plans

The total fifth Plan outlay will be Rs. 5,11.00 lakhs and the sixth plan outlay will also be Rs. 511.00 lakhs.

*Project No. 36*

7.2.28. *Construction of Hostels.*—This scheme contemplates the construction of 40 hostels including 28 for the new industrial training institutes proposed for the Perspective Plan. Acquisition of land for the 28 hostels have been proposed along with lands for the industrial training institutes and funds have to be provided only for the construction of remaining hostels.

7.2.29. Cost of construction of 20 hostels will be Rs. 100.00 lakhs during fifth plan. Cost of construction of another 20 hostels will be Rs. 100.00 lakhs. The total Perspective plan outlay will be Rs. 200.00 lakhs.

*Project No. 37*

7.2.30. *Construction of staff quarters.*—This scheme contemplates the construction of staff quarters for the essential staff in the Industrial Training Institutes. During the fifth plan accommodation will be provided to essential staff against 50 per cent admissible as provided in the scheme. It has been proposed to construct staff quarters for 20 industrial training institutes at the rate of 8 Nos. each (total 160 Nos.) which includes the six industrial training institutes started during the third plan, and which works out to about, 10 per cent of staff even in small Industrial Training Institutes. During the sixth plan 400 staff quarters will be constructed. The cost of construction of 160 staff quarters for 20 Industrial training institutes during the Fifth Plan works out to Rs. 30.00 lakhs. The cost of construction of 400 staff quarters during the sixth plan works out to Rs. 45.00 lakhs. The perspective plan outlay will be Rs. 75.00 lakhs.

*Project No. 38*

7.2.31. *Strengthening of State Directorate.*—This scheme contemplates the provision of adequate staff to meet the increase in volume of work for the preliminary action and implementation of schemes during the Perspective plan. Under this scheme it is proposed to establish :—

- (1) Curricular Development Cell.

**(2) Separate Planning Division.**

(Office sections will have to be provided for each in addition to special staff).

**(3) Strengthening of Accounts branch.**

7.2.32. The Curriculum Cell will advise the changes or modification in the syllabi and curriculum of various courses and prepare trade manuals, charts, text-books in Tamil. This cell will also undertake programme training, research and study of domestic and foreign systems of vocational training, study of audio-visual aids, etc. This curriculum cell will be under the control of a Deputy Director (Cell) assisted by an Assistant Director, Technical Assistant, Draughtsman, Artist, Translators, Roneo Operator, Mechanic, Librarian and also with necessary ministerial staff. For this cell, special equipments like, Ammonia Printer, Xerox Printers, Duplicators, etc., will be provided.

7.2.33. Planning Division comes under the control of a Deputy Director (Planning) and assisted by Gazetted Assistant with necessary ministerial staff. This Division undertakes the survey of skills required in the industry, formulation of schemes, study of the impact of technical innovation on vocational training, study of improvement of skills, study of the measurement and revaluation of training effects, empirical study of training methods of trades and collection of materials concerning vocational training, follow up activities concerning craftsmen from Industrial Training Institutes in co-ordination with the Employment Wing.

7.2.34. To co-ordinate the activities of all training programmes and to meet the increase in volume of work in general and in accounts in all respects, it is proposed to create the following posts with connected section staff.

1	Joint Director	..	..	..	1
2	Deputy Director (Administration)				1
3	Deputy Director (Technical)	..			1
4	Gazetted Assistant (Planning Division).				1
5	Senior Accounts Officer	..			1
6	Junior Accounts Officer	..			1
7	Assistant Director (Inspection)	..			1
8	Superintendents	..	..	..	5
9	Librarian	..	..	..	1
10	Assistants	..	..	..	10
11	Junior Assistants	..	..	..	5
12	Typists	..	..	..	5
13	Steno-typists	..	..	..	5
14	Peons	..	..	..	19
15	Record Clerk (Attender)	..	..	..	1

Towards advance action the following minimum staff would be required :—

1 Deputy Director (Technical)	--	1	} for two sections.
2 Gazetted Assistant (Planning Division).		1	
3 Superintendents .. .. .		2	
4 Assistants .. .. .		4	
5 Junior Assistants .. .. .		2	
6 Typists .. .. .		2	
7 Steno-typists .. .. .		2	
8 Peon .. .. .		1	

7.2.35. The fifth and sixth plan outlays on this will be Rs. 25.00 lakhs and Rs. 40.00 lakhs respectively. The total Perspective Plan outlay will be Rs. 65.00 lakhs.

#### Project No. 39

7.2.36. *Diversification of trades.*—This scheme will help convert the unnecessary and unpopular trades into essential and remunerative trades. It will also reduce the seats in the trades which have reached surplus stage in the employment market and introduce new and popular trades with reference to the demand position in the Employment market. Changing technologies and grow the pattern in general will also be taken into consideration. Diversification will take place reference to admission trends with employment opportunities and demands from industry. The fact that new Chemical and Petro-chemical complex are coming up, is taken into account and provision will be made to start new trades to cater the needs of these industries. Trades like Mechanic (Electronic), Chemical Attendant (Operator) will be introduced in the Industrial Training Institutes in Tamil Nadu for the first instance. Under this diversification of programme construction of building is kept to the minimum and the purchase of furniture is proposed only wherever absolutely necessary. Purchase of tools and equipments will also be made with reference to the actual requirement after taking into consideration the availability of common tools which are available in the Industrial Training Institutes under the trades abolished.

7.2.37. A lumpsum provision of Rs. 150.00 lakhs is proposed for the Perspective Plan period which could be broken into Rs. 50.00 lakhs for the Fifth Plan and Rs. 100.00 lakhs for the Sixth Plan.

#### Project No. 40

7.2.38. *Replacement of worn out equipment.*—This scheme contemplates the purchase of tools and equipments for the trades which are already existing in the Industrial Training Institutes and for which proposals for the purchase of deficient tools worth Rs. 70.00 lakhs is already pending with Government during Fourth Plan. The whole amount has to be provided for the fifth plan as the purchase of the deficient tools is quite essential in view of the revision of standard list of tools and equipment. This scheme also provides funds of Rs. 30.00 lakhs towards the purchase of machinery in order to replace the worn out machinery which are in existence in the Industrial Training Institutes for more than 15 years.

The Fifth Plan outlay will be Rs. 100.00 lakhs. The sixth plan outlay will be Rs. 150.00 lakhs. The total perspective plan outlay will be Rs. 250.00 lakhs.

*Project No. 41*

7.2.40. *Evening Classes for Industrial Workers.*—During the third plan, two centres were opened with a sanctioned seats of 200 each. For the fourth plan, it was proposed to start 4 more centres with a sanctioned seats of 800. But only one centre at Industrial Training Institute, Ambattur was sanctioned with a sanctioned capacity of 200 seats which were introduced in two sessions commenced on 1st September 1970 and 1st September 1971. The proposal for starting one centre at Industrial Training Institute, Tiruchirappalli sent to Government was deferred due to financial stringency. A centre for evening classes for industrial workers can be started at Industrial Training Institute, Mettur dam as there are 50,000 workers in that area. Taking into consideration the earlier target proposed for fourth plan there is necessity to start 3 more centres with 600 seats small during the fifth plan. Six more centres will be started during the sixth plan with 1,200 seats.

7.2.41. The total perspective plan outlay will be Rs. 6.00 lakhs. The fifth and sixth plan outlays will be Rs. 2.00 and Rs. 4.00 lakhs respectively.

*Project No. 42.*

7.2.42. *Training Institutes.*—Setting up of Rural Training Institutes in Tamil Nadu was proposed during fourth plan but not established. Under Rural development schemes special provision has also been made for Agro-Industrial Estates. Necessary training has to be imparted to workers in the estates.

7.2.43. This scheme will be carried over to the perspective plan with an outlay of Rs. 35.00 lakhs. The fifth plan outlay will be Rs. 10.00 lakhs and the sixth plan outlay will be Rs. 25.00 lakhs.

*Project No. 43.*

7.2.44. *Training of Craft Instructors.*—The quality of the craftsmen no doubt will depend on the quality of the teaching staff. Apart from development activities, stress is also to be made on consolidation and toning up of quality of the training during perspective plan for this, apart from starting a curriculam cell, it is proposed to give intensive training for the Instructors in the Industrial Training Institutes at Central Training Institutes and also in major industries so that there will be an industrial atmosphere and industrial orientation in the Industrial Training Institutes. There should be a constant touch with the industry for the Craft Instructors so that they can have practical knowledge and latest know-how. Under this scheme the Craft Instructors recruited for the new Industrial Training Institutes have to be given initial training in the Central Training Institute and those who have already undergone training in Central Training Institute have to be sent for refresher training in the Central Training Institute and Industrial establishments.

7.2.45. The outlay on this scheme for the fifth plan will be Rs. 17.20 lakhs and for the sixth plan the outlay will be Rs. 40.00 lakhs. The total perspective plan outlay will be Rs. 57.20 lakhs.

*Project No. 44*

7-2-46. *Apprenticeship Training under Apprentices Act.*—This scheme contemplates the implementation of the following schemes during perspective plan:—

- (1) Starting of Basic Training Centre for Printing trades at Industrial Training Institute, Madurai.
- (2) Expansion of printing trades at Industrial Training Institute, Guindy.
- (3) Starting of Basic Training Centre for Chemical Trades.
- (4) Starting of Basic Training Centre for non-Industrial Training Institute Trades.
- (5) Reimbursement of Basic Training charges for catering trades at the Institute of Catering Technology, Adayar, Madras.
- (6) Reimbursement of Basic Training charges in Printing and other trades to establishment.
- (7) Reimbursement of shop floor training charges to establishment.
- (8) Expansion of related instruction centre and also starting of new related instruction centres.
- (9) Setting up of Regional Deputy Director's office and creation of additional staff for State Directorate.
- (10) Construction of hostel for apprentices at North Madras, Coimbatore and other places.

7-2-47. The cost of the above schemes during fifth plan will be Rs. 117-68 lakhs. The sixth plan outlay will be Rs. 150-00 lakhs. The total outlay for the perspective plan will be Rs. 267-68 lakhs.

*Project No. 45.*

7-2-48. *Evaluation Research and Development.*—This scheme contemplates evaluation of the entire Craftsmen Training Programme during the sixth plan. Moreover research will also be made. The Sixth Plan outlay will be Rs. 400-00 lakhs.

7-2-49. Under the Craftsmen Training Programme, advance action is to be initiated in respect of the Fifth Five-Year Plan proposals on the following major projects :

<i>Serial number and name of scheme.</i>	<i>Purposes for which advance action is to be taken.</i>	<i>Funds required.</i>
(1)	(2)	(3)
		(RS. IN LAKHS.)
1 Strengthening of State Directorate	To undertake correct assessment of trades by study by the Planning cell in Director of Employment and Training's office and to prepare plan schemes for fifth plan period.	1-00

Serial number and name of scheme. (1)	Purposes for which advance action is to be taken. (2)	Funds required. (3) (Rs. in LAKHS.)
1 Starting of new Industrial Institutes and expansion of existing I.T.Is.	Acquisition of lands, preparation of plans and estimates—	
	Land .. .. .	28-00
	Building .. .. .	75-00
	Preliminary work connected with the procure- ment of tools and equipment in advance.	60-00
	Expenditure on deputation of Craft Instructors to C.T.Is. for initial training.	4-00
2 Construction of hostels .. .. .	Preparation of plans and estimates for construc- tions.	25-00
4 Construction of staff quarters .. .. .	Do.	6-00
5 Diversification of trades .. .. .	Procurement of tools for new trades .. .. .	10-00
6 Apprenticeship Training scheme .. .. .	Construction of buildings and purchase of tools and equipments.	22-00
	Total ..	231-00



## CHAPTER VIII

### MANPOWER CONTENTS OF THE PLAN PROJECTS

This chapter is added to this report as a preliminary exercise in the task of working out detailed Manpower requirements of the various plan schemes. To the extent possible the Manpower contents by broad skill divisions have been furnished by the various Task Forces and they are included here. This Task Force however would work out these Manpower contents of the various schemes of the Perspective Plan in terms of the Industry—Occupation Tables which we have used already in the section on “a review of the past trends ‘Occupation Trends in Tamil Nadu’”, in this report (*vide* chapter V). The immediate advantage of this exercise for the planning purposes would be that we would be able to forecast the Manpower requirements over the Perspective Plan period and this would help in our Manpower Planning efforts. Perhaps such an exercise might also be helpful in orientating our educational programmes to suit the Manpower requirements. An indirect advantage of this exercise would be that by throwing open valuable information about future shortages and surpluses of Manpower. This would enable us to take suitable preventive measures which would iron out unemployment educated and skilled persons during the course of the Perspective Plan period. As a first exercise in this task therefore this chapter on a tentative and rough estimate of the Manpower contents of the different schemes proposed by the various Task Forces for the Fifth and Sixth Plans is included in this report.

#### 1. URBAN DEVELOPMENT (INCLUDING URBAN HOUSING), REGIONAL PLANNING AND TOURISM SKILLED MANPOWER COMPONENTS.

##### I. TOWN PLANNING AND URBAN DEVELOPMENT (STATE SECTOR).

Name of the scheme.	Total persons.	Skilled.		Details for Technical posts.										
		Technical.	Non-technical (Administrative).											
(1)	(2)	(3)	(4)	(5)										
Preparation and implementation of Detailed Development Plans in Urban Area—Assistance by loans to Local Planning Authorities.	2,000	30	10	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Engineers .. .. .</td> <td style="text-align: right; width: 20%;">2</td> </tr> <tr> <td>Engineering Technicians ..</td> <td style="text-align: right;">13</td> </tr> <tr> <td>Town Planners .. .. .</td> <td style="text-align: right;">8</td> </tr> <tr> <td>Town Planning Technicians .. .. .</td> <td style="text-align: right;">8</td> </tr> <tr> <td style="text-align: right;"><b>Total</b></td> <td style="text-align: right; border-top: 1px solid black;"><b>30</b></td> </tr> </table>	Engineers .. .. .	2	Engineering Technicians ..	13	Town Planners .. .. .	8	Town Planning Technicians .. .. .	8	<b>Total</b>	<b>30</b>
Engineers .. .. .	2													
Engineering Technicians ..	13													
Town Planners .. .. .	8													
Town Planning Technicians .. .. .	8													
<b>Total</b>	<b>30</b>													
Formulation and implementation of Master Plans for Urban Areas including setting up of Local Planning Authorities.	2,000	31	30	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Town Planners .. .. .</td> <td style="text-align: right; width: 20%;">10</td> </tr> <tr> <td>Town Planning Technicians .. .. .</td> <td style="text-align: right;">15</td> </tr> <tr> <td>Engineers .. .. .</td> <td style="text-align: right;">1</td> </tr> <tr> <td>Engineering Technicians ..</td> <td style="text-align: right;">4</td> </tr> <tr> <td style="text-align: right;"><b>Total</b></td> <td style="text-align: right; border-top: 1px solid black;"><b>31</b></td> </tr> </table>	Town Planners .. .. .	10	Town Planning Technicians .. .. .	15	Engineers .. .. .	1	Engineering Technicians ..	4	<b>Total</b>	<b>31</b>
Town Planners .. .. .	10													
Town Planning Technicians .. .. .	15													
Engineers .. .. .	1													
Engineering Technicians ..	4													
<b>Total</b>	<b>31</b>													

I. TOWN PLANNING AND URBAN DEVELOPMENT (STATE SECTOR)—*cont.*

Name of the scheme.	Total persons.	Skilled.		Details for Technical posts
		Technical.	Non-technical (Administrative).	
(1)	(2)	(3)	(4)	(5)
3 Formulation and implementation of Regional Plan including setting up of Regional Planning Authorities.	2,000	46	80	Town Planners .. .. 16 Town Planning Technicians .. .. 24 Engineers .. .. 2 Engineering Technicians .. 4 <hr/> 46
4 Formulation and implementation of Plans for New Towns, Statellite Towns and Urban modes including setting up of New Town Authorities and Planning Authorities.	1,000	52	56	Town Planners .. .. 26 Town Planning Technicians .. .. 24 <hr/> 50
5 Setting up of Tamil Nadu State Town and Country Planning Board and strengthening the District Directorate of Town Planning.	100	26	28	Town Planners .. .. 11 Town Planning Technicians .. .. 15 <hr/> 26
6 Urban Development including acquisition of Land—(a self financing schemes).	24,000	216	48	Engineers .. .. 72 Engineering Technicians .. 144 <hr/> 216
7 Research in Urban planning Publicity and promotion of Planning including Library and equipment.	25	10	5	Town Planners .. .. 4 Town Planning Technicians .. .. 5 Photographer .. .. 1 <hr/> 10
8 Training of Specialists in Town Planning.	Existing staff in the respective Training Institutions will continue.			
9 Comprehensive Traffic and Transportation studies of Major cities (including equipment).	60	32	5	
10 Implementation of Metropolitan Plans for Major cities including setting up of Metropolitan Development Authorities.	200	51	26	Town Planners .. .. 31 Town Planning Technicians .. .. 20 <hr/> 51

I. TOWN PLANNING AND URBAN DEVELOPMENT (STATE SECTOR)—*cont.*

Name of the scheme	Total persons.	Skilled.		Remarks.
		Technical.	Non-technical (Administrative).	
(1)	(2)	(3)	(4)	(5)
11 Remunerative enterprises — Loans Assistance to Local Bodies.	2,500	65	17	Engineers .. .. . 21 Engineering Technicians .. 44
				<u>65</u>

## NOTE :

## I. Technical :—

- Engineers indicate Engineering Degree Holders (In Civil and Highway Engineering).
- Engineering Technicians indicate Diploma holders in Civil Engineering and also courses offered in allied subjects at the Industrial Training Institutes and Polytechnics in the State.
- Town Planners indicates persons qualified in Town Planning (either Post Graduate Degree or post Diploma in Town Planning).
- Town Planning Technicians indicate Post Diploma in Town and country Planning offered by the Central Polytechnic, Madras.

## II. Non-Technical—

- Administrative indicates Arts and Science graduates and also P.U.C. and S.S.L.C. qualified persons; typewriting and stenography qualified persons also fall in this category, so also ministerial staff as Assistants.

## II. URBAN HOUSING (STATE SECTOR).

Name of the Scheme.	Total persons.	Skilled.		Details for Technical posts.
		Technical	Non-Technical. (Administrative).	
(1)	(2)	(3)	(4)	(5)
I Subsidised Industrial Housing Scheme—				
(a) Public Sector .. .. .	10,000	65	15	{ Engineers .. .. . 21 Engineering Technicians .. 44
(b) Co-operative Sector .. .. .				
Low Income Group Housing Scheme—				
(a) Tamil Nadu Housing Board .. }	46,500	325	75	{ Engineers .. .. . 105 Engineering Technicians .. 220
(b) Co-operative Sector .. .. .				
Middle income Housing Scheme—				
(a) Tamil Nadu Housing Board .. }	50,000	325	75	{ Engineers .. .. . 105 Engineering Technicians .. 220
(b) Co-operative Sector .. .. .				

## II. URBAN HOUSING (STATE SECTOR)—cont.

Name of Scheme.	Total persons.	Skilled.		Details for Technical posts.
		Technical (Administrative).	Non-Technical.	
(1)	(2)	(3)	(4)	(5)
4 Land acquisition and Development scheme (Housing plots) a self-financing scheme.	99,840	65	70	Engineers .. .. . 21 Engineering Technicians .. 44 <u>65</u>
5 Tamil Nadu Government Servants' Rental Housing Scheme.	15,000	130	30	Engineers .. .. . 42 Engineering Technicians .. 88 <u>130</u>
6 Slum Clearance/Improvement Scheme—				
(a) Tamil Nadu Slum Clearance Board .. .. .	1,12,500	715	165	{ Engineers .. .. . 231 Engineering Technicians .. 484 <u>715</u>
(b) Tamil Nadu Housing Board .. }				

## NOTE :—

## I. Technical :

(1) Engineers indicate Engineering Degree Holders (in Civil and Highway engineering).

(2) Engineering Technicians indicate Diploma holders in Civil Engineering and also courses offered in allied subjects at the Industrial Training Institutes and Polytechnics in the State.

## II. Non-Technical :

(1) Administrative indicates Arts and Science graduates and also P.U.C. and S.S.L.C. qualified persons; typewriting and Stenography qualified persons also fall in this category so also ministerial staff as Assistants

## III. TOURISM (STATE SECTOR).

Name of Scheme.	Total persons.	Skilled.		Details for Technical posts.
		Technical	Non-Technical (Administrative).	
(1)	(2)	(3)	(4)	(5)
1 Construction of Tourist Bungalows and improving existing Tourist accommodation (including Central Heating in Hill stations at Ooty, Kodai, Kolli Hills and Yercaud).	2,500	18	4	Engineers .. .. . 6 Engineering Technicians .. 12 <u>18</u>
2 Developing Tourist spots of scenic beauty and improving existing Tourist's spots in Hill areas (Ooty, Kodai, Kolli Hills and Yercaud, Valparai, etc.).	800	71	25	Engineers .. .. . 21 Engineering Technicians .. 47 Horticulturist .. .. . 1 Architect .. .. . 1 Artists .. .. . 1 <u>71</u>
Provision of Recreational facilities such as Boating, Swimming, Picnic spots and Landscaping including Auditoriums.	500	65	25	Engineers .. .. . 21 Engineering Technicians .. 44 <u>65</u>

## III. TOURISM (STATE SECTOR) — cont.

Name of Scheme.	Total persons.	Skilled.		Details for Technical posts.
		Technical	Non-Technical (Administrative).	
(1)	(2)	(3)	(4)	(5)
4 Publicity and promotion programmes of Tourism in Tamil Nadu.	100	6	42	Cine Technicians .. .. 2
				Photographers .. .. 2
				Artists .. .. 2
				6
5 Opening out link roads, and improving existing approaches to Tourists' spots.	3,000	65	15	Engineers .. .. 21
				Engineering Technicians .. 44
				65
6 Setting up of Museums at Delhi, Bombay, Calcutta and other important cities with exhibits of Tamil cultural Arts and Handicrafts.	39	3	30	Artists .. .. 3
7 Training courses and programmes for Tourist Guides.	20	5	12	Historian .. .. 1
				Architect .. .. 1
				Artist .. .. 1
				Archeologist .. .. 1
				Engineering draughtsman 1
				5
8 Integrated development of Tourists spots, Pilgrim centres, Archeological and Historical monuments and introduction package tour programmes.	80	8	40	Guides .. .. 8
9 Providing modern transport facilities for tourists travel (including air, water, road and rail journeys) and also electric hauling devices such as wire ropes and winches.	60	13	12	Mechanical Engineer .. 1
				Mechanics .. .. 12
				13
10 Setting up of Museums and Art Galleries at Madurai, Tiruchirappalli and Coimbatore.	39	3	30	Artists .. .. 3

## NOTE :

## I. Technical—

(1) Engineers indicate Engineering Degree-holders (in Civil and Highway Engineering).

(2) Engineering Technicians indicate Diploma holders in Civil Engineering and also courses offered in allied subjects at the Industrial Training Institutes and Polytechnics in the State.

## II. Non-Technical—

(1) Administrative indicates Arts and Science graduates and also P.U.C. and S.S.L.C. qualified persons; typewriting and stenography qualified persons also falls in this category so also ministerial staff as Assistant's

## CENTRALLY SPONSORED SCHEMES.

Name of the Scheme.	Total persons.	Skilled.		Details for Technical posts.
		Technical	Non-Technical. (Administrative).	
(1)	(2)	(3)	(4)	(5)
<b>I. Town Planning and Urban Development :</b>				
1 Pilot Research Project in Growth Centres.	20	2	10	Town Planner .. .. 2
2 Implementation of Metropolitan Plans, Satellite and New Towns Plans.	1,60,000	487	242	Engineers .. .. . 171 Engineering Technicians .. 316 <u>487</u>
<b>II. Urban Housing :</b>				
Setting up manufacturing plants for building materials (as bricks, prefabrications etc).	5,600	32	36	Engineers .. .. . 16 Engineering Technicians .. 16 <u>32</u>
<b>III. Tourism :</b>				
Integrated development of Tourist infrastructure including construction of Low Income Group Rest Houses and improving landscape.	6,600	81	26	Engineers .. .. . 21 Engineering Technicians .. 60 <u>81</u>

## NOTE :

**I. Technical :**

(1) Engineers indicate Engineering Degree Holders (in Civil and Highway Engineering).

(2) Engineering Technicians indicate Diploma holders in Civil Engineering and also courses offered in allied subjects at the Industrial Training Institutes and Polytechnics in the State.

**II. Non-Technical :**

(1) Administrative indicate Arts and Science graduates and also P.U.C. and S.S.L.C. qualified persons; typewriting and stenography qualified persons also fall in this category so also ministerial staff as Assistants

## PRIVATE SECTOR SCHEMES AND CO-OPERATIVE SECTOR SCHEME (INCLUSIVE OF SCHEME FINANCED BY AUTONOMOUS BODIES.)

Name of the Scheme.	Total persons.	Skilled.		Details for Technical posts.
		Technical	Non-Technical. (Administrative).	
(1)	(2)	(3)	(4)	(5)
<b>I. Town Planning and Urban Development :</b>				
Implementing Satellite Town Plans and New Town Plans.	64,000	301	125	Engineer .. .. . 85 Engineering Technicians .. 216 <u>301</u>
<b>II. Urban Housing :</b>				
1 Subsidised Industrial Housing ..	3,750	15	8	Engineers .. .. . 5 Engineering Technicians .. 10 <u>15</u>

PRIVATE SECTOR SCHEMES AND CO-OPERATIVE SECTOR SCHEME (INCLUSIVE OF SCHEME FINANCED BY AUTONOMOUS BODIES.)—*cont.*

Name of the Scheme.	Total persons.	Skilled.		Details for Technical posts.
		Technical.	Non-Technical. (Administrative)	
(1)	(2)	(3)	(4)	(5)
2 Low Income Group Housing ..	1,50,000	206	160	Engineers .. .. . 90 Engineering Technicians .. 116 <hr/> 206
3 Middle Income Group Housing.	1,75,000	240	187	Engineers .. .. . 105 Engineering Technicians .. 135 <hr/> 240
4 Other types of housing .. ..	21,250	142	58	Engineers .. .. . 42 Engineering Technicians .. 100 <hr/> 142
<b>III. Tourism :</b>				
1 Construction of Hotels and Lodges for Tourists.	37,500	185	84	Engineers .. .. . 63 Engineering Technicians .. 122 <hr/> 185

## NOTE :

**I. Technical :**

1. Engineers indicates Engineering Degree Holders (in Civil and Highways Engineering).

2. Engineering Technicians indicate Diploma holders in Civil Engineering and also courses offered in allied subjects at the Industrial Training Institutes and Polytechnics in the State.

**Non-Technical :**

1. Administrative indicates Arts and Science graduates and also P.U.C. and S.S.L.C. qualified persons; typewriting and stenography qualified persons also fall in this category as also ministerial staff as Assistants.

**2. SMALL SCALE INDUSTRIES.****Employment Potential for Fifth Plan.**

In spite of the best efforts, it has not been possible at all to collect exactly the details of the employment in the Private Sector for small scale industries. The system of maintaining statistics for Small Scale Industries has been a difficult one, as the registration of the units with the Directorate is only voluntary. However, from the production returns received from a few units, it could be assumed that the employment was around 4 lakhs for the Small Scale Industries as on 1971 for 26,000 units. This however includes the indirect labour out of contract, piece rate and ancillary units to Small Scale Industries for which again no statistics are available. It is estimated that the number of units which are now around 26,000 would be raised to 50,000 units during the V Plan period.

If the recommendation to amend the various Acts under Public Health, Factories Town Planning etc are implemented the labour strength should raise to nearly 8 to 10 lakhs by 1979 in Tamil Nadu.

## 3. LARGE SCALE INDUSTRIES.

## Fifth Plan—State Sector.

## (Employment Potential.)

Skilled.	Unskilled.	Supervisors.	Managerial.	Executive.	Total.
35,065	19,869	7,013	4,675	3,508	70,130

## 4. FUEL AND POWER.

## Employment potential for Fifth Plan.

Projects in the Power Sector afford adequate employment opportunities to all categories of staff. The hydro-projects proposed for execution are especially labour intensive and provide employment to a large number of skilled and unskilled labourers. Assuming that all the Power Projects will be taken up for execution as planned, it is estimated that the following number of people will be employed in each of the different categories mentioned below :—

(1) *Supervisory Staff (Technical)*—

(a) Degree Holders .. .. . 750.

(b) Diploma Holders .. .. . 500.

(2) *Labour*—

(a) Skilled .. .. . 1,000.

(b) Unskilled (including contractor's labour). 30,000.

(3) *Administrative Staff*—

Non-Technical .. .. . 3,000.

## 4 MINERAL RESOURCES.

## Employment Potential—Fifth Plan Schemes.

Schemes.	Employment Potential.			Total.
	Skilled.	Un-skilled.	Technical.	
(1)	(2)	(3)	(4)	(5)
1 Mineral Development Corporation .. .. .	..	..	60*	60
2 Vermiculate Exfoliation Plant .. .. . Sevathur, North Arcot district	10	100	10	120
3 Mineral Treatment Laboratory, Salem .. .. .	10	50	25	85
4 Granite Polishing Unit, Krishnagiri .. .. .	5	50	5	60
5 Graphite Crucible Manufacturing Centre, Sivaganga.	25	50	10	85
6 Exploration Schemes .. .. .	20	50	20	90



MINERAL RESOURCES=*cont.*

<i>Schemes.</i>	<i>Employment Potential.</i>			<i>Total.</i>
	<i>Skilled.</i>	<i>Un-Skilled.</i>	<i>Technical.</i>	
(1)	(2)	(3)	(4)	(5)
Feasibility Studies on—				
(a) Kavuthimalai and Vediappan Malai iron ore deposits.	20	20	20	60
(b) Bauxite .. .. .				
(c) Magnesite .. .. .				
8 Pilot Testing Study .. .. .	25	150	25	200
9 Research and Development Schemes ..	10	20	15	45
10 Marketing Wing Scheme :				
A vitreous glazed mosaic tiles industry with Japanese collaboration to be set up.	10	10	10	30
	135	500	200	835

\* Including Administrative Staff.

## 6. TRANSPORTATION.

## MANPOWER CONTENTS OF THE SCHEMES FOR THE FIFTH PLAN.

<i>Scheme.</i>	<i>Labourers.</i>	<i>Super- visors.</i>	<i>Assistant Engineers.</i>	<i>Divisional Engineers.</i>	<i>Adminis- trative Staff.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Roads .. .. .	1,252,200	12,000	1,800	720	720	1,267,440
Road Transport .. .. .	144,800	1,400	200	100	100	146,600
Inland Waterways .. .. .	6,700	500	100	30	30	7,360
Ports and Harbours .. .. .	36,000	2,700	400	200	200	39,500
Railways .. .. .	205,700	11,000	1,700	700	700	219,800
Total .. .. .	1,645,400	27,600	4,200	1,750	1,750	1,680,700 or 17 lakhs roundly.

## 7. FORESTRY.

## FIFTH PLAN SCHEMES.

## PART I.

<i>Projects.</i>	<i>Rangers.</i>		<i>Foresters.</i>		<i>Forest Guards (above III Ferm.)</i>
	<i>(above S.S.L.C.)</i>				
(1)	(2)	(3)	(4)	(5)	(6)
1 Village forests .. .. .	7	14			26
2 Plan along river and canal banks .. .. .	2	4			6
3 Plan along road-margins .. .. .	7	14			26
4 Plan along seashore sandy tracts .. .. .	4	8			16

## FORESTRY—FIFTH PLAN SCHEMES. PART I MANPOWER CONTESTS—cont.

Projects.	Rangers.		Foresters.		Forest Guards (above III Form)
	(1)	(2)	(3)	(4)	
5 Soil Conservation in catchment areas .. .. .	5	10	20		
6 Forest Publicity .. .. .	3	6	Nil.		
7 Timber—Teak, etc. .. .. .	2	4	8		
8 Matchwood .. .. .	Nil.	Nil.	Nil.		
9 Wattle .. .. .	Nil.	Nil.	Nil.		
10 Pulpwood .. .. .	3	6	12		
11 Sandal .. .. .	Nil.	Nil.	Nil.		
12 Lac hosts .. .. .	Nil.	Nil.	Nil.		
13 Minor Forest Produce Plants and apiary .. .. .	2	4	8		
14 Fuelwood .. .. .	2	4	8		
15 Rubber .. .. .	Nil.	Nil.	Nil.		
16 Tea .. .. .	Nil.	Nil.	Nil.		
17 Coffee .. .. .	4	8	16		
18 Cashew .. .. .	Nil.	Nil.	Nil.		
19 Wild Life Sanctuaries .. .. .	2	4	8		
20 Forest Research and Education .. .. .	4	8	16		
21 Forest Communication .. .. .	6	12	24		
22 Amenities to labour .. .. .	Nil.	Nil.	Nil.		
23 Buildings for staff and rest houses .. .. .	4	8	16		
24 Timber Operation .. .. .	Nil.	Nil.	Nil.		
25 Forest Production .. .. .	2	4	8		
26 Lac Products .. .. .	Nil.	Nil.	Nil.		
27 Development Planning and Statistics .. .. .	Nil.	Nil.	Nil.		
28 Re-organisation .. .. .	Nil.	Nil.	Nil.		
29 Forestry Resources survey .. .. .	2	4	8		
30 Working Plans .. .. .	3	6	12		
31 Sandal oil factory .. .. .	2	4	8		
32 Feny .. .. .	2	4	8		
33 Tribal welfare .. .. .	Nil.	Nil.	Nil.		

Projects.	(1)	Watchers	Ministerial	Labour
		(Literate).	staff (S.S.L.C.)	(casual).
		(5)	(6)	(7)
1 Village forests .. .. .	28	7	2,500	
2 Plan along river and canal banks .. .. .	8	2	350	
3 Plan along road-margins .. .. .	28	7	630	
4 Plan along seashore sandy tracts .. .. .	16	4	320	

## FORESTRY—FIFTH PLAN SCHEMES. PART I MANPOWER CONTENTS—cont.

Projects.							Watchers (Literate). (5)	Ministerial staff (S.S.L.C.) (6)	Labour (casual). (7)
(1)									
5	Soil Conservation in catchment areas	..	..	..	..	..	20	25	2,700
6	Forest Publicity	..	..	..	..	..	Nil.	Nil.	Nil.
7	Timber—Teak, etc.	..	..	..	..	..	8	2	450
8	Matchwood	..	..	..	..	..	Nil.	Nil.	100
9	Wattle	..	..	..	..	..	Nil.	Nil.	1,090
10	Pulpwood	..	..	..	..	..	12	3	1,800
11	Sandal	..	..	..	..	..	Nil.	Nil.	370
12	Lac hosts	..	..	..	..	..	Nil.	Nil.	70
13	Minor Forest produce plants and apiary	..	..	..	..	..	8	2	800
14	Fuelwood	..	..	..	..	..	8	2	650
15	Rubber	..	..	..	..	..	Nil.	Nil.	1,100
16	Tea	..	..	..	..	..	Nil.	Nil.	2,000
17	Coffee	..	..	..	..	..	16	4	840
18	Cashew	..	..	..	..	..	Nil.	Nil.	2,800
19	Wild life sanctuaries	..	..	..	..	..	8	2	270
20	Forest Research and Education	..	..	..	..	..	16	4	380
21	Forest Communication	..	..	..	..	..	24	6	3,600
22	Amenities to labour	..	..	..	..	..	Nil.	Nil.	Nil.
23	Buildings for staff and rest houses	..	..	..	..	..	16	4	1,300
24	Timber operation	..	..	..	..	..	Nil.	Nil.	230
25	Forest Protection	..	..	..	..	..	8	2	230
26	Lac Products	..	..	..	..	..	Nil.	Nil.	Nil.
27	Development Planning and Statistics	..	..	..	..	..	Nil.	Nil.	Nil.
28	Re-organisation	..	..	..	..	..	Nil.	Nil.	Nil.
29	Forestry Resources survey	..	..	..	..	..	8	2	Nil.
30	Working Plans	..	..	..	..	..	12	3	Nil.
31	Sandal oil factory	..	..	..	..	..	8	2	Nil.
32	Feny	..	..	..	..	..	8	2	Nil.
33	Tribal welfare	..	..	..	..	..	Nil.	Nil.	Nil.

## PART II.

Assistant Conservator of Forests or Deputy 13  
Conservator of Forests (B.A. and above).

Conservator of Forests or Deputy Conser- 2  
vator of Forests (B.A. and above).

Chief Conservator of Forests or Deputy 1  
Conservators of Forest (B.A. and above)

## 8. HEALTH AND NUTRITION.

Employment and Generation Schemes for the educated unemployed and unskilled formulated by the State Planning Commission.

## Statement I.

## STATE SCHEMES. (FIFTH PLAN).

(Including Centrally Assisted)

<i>Name of the project.</i>	<i>Technical.</i>	<i>Skilled.</i>	<i>Unskilled.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)
1 District General Hospital .. ..	260	1,300	416	1,976
2 Poly-Clinic Hospitals .. ..	780	3,125	780	4,685
3 Poly-Clinic Centres .. ..	380	3,040	1,140	4,560
4 Vital Statistics Registration system .. ..	2	....	2	4
5 Production of Drugs and Biologicals .. ..	20	80	80	160
6 Drug Control .. ..	50	100	75	225
7 Conversion into Teaching Hospitals (Postponed to VI Plan).				
8 Upgrading of Teaching Hospitals .. ..	35	160	80	275
9 Full-Time Non-Practising Units (No cost during V Plan).	....	....	....	....
10 Medical Research .. ..	6	16	16	38
11 Laboratory Services (Postponed to VI Plan).	....	....	....	..
12 Nursing Services .. ..	....	1,000	....	1,000
13 Dental Surgery .. ..	10	50	25	85
14 Pharmaceutical Education .. ..	10	20	20	50
15 Indigenous System of Medicine .. ..	7	9	8	24
16 Post-Graduate Education in Siddha .. ..	1	2	3	6
17 Orientation in Siddha for M.B.B.S. Students	....	....	....	....
18 Research in Indigenous Medicine .. ..	7	10	3	25
19 Homeopathy College .. ..	5	8	4	17
20 Urban Water Supply and Drainage .. ..				
21 Urban Drainage .. ..	652	4,850	2,50,000	2,55,502
22 Madras City Water Supply and Drainage .. ..				
23 Rural Water Supply .. ..				
24 Rural Sanitation .. ..				

<i>Name of the project.</i>	<i>Technical.</i>	<i>Skilled.</i>	<i>Unskilled.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)
25 Tamil Nadu Water Supply and Drainage Board.	100	200	1,05,000	1,05,300
26 Solid Waste Disposal .. .. .				
27 Industrial Waste Disposal .. .. .				
28 Centre for Urban Engineering .. .. .				
29 Centre for Environmental Engineering .. .. .				
30 Desalination .. .. .	20	50	100	170
31 Research and Training in Public Health Engineering.				
32 Administration, organisation and Financing.				
<b>Total ..</b>	<b>2,345</b>	<b>14,000</b>	<b>4,57,757</b>	<b>4,74,102</b>

## Statement II.

## Central Schemes (Centrally Sponsored Schemes) V Plan.

<i>Name of Project.</i>	<i>Technical.</i>	<i>Skilled.</i>	<i>Unskilled.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)
1 Mini Health Centres .. .. .	14,000	..	6,000	20,000
2 National Malaria Eradication Programme .. .. .	..	2,222	..	2,222
3 National Filaria Control Programme .. .. .	8	..	389	397
4 National Smallpox Eradication Programme .. .. .	..	1,890	..	1,890
5 Strengthening of Basic Health Services .. .. .	..	3,000	..	3,000
6 Cholera Control Programme .. .. .	10	50	50	110
7 Immunization Programme .. .. .	..	29	..	29
8 Leprosy Control Programme .. .. .	86	1,069	328	1,483
9 Cancer Control Programme .. .. .	34	46	60	140
10 Tuberculosis Programme .. .. .	20	20	40	80
11 Post-Graduate Medical Education .. .. .	123	154	38	315
12 Sterilisation IUCD, etc. .. .. .	126	230	150	536
13 Extension Education and Publicity in F.P. .. .. .				
14 Population Education and Training .. .. .				
15 Professional Training .. .. .				
16 Family Planning and Medical Education .. .. .				
17 Incentives for F.P. .. .. .				
18 Involvement of other Departments (No Cost) .. .. .				
19 Action by Special Organised Groups .. .. .				
20 Evaluation Tasks .. .. .				
21 Demonstration Projects .. .. .				
22 Integration and Co-ordination .. .. .				

## 8. HEALTH AND NUTRITION.

## Statement II—cont.

## Central Schemes (Centrally Sponsored Schemes)—Vth Plan.

<i>Name of Project.</i>	<i>Technical.</i>	<i>Skilled.</i>	<i>Unskilled.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)
23 Kuzhanthaigal Kappakams/Pre-primary Sections ..	..	12,500	27,000	39,500
24 Expectant Nursing Mothers. (Nutrition Rehabilitation Programme).				
25 Education, Research and Evaluation .. ..	20	50	50	120
26 Prevention of Food Adulteration .. .. .	20	50	50	120
27 Administration (Nutrition) .. .. .	35	100	70	205
Total	14,428	21,440	34,222	70,144
	<i>Technical.</i>	<i>Skilled.</i>	<i>Unskilled.</i>	<i>Total.</i>
State Schemes .. .. .	2,345	14,000	4,57,757	4,74,102
Central Schemes .. .. .	14,482	21,440	34,222	70,144
Grand Total ..	16,827	35,440	4,91,979	5,44,246

## 9. EDUCATION, SCIENCE AND TECHNOLOGY.

## Employment likely to be generated during the Fifth Plan.

<i>Name of the project.</i>	<i>Professional with</i>		<i>Skilled.</i>	<i>Unskilled.</i>	<i>Total.</i>
	<i>Degree.</i>	<i>Diploma.</i>			
1 In-service Training of Teachers ..	Nil.	Nil.	Nil.	Nil.	Nil.
2 Equalisation of Education Opportunities	20,000	..	..	..	20,000
3 Functional Literacy Programme ..	8,000	..	..	..	8,000
4 Vocationalisation of Secondary Education	16,000	..	..	..	16,000
5 Development of Public Library System	..	200	..	..	200
6 State Council of Educational Research and Training.	400	..	800	..	1,200
7 Pre-Primary Education .. ..	6,500	..	..	..	6,500
8 Expansion of School Education ..	39,000	..	..	..	39,000
9 State Council of Academic Awards ..	1,000	..	..	..	1,000
10 Post-Graduate Universities of Madras, Annamalai and Madurai.	500	..	..	..	500
11 Madras University of Technology ..	300	..	..	..	300
12 Tamil Nadu Agricultural University ..	400	..	..	200	600
13 Library and Documentation Development	..	100	..	100	200
14 International Institute of Tamil Studies.	60	..	..	40	100
15 Tamil Nadu Science Foundation ..	100	..	250	100	450
16 Tamil Nadu Academy of Basic and Applied Sciences.	1	..	34	10	45

## 9. EDUCATION, SCIENCE AND TECHNOLOGY—cont.

Employment likely to be generated during the Fifth Plan.

Name of the Project.	Professional with		Skilled.	Unskilled.	Total.
	Degree.	Diploma.			
(1)	(2)	(3)	(4)	(5)	(6)
17 Hall of Science and Industry in Tamil Nadu.	12	..	40	13	65
18 Computer Centres .. .. .	10	..	12	4	26
19 Education Planning Cell for Tamil Nadu.	22	..	90	50	162
20 Administration and Management of Education.	165	..	150	180	495
<b>Total ..</b>	<b>92,470</b>	<b>300</b>	<b>1,376</b>	<b>697</b>	<b>94,843</b>

10. HUMAN RESOURCES AND SOCIAL CHANGE FOR ECONOMIC DEVELOPMENT  
FIFTH PLAN SCHEMES—MANPOWER CONTENTS.

Name of the scheme.	Professional.	Technical.	Skilled.	Unskilled.
(1)	(2)	(3)	(4)	(5)
1 Setting up of Agro Service Centres. . . . .	....	2,000	1,000	1,000
2 Integrated Scheme for the rural unemployed.	....	....	....	5,00,000 rural landless unemployed.
3 Setting up of a special unit to identify entrepreneurs.	4	20	20	10
4 Modernisation of traditional occupations ..	....	....	....	25,000 Barbers, washerman and other village artisans.
5 Advance action in respect of road schemes ..	10	500	900	1,500
Project to relieve unemployment of elementary school teachers.	..	..	25,000 unemployed elementary school teachers.	..
Intensive pre-school social education ..	....	....	2,000 unemployed secondary grade teachers.	....
Creation of village level clubs ..	....	....	1,000 jobs for village level social workers.	..
9 Establishment of an Academy of Tamil Culture.	20	75	1,250 Artists	150

**10. HUMAN RESOURCES AND SOCIAL CHANGE FOR ECONOMIC DEVELOPMENT (cont.)  
FIFTH PLAN SCHEMES—MANPOWER CONTENTS.**

<i>Name of the scheme.</i>	<i>Professional.</i>	<i>Technical.</i>	<i>Skilled.</i>	<i>Unskilled.</i>
(1)	(2)	(3)	(4)	(5)
10 District Surveys on Harijan Welfare ..	15	40	300	250
11 Establishment of Tamil Nadu Bureau of Social Assistance.	30	40	60	20
12 Preparation of social profiles .. .. .	15	15	80	20
13 Setting of Tamil Nadu Bureau of Correctional Services.	15	30	80	20
14 Establishment of a Tamil Nadu Institute for Research in Social Change for Economic Development.	30	80	150	75
15 Establishment of a Tamil Nadu Institute of Tribal Research.	2	25	50	30
16 Setting up of a State Manpower Research Cell.	5	60	200	40
17 Project for developing 'Job profiles' in Tamil Nadu.	1	6	7	3
18 Special Employment projects for Educated and professional Manpower.	(Details not yet finalised).			

**11. RURAL DEVELOPMENT INCLUDING RURAL HOUSING.**

Since the provision of employment for the educated unemployed may not cover the skilled and unskilled labour employed on the projects, only the engineering staff at various levels required for the execution of the programmes contemplated under the Rural Development Sector may be relevant. The projected requirements of the engineering staff such as Union Engineers and Overseers for an outlay of Rs. 112.03 crores under Rural Development Sector for the Fifth Plan are as follows :—

<i>Scheme.</i>	<i>In numbers.</i>
(1)	(2)
Minor Irrigation Schemes in Panchayat Union areas .. .. .	25
Rural Water Supply Schemes in Panchayat Union areas .. .. .	270
Rural Roads in Panchayat Union areas .. .. .	215
Nutrition programme .. .. .	30
Social education .. .. .	20
Crash Scheme for Rural unemployment .. .. .	250
School Buildings .. .. .	50
+	
	-----
	total .. .. .
	----- 300



## 12. ANIMAL HUSBANDRY.

## V PLAN SCHEMES—(EMPLOYMENT POTENTIAL).

Serial number and name of the scheme.

Employment potential  
(No. of persons).

(1)

(2)

## I. Cattle Development : —

(a) Establishment of Livestock Farms .. .. .	300
(b) Expansion of existing Livestock Farms .. .. .	300
(c) Intensive Cattle Development projects—	
(i) Strengthening the existing ones .. .. .	} 3,300 and 5.01 lakhs of farmers.
(ii) Starting new ones .. .. .	
(iii) Frozen Semen Labs .. .. .	
(d) Key Village Block :—	
(i) Strengthening the old key village Blocks (75) .. .. .	} 3,000 and 5.0 lakhs of Farmers.
(ii) Key Village Blocks (100) .. .. .	
(e) Goshala Development Scheme .. .. .	20
(f) Progeny testing of bulls .. .. .	100

II. Dairy Development .. .. . 250

## III. Animal Health—

(a) Establishment of Veterinary Aid Centres or Sub-Centres .. .. .	500
(b) Veterinary Surgeons for Extension work .. .. .	200
(c) District Veterinary Investigation Laboratories .. .. .	210
(d) Upgrading Veterinary Hospital as clinician centres .. .. .	80
(e) Starting a second Veterinary Dispensary in Panchayat Union which have only one Veterinary Dispensary at present	1,200
(f) Physio pathological clinics at 14 districts and 6 Livestock Farms and Antibiotics for 300 centres.	70
(g) Additional Veterinary Assistant Surgeons for Veterinary Institutions in Municipal areas.	50
(h) Units for detection and control of Brucellosis and Tuberculosis in Livestock ..	56

IV. Veterinary Biologicals .. .. . 100

## V. Poultry Development—

(1) Table egg production units at 15,000 units a year (of 100 birds each) .. .. .	75,000 farmers.
(2) Village societies at 100 egg production units for each 150 societies each year .. .. .	10,000
(3) 90 layer farms of 10,000 layers each .. .. .	} 1,845
(4) 90 Hatcheries for hatching 4.5 lakh chicks, each year .. .. .	
(5) Feed Mixing units (23 units) .. .. .	644
(6) Extension Services .. .. .	1,800

## VI. Sheep Development—

(1) Sheep Breeding Co-operative Societies (150) .. .. .	7,500 sheep farmers.
(2) Purchase of exotic sheep and goats for existing sheep farms .. .. .	..
(3) Veterinary aid for non-society Sheep at Rs. 5.0 lakhs per annum .. .. .	70
(4) Aid for Cumbly Weaving and other by product industries .. .. .	330

## 12 ANIMAL HUSBANDRY—V PLAN SCHEMES—(EMPLOYMENT POTENTIAL.)—cont.

<i>Serial Number and name of the scheme.</i>	<i>Employment potential (No. of persons)</i>
(1)	(2)
<b>VII. Piggery Development—</b>	
(1) Pig production through farmers .. .. .	20,000 farmers.
<b>VIII. Fodder and Feeds—</b>	
(1) Grants to local bodies for establishing Sewage farmers for fodder grasses (2,000 acres). Grant at Rs. 400 for establishment.	200
(2) Feeds and Fodder Research Institute and establishing seed production units ...	100
(3) Cattle Feed Mixing Plants 125 units each with a capacity of 6 tons per hour. At Rs. 12 lakhs a unit (75 units).	2,100
(4) Fodder Development Assistants .. .. .	200
<b>IX. Veterinary Education and Research—</b>	
(1) Expansion of the existing labs and faculties .. .. .	} 100
(2) Starting of new faculties .. .. .	
(3) Training facilities .. .. .	
<b>X. Organisational set-up for Animal Husbandry Development</b> .. .. .	70
<b>Total</b> ..	1,130,695

## 13. FISHERIES.

## OUTLAY, TARGET AND MAN-POWER REQUIREMENTS (FIFTH FIVE-YEAR PLAN).

<i>Schemes.</i>	<i>Plan Outlay.</i>	<i>Plan Target.</i>	<i>Additional potential employment.</i>	
			<i>Regular.</i>	<i>Construction Phase man-years.</i>
(1)	(2) <i>(Rs. in lakhs.)</i>	(3)	(4)	(5)
<b>I. STATE SECTOR—</b>				
<b>MARINE FISHERIES.</b>				
<b>1. Assistance for non-mechanised traditional fishing—</b>				
(a) Preservation of craft-material treatment plants and preservatives.	14.25	6 units.	60	..
(b) Provision of insulated boxes and bringing tubs ..	6.875	2,750 sets.	30	..
(c) Use of out-board motors on catamarans .. ..	30.00	1000 Nos.	30	..
(d) Provision of sails including improved material ..	6.875	2,750 Nos.	30	..
(e) Modern gear and material .. .. .	30.00	375 tonnes.	10	..
(f) Boat Yards for non-mechanised boats .. ..	9.00	3 Nos.	150	..
(g) Provision of winches for shore-seines .. ..	10.00	120 Nos.	720	..
(h) Forest Plantation of trees suitable for catamaran logs.	2.00	200 ha.	15	..

## 13. FISHERIES--cont..

Schemes	Plan outlay.	Plan target.	Additional Potential employment	
			Regular.	Construction
(1)	(2)	(3)	(4)	(5)
	(RUPEES IN LAKHS.)		Phasam an-years.	
<b>2. Assistance to small boat mechanisation—</b>				
(a) Provision of in-board motors for indigenous crafts.	125.00	500 Nos.	30	..
(b) (i) Construction and supply of mechanised fishing boats.	1226.00	(a) 9.8 metres 150 Nos. (b) 13.8 metres. 550 Nos.		(a) 154
(ii) Financial assistance to Private and Co-operative enterprise.	156.80	(a) 9.8 metres. 100 Nos. (b) 13.8 metres 350 Nos.		(b) 1185
(c) Service Centres, Workshops and Boat Building Yards—				
Capital .. .. .	30.00	..	*	..
Recurring .. .. .	5.00	..	..	..
(d) Modern gear and gear material .. .. .	244.00	..	100	..
	31.20			
(e) Rescue vessels .. .. .	9.50	2 Nos.	15	..
Capital .. .. . 5.00 }				
Recurring .. .. . 4.50 }				
<b>3. Deep Sea Fishing—</b>				
(a) Fisheries Corporation .. .. .	50.00	1	25	..
(b) Assistance to private and co-op. enterprise	325.04	100 vessles. (40 + 20 + 40)	4,024	..
<b>4. Processing, Storage and Marketing—</b>				
(a) Establishment of Cold chain .. .. .	60.00	12 units.	*	..
(b) Big Ice Plants and distribution of ice insulated transport—				..
Capital .. .. .	35.00			..
Recurring .. .. .	5.00	3 Units.	*	..
(c) Assistance to Co-operative Marketing Societies.	25.00	12 societies.	50	..
<b>5. Training—</b>				
(a) Establishment and Expansion of Fishermen Training Centres.	15.00	1000 Candidates.	} 75	..
(b) Provision of stipend for advanced training at Central Institutes.	6.00	100 Candidates.		
(c) Provision for leave reserve in place of departmental candidates sponsored for training.	4.00	..	80	..
(d) Strengthening of Staff Training Institute ..				
Capital .. .. .	3.00			
Recurring .. .. .	2.00	..	10	..

## 13. FISHERIES—cont.

## OUTLAY TARGET AND MAN-POWER REQUIREMENTS FIFTH FIVE-YEAR PLAN—cont.

Schemes.	Plan Outlay	Plan Target.	Additional potential employment.	
			Regular.	Construction Phase men-years.
(1)	(2)	(3)	(4)	(5)
<b>INLAND FISHERIES.</b>				
1. Fish Seed Production—				
(a) Establishment and expansion of Fish Seed Farms.				
Capital .. .. .	20.00	40 ha.	†	..
Recurring .. .. .	40.00			
(b) Establishment of additional induced carp spawning centres—				
Capital .. .. .	5.00	5 centres (1,000 lakhs hatchlings).	..	..
Recurring .. .. .	10.00			
(c) Distribution of fish seed transport, staff, etc. ..	75.00	..	..	..
2. Reservoir Fisheries—				
Capital .. .. .	20.00	5 Centres.	†	..
Recurring .. .. .	30.00			
3. Reclamation of Tanks .. .. .				
	20.00	..	400	..
4. High altitude fisheries—				
(i) Setting up and expansion of Trout hatcheries.				
Capital .. .. .	5.00	2	20	..
Recurring .. .. .	5.00	..	..	..
(ii) Trout Farms .. .. .				
Capital .. .. .	10.00	2	40	..
Recurring .. .. .	10.00			
<b>RESEARCH—</b>				
(a) (i) Inshore Survey—				
Capital .. .. .	48.00	20 Boats.	100	..
Recurring .. .. .	72.00	(7 centres).		
(ii) Experimental fishing with medium and large vessels—				
Capital .. .. .	170.00	9 vessels.	120	..
Recurring .. .. .	60.00			
(b) (i) Research Local problems .. .. .				
	20.00	..	20	
(ii) Research Vessel				
Capital .. .. .	8.00	1 Vessel.	12	..
Recurring .. .. .	4.50			
(c) State commitment for Co-ordinated ICAR ..				
Research Projects	20.00	Pearl Fishery.	} 50	..
	50.00	Matriculature		
	10.00	Paddy-cum- fish culture.		
	5.00	Fish Feed, etc.		
(d) Strengthening the Statistical Unit for marine and inland Statistics.				
	..	..	40	..

## FISHERIES—cont.

## OUTLAY TARGET AND MAN-POWER REQUIREMENTS (FIFTH FIVE-YEAR PLAN—cont.)

Schemes.	Plan Outlay.	Plan Target.	Additional potential employment.	
			Regular.	Construction Phase man-year.
(1)	(RUPEES IN LAKHS.) (2)	(3)	(4)	(5)
(e) Extension—				
(i) Establishment of an Extension Unit ..	10.00	..	10	..
(ii) Provision for Seminar and Refresher Course.	5.00	..	..	..
<b>SOCIO ECONOMIC BETTERMENT—</b>				
(a) Housing .. .. .	200.00	10,000 Units	..	400
(b) Assistance to Co-operative Societies (term loan, working capital and participation in shares).	50.00	..	50	..
(c) Approach Roads .. .. .	50.00	..	..	100
(d) Water Supply .. .. .	50.00	200 villages.	..	100
(e) Demonstration fish processing Units ..	10.00	..	10	..
<b>OTHER SCHEMES.</b>				
1. Establishment of Fisheries Industrial Estate ..	10.00	..	50	..
2. Establishment of Fish net making plant .. ..	..	..	20	..
3. Centre for Ocean Engineering and Marine Sciences.				
Capital .. .. .	9.00	..	..	..
Recurring .. .. .	25.00	..	25	..
4 Administrative set up of the Department ..	10.00	..	30	..
5 Tourist Promotion—				
(a) Aquarium—				
Capital .. .. .	15.00	1 at Madras.	6	..
Recurring .. .. .	5.00	..	..	..
(b) Aquatic Sports (Boating, Angling, Water skiing).	20.00	5 centres.	20	..
6. Pilot Projects .. .. .	..	..	..	..
	<b>Total I</b>	<b>3,668.08</b>	<b>6,477</b>	<b>1,939</b>

## II. CENTRALLY SPONSORED SCHEMES—

1. Provision of landing and berthing facilities at Minor ports.	250.00	Colachel.	}	930
	60.00	Chinna Muttom		
	25.00	Point Calimere		
	50.00	Valinookam		
	15.00	Periathalai.		
	25.00	Cuddalore-3rd stage.		
	15.00	Mandapam.		
	25.00	Mallipattinam.		
2. Water supply .. .. .	50.00			100
3. Approach Roads .. .. .	50.00			100
4. Demonstration Fish Processing .. .. .	10.00		10	
5. Establishment of State Seed Farm and Fish farmers				
Capital .. .. .	50.00	100 ha	†	100
Recurring .. .. .	50.00			
	<b>Table II</b>	<b>6 75.00</b>	<b>10</b>	<b>1,230</b>

## 13. FISHERIES—cont.

## OUTLAY TARGET AND MAN-POWER REQUIREMENTS (FIFTH FIVE-YEAR PLAN—cont.)

Schemes.	Plan Outlay.	Plan Target.	Additional potential employment.	
			Regular	Construction Phase men-years.
(1)	(RUPEES IN LAKHS.) (2)	(3)	(4)	(5)
III. CENTRAL SECTOR—				
1 Madras Fisheries Harbour .. .. .	500.00	(Spill over of IV Plan)		1,000
2 UNDP Survey Project for East Coast .. ..	100.00	..	50	..
3 Pre-investment survey of Fisheries Harbour ..	10.00	..	5	..
4 Establishment of Steel Boat Building Yard ..	50.00	..	200	..
5 Subsidy on indigenous built fishing vessels ..	237.58	..	*	..
6 Excise Duty exemption on fuel for mechanised boats.	300.00	..	*	..
7 Refrigerated Rail-wans .. .. .	30.00	..	..	..
	Total III	1,227.58	255	1,000
* Add Marine Fisheries .. .. .			25,000	
† Add Inland Fisheries .. .. .			12,260	
		Grand Total	44,002	

## 14. AGRICULTURE.

## EMPLOYMENT POTENTIAL IN FIFTH PLAN UNDER (AGRICULTURE).

Name of the Scheme.	Agricultural Graduates.	Engineering Graduates.	Other technical Personnel	Ministerial staff
(1)	(2)	(3)	(4)	(5)
1 Extension of Intensive Agricultural District Programme.	175	14	175	34
2 Sunflower Scheme .. .. .	28	..	28	..
3 Vegetable production including cold storage .. ..	100	..	200	40
4 Hill Development Project .. .. .	105	..	120	22
5 Extension of Intensive Cotton Development Programme.	30	..	60	15
6 Certified Seed Production Programme .. .. .	240	15	75	25
7 Strengthening the Extension on Agency .. .. .	98	14	120	196
8 Agricultural Prices Stabilisation Board .. .. .	20	12	100	100
9 Cotton Marketing Board .. .. .	8	..	60	20
10 Agricultural Research .. .. .	112	20	112	32
11 Improved Seed Production Programme .. .. .	15	..	30	10
12 Manures and fertilisers Urban Compost, Night Soil Compost, Soil conditioners.	25	..	25	10
13 Improved practices, Plant protection .. .. .	60	..	100	20
14 Commercial crops sugarcane .. .. .	64	42	128	64
15 Oilseeds package schemes .. .. .	100	..	200	0

## 14. AGRICULTURE—cont.

## EMPLOYMENT POTENTIAL IN FIFTH PLAN UNDER (AGRICULTURE)—cont.

Name of the scheme.	Agricultural Graduates.	Engineering Graduates.	Other technical Personal in Nos.	Ministerial staff in Nos.
(1)	(2)	(3)	(4)	(4)
16 Cashew Development .. .. .	4	..	6	..
17 Coconut Development .. .. .	30	..	60	15
18 Horticultural Development .. .. .	26	..	52	10
19 Pulses Development .. .. .	100	..	200	20
20 Scheme for Development of Commercial flowers ..	4	..	8	..
21 Pilot Scheme for cultivation coffee in Dharmapuri District.	2	..	4	..
22 Scheme for the Development of chillies and turmeric ..	30	..	60	10
23 Agricultural Research .. .. .	130	..	260	20
24 Establishment of Soil Testing Centres .. .. .	38	..	76	4
25 Extension activities opening of additional agricultural depots,—appointment of physical verification superintendents.	..	..	..	300
26 Agricultural information .. .. .	..	..	3	..
27 High yielding varieties programme and Multiple Cropping Programme.	750	..	..	30
28 Land Development .. .. .	30	72	638	..
29 Minor Irrigation .. .. .	..	36	250	..
30 Soil conservation .. .. .	..	10	330	..
31 Other centrally sponsored schemes .. .. .	120	..	240	..
32 Irrigation schemes .. .. .	—	1,756	..	..
	2,450	1,991	3,720	1,017

LAKHS.

Unskilled workers .. .. .	14.83
Schemes on crop production: Irrigation	2.05
Soil conservation .. .. .	0.19

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 17.07
 

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 ABSTRACT OF MANPOWER CONTENTS IN THE FIFTH PLAN PROPOSALS  
 OF ALL SECTORS.

The tentative estimate of manpower requirement based on several Task Force Reports and the programmes therein given above suggests employment opportunities for 1,76,533 professionals, 11,33,252 skilled, 16,69,920 semi skilled and 39,32,885 unskilled personnel could be anticipated.

<i>Sector.</i>	<i>Professional.</i>	<i>Skilled.</i>	<i>Semi Skilled.</i>	<i>unskilled.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)	(6)
1 Urban Development .. .. .	4,133	1,903	..	..	6,036
2 Small Scale Industries .. .. .	..	10,00,000	..	..	10,00,000
3 Large Scale Industries .. .. .	15,196	35,065	..	19,869	70,130
4 Fuel and Power .. .. .	1,250	4,000	..	30,000	35,250
5 Mineral Resources .. .. .	200	135	..	500	835
6 Transportation .. .. .	33,550	1,750	16,45,400	..	16,80,700
7 Forestry .. .. .	16	269	520	24,490	25,295
8 Health and Nutrition .. .. .	16,827	35,440	..	4,91,979	5,44,246
9 Education, Science and Technology ..	92,770	1,376	..	697	94,843
10 Human Resources and Social change..	3,075	32,297	..	5,28,148	5,63,520
11 Rural Development .. .. .	860	..	..	..	860
12 Animal Husbandary .. .. .	195	15,000	12,000	11,03,500	13,30,695
13 Fisheries .. .. .	300	5,000	12,000	26,702	4400,2
14 Agriculture .. .. .	8,161	1,017	..	17,07,000	17,16,178
<b>Total ..</b>	<b>1,76,533</b>	<b>11,33,252</b>	<b>16,69,920</b>	<b>39,32,885</b>	<b>69,12,590</b>

#### MANPOWER CONTENTS OF THE SIXTH PLAN PROPOSALS FOR ALL SECTORS.

For the sixth plan, the tentative estimate of total manpower contents works out to 1,30,00,000 making the total for Perspective Plan period 1,99,12,590. These estimates are purely tentative and subject to revision at the time of finalisation of plan schemes.



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PART—FOUR.

BETTER WORKING CONDITIONS.

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## CHAPTER IX.

### INDUSTRIAL RELATIONS AND LABOUR WELFARE.

9-1 Good industrial relations and a sense of happiness among the industrial workers are necessary pre-conditions for increase in productivity, production and growth rate. Bearing this in view, this Task Force has devoted considerable time for discussion of this subject. Industrial Relations is to be viewed from a positive angle, namely, of better employer-employee relationship and from the point of view of raising productivity and also raising emoluments suitably. The social security schemes and the role of Trade Unions have to be approached from an over-all view of plan targets both in respect of welfare and productivity. As a vital part of our human resources, the skilled workers and their welfare is of great importance to us. Growth rate and its acceleration are no less important. The strategy for perspective planning will be one of welding these two in such a manner as to make these two aspects complementary to each other and in the process achieve our plan end of welfare with growth. One view that has been expressed in this group is that capital in modern times is a phenomenon of professional management.

9-2 As for industrial organisations, it has been suggested that the present unorganised industries like hand-loom, beedi, pottery, etc., should be progressively organised.

## CHAPTER X.

### THE CONCEPT OF GOOD FAITH IN INDUSTRIAL RELATIONS.

10-1 People are the nation's richest resources. Certainly the operation of any economy depends upon the employment of people on the purchase, sale, and performance of labour services.

We work for many and the major element in the Gross National Product is wages. The economy is rapidly becoming "labouristic economy".\* Labour is an influential group in the community, dominating the social values and a major factor in policy determination. Hence it is necessary to digress on their relationship with the employers in the interest of achieving greater national production.

10-2 The incorporation of a section on "unfair-labour practices" into the national labour relations legislation is an American innovation. The heart of this section of the Wagner Act, 1935, was the duty enjoined on the employer to bargain collectively with the chosen representatives of the employees. The Taft-Hartley Act, 1947 made this obligation to bargain in good faith unequivocal and extended it to the labour unions as well.

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\* Slichter, S.H.—The American Economy—Its problems and prospects—New York—1948.

10.3 The good faith bargaining provision coupled with the requirement for recognising the exclusive bargaining unit as well as the bargaining agent form the bed-rock of the American collective bargaining process. Since the National Commission on Labour is anxious to usher in the same effective process in India, it is relevant to look into the evolution of the concept of "good faith bargaining" in the U.S.A. and understand its significance for the emerging collective bargaining relationship in our country. . . .

10.4 It is important to note that uptill the passage of the Wagner Act in 1935 there was no legal obligation for the employer to recognise a labour union in the U.S.A. It is also significant that when the obligation to recognise a union was imposed upon the employer by the Act it was deemed necessary to impose concurrently on the employer a corollary obligation to bargain in good faith with the Union; otherwise it would have amounted "to merely leading employees representative to the door of their employer without going beyond it".

10.5 The obligation to bargain in good faith is now universally recognised as one of the key concepts of collective bargaining. But as in the case of other collective bargaining obligations, it has been result of Governmental encouragement of the practice and procedure of collective bargaining.

10.6 The National Industries Recovery Act, 1933, stated that "the employees shall have the right to organise and bargain collectively through representatives of their own choosing". It did not impose any legal obligation upon the employer to bargain with a union. It was the National Labour Board constituted under the Act, in its first attempt to define this 'right' thus conferred on the Unions, decided that it involved "an implicit reciprocal duty in employers to bargain".

10.7 This view was confirmed subsequently by section 7 (a) of the Wagner Act which made the employer's refusal to bargain collectively with the chosen representative of the employees an "unfair labour practice" and enjoined on the National Labour Relations Board constituted under the Act to enforce this duty on the employers. Thus the Wagner Act spelled out that the National Industries Recovery Act was able to suggest only by administrative construction; the obligation to bargain collectively with the Union designated as exclusive representative of the employees in a given unit after the election. The unit was to be defined by the National Labour Relations Board and the selection of representative union was to be accomplished by a majority decision of the interested employees. Moreover the Wagner Act provided the remedial penalties which the National Industries Recovery Act lacked; the federal courts were to enforce Board Orders, the violations of which subjected employers to punishment for contempt of court.

10.8 Such a statement of legal duty to bargain collectively with the union led to pressures on the Board to define the scope of that duty. In response to this need the National Labour Relations Board since 1935, case by case, set forth the ambits of collective bargaining in the U.S.A.

10.9 The Taft-Hartley Act, 1947, in its section 9 (d) summed up the accumulated definitions of this duty given by the successive National Labour Relation Boards by defining collective bargaining as "the performance of the mutual obligation of the employer and

the representatives of employees to meet at reasonable times and confer in good faith with respect to wages, hours and other terms and conditions of employment, or any question arising thereunder, and the execution of a written contract incorporating any agreement reached if requested by either party, but such obligations does not compel either party to agree to a proposal or require the making of a concession”.

10-10 The employer and the recognised union were thus required by the Act to bargain in good faith. Good faith bargaining could hardly exist in a vacuum. “Good faith” arises only when the parties are bargaining about something. According to the Act the parties are required to bargain in good faith with respect to “wages, hours and other terms and conditions of employment”. Thus refusal to bargain collectively, which is an unfair labour practice, may arise either due to lack of good faith while bargaining with respect to these issues or when either of the parties refused to bargain on any bargaining demand which falls within the statutory language of “wages, hours, and other terms and conditions of employment.”

10-11 The National Labour Relations Board, on the one hand, was called upon to decide whether the conduct of the parties during negotiations on wages, hours, etc., was in good faith or in bad faith and on the other, whether a particular bargaining demand fell within or without the classification, “wages, hours and other terms and conditions of employment.”

10-12 The NLRB in keeping with the terms of reference decided that ‘good faith’ in bargaining meant a sincere desire to reach an agreement; the Board, therefore, had to decide whether the employer has bargained with intent to reach an agreement with the union or has the negotiation been only a smoke screen behind which he seeks to discourage union activity by conceding nothing or undermining the confidence of employees in the ability of the union to accomplish something. Does a line of conduct adopted by the employer indicate only a shrewd attempt to secure a good bargain (legitimate) or does it suggest an effort to prevent the conclusion of an agreement at all? (illegitimate.) It is indeed difficult to probe the mind of the employer and reach any certain conclusions about this intent. But still, the decisive factor is the bargainer’s state of mind, and hence the Board attempted to infer his state of mind and intent from the totality of his conduct during the negotiations.

10-13 The Board adopted the approach of using what it refers to as “objective indicia” this means relying upon circumstantial evidence and deciding whether the established facts support a judgment that negotiations were conducted in good faith or bad faith. In other words the Board examines the subjective factor of intent in the light of what it can reasonably infer from the evidence. The inference that bad faith was present in negotiation may always be rebutted of course, if the employer presents an equally reasonable explanation of his action.

10-14 Once the criteria for good faith bargaining were established the NLRB busied itself with the other question of deciding whether a particular bargaining demand by either of the negotiating parties to collective bargaining fell within the statutory language of “wages, hours and other terms and conditions of employment”. The formula which the NLRB used, with the court’s approval to resolve this problem, involved a classification of

bargaining demands as illegal, mandatory and voluntary. Mandatory subjects are those bargaining demands which according to the NLRB were directly related to the statutory language of "wages, hours, and other terms and conditions of employment". A bargaining demand may come within the meaning of the statutory language but could be illegal. For example the "closed shop" demand is illegal because it is out-lawed by the Taft-Hartley Act. In such cases the NLRB declared them illegal. When the bargaining demand could not reasonably be said to fall within the meaning of the statutory language and the demand was not illegal, it came under voluntary demand. For example, the employer's demand to the union that it should organise the employer's competitors is not an illegal demand but does not fall within the area of bargaining required by the statutory language. On the other hand, the NLRB held that items such as Christmas bonus, the rental of company-owned houses, the price of meals furnished by the employers, and free time for coffee breaks during working hours fall within the statutory language of wages, hours, etc. Similarly in various other decisions the Board has declared that an employer must, if requested, bargain over check off, grievance settlement, seniority and holiday provisions.

10.15 Mandatory subjects like the demands mentioned above could be bargained to an impasse without being guilty of an unfair labour practice. In other words, while bargaining about these demands there must be good faith (a sincere desire to reach an agreement) but it is **not necessary** that they should reach an agreement.

10.16 The main objection of the contending parties in India to the existing Industrial Relations machinery was that it encouraged legalistic approach to problems that could not easily be brought under legal discipline. Only the conflicts of interests in a society can be settled in courts where there is no difference on principles to be applied. Jurisprudence has evolved through centuries certain basic concepts of rights and wrongs that are generally accepted by the community at large. These principles are codified in laws or have been accepted as part of equity and justice. In these circumstances the main function of the judiciary is to apply the principles of law and equity to concrete cases and pronounce judgments.

10.17. In labour matters, however, things are not the same. In fact, Management and Labour hold different views on the principles that should govern industrial relations. These views are in the process of transformation and attempts are being made to bring these two sides together on the main principles governing the relation of Labour and Management.

10.18. We have labour laws which help in determining some of these issues involved. But still there is a large area where the principles are in a state of flux, and till some crystallisation takes place there will be dissatisfaction both on the side of management and of labour regarding their application in cases before the courts. It is here that collective bargaining plays a crucial role. The main objection to the existing machinery for determining industrial relations cases was that collective bargaining was not allowed to play its legitimate role.

10.19. The National Commission on Labour whose recommendations are to guide Industrial Relations Policy in the coming decades in India has formulated some of their recommendations specifically to promote and support collective bargaining relationships.

For example, the Commission has deemed it desirable "to make Union recognition compulsory under a central law in all undertakings employing 100 or more workers or where the capital invested is above a stipulated size". It has recommended the establishment of the Industrial Relations Commission, independent body to deal with the recognition work in its various aspects, namely, the bargaining unit, the bargaining agent and the means of determining the latter.

10.20. Besides making provision for union recognition the Commission bestowed some thought on unfair labour practices as well. It has specifically recommended that it is "important" to write into the law provisions to prohibit and penalise unfair labour practices on the part of both the employer and the recognised union". It further noted that the list of unfair labour practices enumerated by the Maharashtra Committee on unfair labour practices could form a suitable basis for enumeration of various acts of omission and commission which constitute unfair labour practices in union management relations. It is significant that "refusal to bargain in good faith" has been listed as one of the unfair labour practices in the report of the said committee. The Commission has also recommended the setting up of Standing Labour Courts which could be entrusted with, among others, the settlement of disputes arising out of unfair labour practices. Appeals over the decisions of the labour court would lie with the High Court within whose jurisdiction the labour court is located. More on the recommendations of the National Labour Commission follows in the next section.

10.21. Finally, no law on industrial relations can afford to set any narrow limits to the scope of collective bargaining, nor any exhaustive list of bargaining subjects can ever form part of any regulatory law governing collective bargaining. What is feasible is only a statement in general terms such as the language of the Taft-Hartley Act which mentions "wages, hours and other terms and conditions of employment"; with a few prohibitions or exceptions like the closed shop. If a similar statement were to be incorporated in the prospective procedural law governing collective bargaining in our country, there would undoubtedly arise a need for an independent body to decide whether a particular bargaining demand falls within the statutory language. Could a standing labour court be the appropriate body to decide on this issue? Or should it be the proposed Industrial Relations Commission? Or should the Industrial Relations Commission, like the NLRB be entrusted with all the three related functions—certification of the sole bargaining agent, decision on unfair labour practices and determination of the mandatory bargaining demands? We shall revert to these questions later.

10.22. Whatever be our counterpart to the NLRB, it will have to function very much like it. Its regulatory role should be aimed at establishing the frame work within which collective bargaining could take place without impinging upon this the voluntary determination of its substance. The NLRB did achieve distinction through taking cues from mature collective bargaining relationships between well-established industrial concerns and well-organised labour unions, and endorsing them, so to say, through its decisions in other specific cases in dispute brought to its notice.

10.23. The bargaining unions in the thirties and early forties in the USA were usually not concerned with exploring all the possibilities of collective bargaining. They were satisfied to secure recognition, gain a wage increase and set up a grievance procedure. With

Each negotiation, however, more provisions and more complicated terms were added. By the time of the World War II, Unions and Managements were negotiating for such benefits as paid vacation, holidays, sick leaves, group health insurance and special work bonuses. After the war, supplemental unemployment benefits, portal to portal pay stock bonuses for employees, and re-employment of displaced employees were negotiated. More recently the issues of sub-contracting, plant location, profit sharing and job or income security in the face of technological change have become subjects for collective bargaining. The NLRB has indeed played a significant role, through its decisions, in making many of these bargaining demands widely acceptable, but it could not be accused of having initiated any one of them to deserve the allegation of active interference with the substance of collective bargaining.

10.24. Incidentally it is of interest to note that our counterpart to the NLRB has the advantages of having a broad base to take-off soon after it is installed. Not only the subject covered by the extensive labour legislation in India become *ipso facto* mandatory bargaining demands but the voluminous case law on what constitute industrial disputes under the Industrial Disputes Act, 1947 provide for it a basis to build the edifice of collective bargaining in our country.

10.25. The Industrial Disputes Act, 1947 [(Section 2 (k)] defines an industrial dispute as "any dispute or difference . . . . . between employers and workmen . . . . . which is connected with the employment or non-employment or the terms of employment or with the conditions of labour, of any person". Under the Act, the appropriate government is the judge as to whether an industrial dispute exists, and to refer the dispute for conciliation or adjudication. While the opinion of the appropriate government as to the existence of an industrial dispute will be accepted by the courts, the question whether the dispute that has arisen is an industrial dispute is an objective fact and government cannot turn a dispute which is not an industrial dispute merely by making an order of reference. Courts can go into the question whether the dispute referred are industrial disputes or not within the meaning of the statutory definition.

10.26. The Courts have ruled, for example, that disputes about the maintenance by employers of schools, dispensaries, creches for children of workmen and medical relief to the aged parents or workmen are industrial disputes. Similarly disputes relating to payment of bonus, gratuity pension, provident fund, etc., are industrial disputes. While the former set of demands come within the meaning of "conditions of labour", the latter come within the meaning of "terms of employment". In another case, it was decided that workmen are at liberty to raise an industrial dispute demanding abolition of the contract system indulged in by their employers for getting part of their work done.

10.27. Be that as it may, the decision of the independent body, in effect, makes the bargaining demand under dispute a mandatory one, and the parties would then be obligated to bargain over this demand lest the charge of unfair labour practice per se would be levelled against them. In this process of decision making, as we have noted already, the independent body would have a reference point; the NLRB looks to the tradition of mature collective bargaining relationships between well-established concerns and well-organised unions; in our country the subjects of labour legislations the content of conciliation settlements



and the awards of the Industrial tribunals provide such a reference point to start with. In course of time when collective bargaining becomes the accepted method of management-labour relations, our Indian counterpart would also have to draw their inspiration from the mature collective bargaining relationships in our country. In other words, the discharge of this responsibility calls for an expertise to assess the industrial relations climate in the country, the health of the industry in the developing economy and the interests of labour in the socialistic pattern of society. Viewed from this angle, not the Labour court but the Industrial Relations Commission with its judicial membership and the representatives of employers and workmen appears to be properly geared to undertake this delicate task of reconciling these conflicting interests and promoting real collective bargaining in our country within the framework it deems desirable.

10.28. The Standing Labour Committee (1970) recommended that the power to certify the sole bargaining unit should be given only to the judicial member of the Industrial Relations Commission. As noted earlier, determination of "good faith bargaining" is a judicial process, and a case can be built up for transferring this responsibility from the Standing Labour courts to the judicial member of the Industrial Relation Commission. In the USA, the NLRB not only certifies the sole bargaining agent but also decides on "good faith bargaining" and "mandatory bargaining demands". It is but logical that the NLRB which gives birth to a recognised Union should also nurture it and bring it up through the discharge of the other two related functions. The Industrial Relations Commission endowed as it is with necessary expertise and flexibility in guiding industrial relations could in a sense be the appropriate body to effectively serve the cause of collective bargaining in our country.

10.29. As said, earlier, in the next Section, we shall list the important recommendations of the National Commission on Labour and discuss the needs of Tamil Nadu in that context. First the important recommendations are listed and then the needs of our State are discussed separately, under the appropriate major heads, that are relevant to our own situation.

## CHAPTER XI.

### IMPORTANT RECOMMENDATIONS OF THE NATIONAL COMMISSION ON LABOUR AND THE NEEDS OF TAMIL NADU.

#### I. RECOMMENDATIONS.

##### WORKERS' ORGANISATIONS.

11.1. The basis on which a trade union should be organised is a matter to be determined by workers themselves, in the light of their own needs and experiences. They have to grow according to the dictates of their members, but within the constraints set on them by the law of the land.

(20-19)

11.2. Formation of craft/occupation unions should be discouraged. Craft unions operating in a unit/industry should amalgamate into an industrial union.

(20-21)

11.3. Apart from paying attention to the basic responsibilities towards their members, union should also undertake social responsibilities such as (i) promotion of national integration, (ii) influencing the socio-economic policies of the community through active participation in the formulation of these policies, and (iii) instilling in their members a sense of responsibility towards industry and the community.

(20-38)

11.4. There should be no ban on non-employees holding positions in the executive of the unions. Step should be taken to promote internal leadership and give it a more responsible role. Internal leadership should be kept outside the pale of victimisation. To hasten the process of building up internal leadership, the permissible limit of outsiders in the executives of the unions should be reduced. Ex-employees should not be treated as outsiders.

(20, 50, 20-52 & 20-53)

##### EMPLOYEES' ORGANISATIONS.

11.5. Public sector undertakings should be encouraged to join their respective industrial associations. There is an equally strong case for co-operative to join such associations.

(21-8)

11.6. Employers' organisations should encourage collective bargaining. They should also encourage voluntary arbitration and wean away reluctant employers from recourse to third party intervention.

(21-24)

11.7. Regular and scientific arrangements for training of supervisors and middle management personnel in the art of handling labour should receive due attention from employers' organisations.

(21-25)

11.8. Employers' organisations should build up their internal consultation system in such a manner that all matters which have far reaching impact on members are scrutinised by the constituents prior to any decision that might be taken at the national level. (21-31)

11.9. From the view-point of labour-management relations, employers' associations should :

- (i) undertake promotion of collective bargaining at various levels ;
- (ii) encourage observance and implementation by their members of dipartite and tripartite arrangements in real spirit and form ;
- (iii) expedite implementation of wage awards by members ;
- (iv) work towards elimination of unfair labour practices by employers ;
- (v) encourage adoption by members of personnel policies conducive to productivity and industrial peace ;
- (vi) promote rationalisation of management or organisation to improve productivity.
- (vii) arrange employers' education (a) in the concept of labour partnership in industry, (b) for ensuring identity of interests of labour and management and (c) for promoting harmony in the goals of industry and the community, and
- (viii) work towards the collective welfare of its members through training, research and communication in the field of labour-management relations.

(21-26)

#### STATE AND INDUSTRIAL RELATIONS.

11.10. *Role of the State.*—Industrial relations affect not merely the interests of the two participants, labour and management, but also the social and economic goals to which the State addresses itself. To regulate these relations in socially desirable channels is a function which the State is in the best position to perform ; such regulation has to be within limits.

(22-8)

11.11. Where standards of good employment are disparate, the State seeks to set them with a view to influencing employers in the private sector.

(22-12)

#### COLLECTIVE AGREEMENTS—COLLECTIVE BARGAINING.

11.12. In the absence of arrangements for statutory recognition of unions except in some States and provisions which require employers and workers to bargain in 'good faith', it is no surprise that reaching of collective agreements has not made headway in our country. Nonetheless, the record of reaching collective agreements has not been as unsatisfactory as it is popularly believed. Its extension to a wider area is certainly desirable.

(23-12 & 23-14)

11.13. There is a case for shift in emphasis and increasingly greater scope for and reliance on collective bargaining. Any sudden change replacing adjudication by a system of collective bargaining is neither called for nor is practicable. The process has to be gradual. A beginning has to be made in the move towards collective bargaining by declaring that it will acquire primary in the procedure for settling industrial disputes.

(23-36)

11.14 Conditions have to be created for promotion of collective bargaining. The most important among them is statutory recognition of a representative union as the sole bargaining agent. The place which strike/lock out should have in the overall scheme of industrial relations needs to be defined ; collective bargaining cannot exist without the right to strike /lockout.

(23-37)

#### CONCILIATION :

11.15. Conciliation can be more effective if it is freed from outside influence and the conciliation machinery is adequately staffed. The independent character of the machinery will alone inspire greater confidence and will be able to evoke more co-operative on from the parties. There is need for certain other measures to enable the officers of the machinery to function effectively. Among these are : (i) proper selection of personnel, (ii) adequate pre-job training and (iii) periods of in service training.

(23-29)

#### VOLUNTARY ARBITRATION :

11.16. With the growth of collective bargaining and the general acceptance of recognition of representative unions and improved management attitudes, the ground will be cleared, at least to some extent, for wider acceptance of voluntary arbitration.

(23-26)

11.17. In certain essential industries/services where a cessation of work may cause harm to the community, the economy or to the security of the nation itself, the right to strike may be curtailed but with the simultaneous provision of an effective alternative, like arbitration or adjudication, to settle the disputes.

(23-43)

#### UNION RECOGNITION :

11.18. It would be desirable to make recognition compulsory under a Central law in all undertakings employing 100 or more workers or where the capital invested is above stipulated size.

(23-50)

11.19. The recognised union should be statutorily given certain exclusive rights and facilities, such as right of sole representation, entering into collective agreements on terms of employment and conditions of service, collection of membership subscription within the premises of the undertaking, the right of check-off, holding discussions with departmental representatives of its worker members within factory premises, inspecting, by prior agreement the place of work of any of its members, and nominating its representatives on works/grievance committees and other bipartite committees.

(23-57)

11.20. The minority unions should be allowed only the right to represent cases of dismissal and discharge of their members before the Labour Court. (23-59)

#### LABOUR IN PUBLIC SECTOR :

11.21. Strict enforcement of labour laws should be ensured by the person in charge of the undertaking. Since the public sector is considered a model employer, breach of statutory provisions should not be countenanced in that sector. (25-17 & 25-30)

#### UNORGANISED LABOUR :

11.22. *General Recommendations about Un-organised Labour.*—Legislative and administrative procedures applicable to small establishments should be simplified to facilitate their understandings and implementation. The machinery for the enforcement of law and welfare measures should be strengthened. [29-76 (iii) & v]

11.23. The difficulties of small employers, who find it difficult to employ separate staff to look after various formalities and keep accounts are genuine. Government should take appropriate measures to mitigate them. [29-76 (v)]

#### LABOUR ADMINISTRATION :

11.24. Improving social consciousness should make the parties concerned avoid deliberate delays in the implementation of laws. Courts should show greater firmness in handling intransigence in these matters. (30-28)

11.25. Greater vigilance on the part of Government is necessary for improving implementation of labour laws in small units. (30-29)

11.26. Public Works Departments in the States and Union as also the Forest Department should consult the respective Labour Commissioners before settling contractor's claims.

## II. THE NEEDS OF TAMIL NADU.

11.27. It would not be a practical proposition for us to embark upon a study of the relevance of all the above recommendations to our needs.

The major needs of Tamil Nadu at present would appear to be centred around :—

- (1) The machinery for settlement of disputes ;
- (2) The determination of the representative union ;
- (3) Unorganised labour ; and
- (4) Labour Welfare.

## 1. THE MACHINERY FOR SETTLEMENT OF DISPUTES.

11-28. The number of man-days lost due to strikes and lockouts during the 5 years ending 1970 in this State are as follows :

	Years.				Number of strikes and lockouts.	Number of workers involved.	Mandays lost.
	(1)				(2)	(3)	(4)
1966	..	..	..	..	176	69,310	7,54,612
1967	..	..	..	..	305	1,14,151	11,20,517
1968	..	..	..	..	231	1,15,366	18,81,559
1969	..	..	..	..	174	41,900	6,83,059
1970	..	..	..	..	277	1,41,186	10,33,377

11-29. The question of devising appropriate machinery for taking prompt and effective steps to deal with industrial disputes has been engaging the attention of the National Commission on Labour.

The Commission has recommended that :

“The present arrangement for appointing ad hoc industrial tribunals should be discontinued. An Industrial Relations Commission (IRC) on a permanent basis should be set up at the Centre and one in each State for settling 'interest' disputes. The industrial Relations Commission will be an authority independent of the executive.

Each State should have an Industrial Relations Commission for settlement of disputes for which the State Government is the appropriate authority.

The main functions of the National/State Industrial Relations Commission will be (a) adjudication in industrial disputes, (b) conciliation and (c) certification of unions as representative unions ;

After negotiations have failed and before notice of strike/lock out is served, the parties may agree to voluntary arbitration and the Commission will help the parties in choosing a mutually acceptable arbitrator. Alternatively, either party may, during the period covered by the said notice, approach the Commission for naming a conciliator within the Commission to help them in arriving at a settlement ; and

(a) The Commission will have powers to decide to pay or withhold payments for the strike/lockout period under certain circumstances. (b) If during the pendency of the strike or thereafter, the employer dismisses or discharges an employee because he has taken part in such strike, it would amount to unfair labour practice, and on proof of such practice, the employee will be entitled to reinstatement with back wages ”.

11-30. The Commission has also recommended that a Standing Labour Court be constituted in each State to deal with disputes relating to rights and obligations, interpretation and implementation of awards and claims arising out of rights and obligations under the relevant provisions of law or agreements as well as disputes in regard to unfair labour practices and the like.

11-31. The above recommendations of the Commission came up for consideration at the 29th Session of the Standing Labour Committee held in July 1970 at New Delhi. At that meeting, the general approach was to dispense with the proposals for setting up an Industrial Relations Commission and to retain the existing machinery, if necessary, after strengthening it suitably on the basis of assessment of workload etc. However, it was decided at that Session that depending on the workload there shall be one more Industrial Relations Commission, both at the Centre and in the State, each to be presided over by a Judicial Officer, who will be appointed by the appropriate Government, in consultation with the Chief Justice of India or the Chief Justice of the High Court, as the case may be, and the U.P.S.E. or the State Public Service Commission.

11-32. The Industrial Relations Commission will be entrusted with the functions of :

(a) certification of representative unions ;

(b) adjudication of industrial disputes referred to it ; and

(c) disposal of matters relating to inter-union rivalry and unfair practices, and such other functions as may be assigned to it.

The appropriate Government shall continue to have the same powers in respect of conciliation as at present under the Industrial Disputes Act.

11-33. It was also agreed at that meeting that Labour Courts may be appointed in each State to deal with interpretation and implementation of awards, claims arising out of rights and obligations under the Labour Laws and agreements, cases of discharge or dismissal of workmen and such other matters as may be assigned to these courts.

The decision of the Government of India on the above conclusions are still awaited.

## 2. DETERMINATION OF THE REPRESENTATIVE UNIONS.

11-34. Many of the disputes which arise in this State as well as the country are due to inter-union rivalry. A part from the unions affiliated to various Central Organisations like the Indian National Trade Union Congress, Hind Mazdoor Sabha, All India Trade Union Congress, Centre of Indian Trade Unions and Labour Progressive Federation, there are also unattached unions as well as groups within the same union which because of such rivalry raise unrealistic demands, reduce the chances of settlement of even legitimate disputes and sometimes try to disturb existing settlements.

11-35. There is general acceptance of the principle of one union for one industry or atleast one Union for one Industrial Establishment.

11-36. The National Commission on Labour has attached considerable importance to the questions of recognition of a representative union. The Commission has recommended that

“ It would be desirable to make recognition compulsory under a Central Law in all undertakings employing 100 or more workers or where the capital invested is above a stipulated size ”.

11-37. The Commission has also suggested that the Industrial Relations Commission recommended by it should be given the power to decide the representative character of a union either by verification of records or, if it considers necessary, by holding an election by secret ballot open to all employees.

11-38. This aspect was discussed at the 29th Session of the Standing Labour Committee held in July, 1970 and it was agreed that there should be Industrial Relations Commission both at the Centre and State levels, and that this Commission be entrusted with the functions of certification of representative Unions. It was also agreed at that session that Central Legislation could be introduced for providing a statutory basis for recognition of representative Union. Again this matter was discussed at the Conference of Trade Unions and employers' organisations in May 1971 but no definite conclusion was arrived at.

11-39. At the Indian Labour Conference held on October 22/23, 1971, it was agreed that the question of recognition of Unions may be discussed by the representatives of Central Organisations of trade Unions among themselves and the result thereof awaited to see if a consensus could be found in regard to the manner of determining the representative character of unions and their recognition.

11-40. The Government of Tamil Nadu have drafted a Bill to provide for the statutory recognition of representative trade unions for facilitating collective bargaining in certain undertakings and to lay down their rights and obligations and to provide for prevention of certain unfair labour practices. This bill came up for consideration at the last meeting of the State Labour Advisory Board held at Trichirapilli on 23rd September 1971. As the members of the Board wanted time for a detailed study of the Bill and for further consideration of the subject, the discussion was postponed. This subject is again coming up for discussion at the 22nd meeting of the Board.

### 3. UNORGANISED LABOUR.

11-41. There is a well-founded feeling that urban labour and particularly organised labour have been receiving favoured treatment both from employers and from the State.

11-42. There are strong trade union for the workers connected with such industries as textiles, engineering, sugar, transport, cement plantations etc. The workers in these industries are able to raise industrial disputes (through their trade unions) in accordance with the provisions of Industrial Disputes Act for securing better conditions of service from their employers. The Government are also providing them with the services of conciliation and adjudication machineries for redressing their grievances. The workers in the unorganised sector, however, have little chance of availing themselves of the provisions of the Industrial Disputes Act because of the very fact of their being unorganised and possessing weak bargaining capacity. The Factories Act and the Industrial Disputes Act which provide for various items within their purview, were not designed to meet the requirements of labour in unorganised industries and employment.

11-43. Some of the unorganised industries in this State are agriculture, handloom weaving, fishing, beedi and cigar rolling, tanning and shops and commercial establishments. The list is not exhaustive and can be added to.



11.44. The recommendations of the National Commission on Labour in regard to unorganised labour are :

A better understanding of the problems of different categories of unorganised labour is essential to the formulation of suitable ameliorative measures. Detailed surveys about conditions of work in these employments should be undertaken.

The State will have to play an increasingly important role in providing legislative protection for unorganised/unprotected labour. The requirements of legislation and revision of existing measures should be under constant review.

Legislative and administrative procedures applicable to small establishments should be simplified to facilitate their understanding and implementation. The machinery for the enforcement of law and welfare measures should be strengthened.

The difficulties of small employers, who find it difficult to employ separate staff to look after various formalities and keep accounts are genuine. Government should take appropriate measure to mitigate them.

11.45. The employment in agriculture, beedi and cigar industry and tanneries are covered under the Minimum Wages Act, 1948 which provides for the statutory fixation of minimum rates of wages for the workmen in these industries and revision of those wages at appropriate intervals. There is also provision under this Act to regulate the working hours of these workmen. The Government of Tamil Nadu are considering the question of adding the employment in shops and commercial establishments and handloom industry to the Schedule to the Minimum Wages Act.

The implementation of the above recommendations of the National Commission on Labour are being examined.

#### 4. LABOUR WELFARE :

11.46. Apart from statutory welfare amenities like provision of safety measures, canteens, rest sheds, sanitation, first aid and medical facilities, washing and bathing facilities, creches, etc., there is a large uncovered area in the life of the workers as well as their families which is outside the scope of statutory welfare. With the object of meeting this long felt need, the Committee on Labour Welfare set up by the Government of India has recommended the constitution of a Labour Welfare Fund in each State on a statutory basis.

11.47. Such Labour Welfare Funds are already in existence in States like Maharashtra and Gujarat. Our State has also decided to set up a similar fund and last year the Government of Tamil Nadu constituted a Labour Welfare Fund with an initial grant of Rs 5 lakhs from the State-Funds and also set up a Labour Welfare Board with the Hon'urable Minister for Labour as Chairman. The Board is charged with the responsibility of administering the labour welfare fund for the welfare of the workers in Tamil Nadu. Necessary legislation to provide for contributions to the Fund by employers and workmen is likely to be introduced shortly.

11.48. Statutory welfare under the Factories Act, Plantations Labour Act, Motor Transport Workers Act, Beedi and Cigar workers (conditions of employment) Act and social security schemes like Employees Provident Fund, Employees State Insurance and Employees Provident Fund Scheme and the proposed gratuity legislation can be left out of our purview as they have been subjected to sufficient study and as they can also be reviewed as and when necessary.

11.49. The National Commission on Labour as recommended that--

(a) Constitution of tripartite and autonomous Statutory Labour Welfare Boards, as in some States has resulted in efficient management of welfare centres and in workers taking adequate interest in the activities of such centres (b) similar Boards should be set up elsewhere (c) Trade Unions doing approved welfare work should be given subsidies by the Board.

11.50. In compliance with the recommendations of the Committee on Labour Welfare and National Commission on Labour, the Government of Tamil Nadu have set up a Labour Welfare Board as already stated. This Board met twice during the last year on 2nd December 1971 and 26th February 1972. At the last meeting of the Labour Welfare Board held on 2nd December 1971, it was agreed that the Welfare Centres be set up with classes in tailoring for women workers and wives of workmen in the first instance and that two centres could be opened in Madras (one at Thiru-vi-ka Nagar or Sembium and the other at Ambattur) and one each at Madurai and Coimbatore.

11.51. At that meeting, it was also agreed to have Workers' Stadium built for the benefit of workmen in Madras City near Tiruvottiyur with amenities such as Theatre, indoor and outdoor games facilities and also a swimming pool as in Bombay.

## CHAPTER XII.

### THE PLAN SCHEMES FOR LABOUR WELFARE AND INDUSTRIAL RELATIONS.

#### INTRODUCTION.

12.1. This section on "Labour Policy" should be read with the more comprehensive sections on Human Resources, Social Change, Employment and Manpower, wherein welfare programmes for the working classes have been included. In addition, this supporting Chapter considers the need for co-ordination of the normal public expenditure towards labour welfare and the new plan expenditure. The Department of labour is the main agency to watch the implementation of Labour legislation and to disseminate authentic labour information. In enlightened labour policy is indispensable to the Government which is committed to the ushering in an age of scientific socialism. The programmes for this permeate the entire plan document. In this chapter, five main policy issues are raised and funds are provided for co-ordinating the efforts of the different Departments of Government.

12.3. There are significant issues like income and wages policy, working condition of labour, employment policy, etc., which form separate thesis of social and economic planning.

Good industrial relations are a necessary pre-condition for increasing production, productivity and growth rate. The concept of good faith in bargaining is now universally recognised as one of the key concepts of collective bargaining. The concept will greatly help in settling problems that cannot easily be brought under the legal discipline. This concept has been dealt with in greater details earlier. The National Commission on Labour have formulated some of their recommendations specifically to promote and support collective bargaining relationship as stated earlier.

#### REVIEW OF THE FOURTH PLAN :

12.4. Under the subsidised Industrial Housing Scheme, the Government of India provided financial assistance to the State Government for use by statutory Housing Board, employers and co-operative societies of industrial workers in the form of loan and subsidy. The total original plan outlay was Rs. 150.00 lakhs in the Fourth Five-Year Plan for public, private and Co-operative Sectors. Subsequently, a reduction of nearly 50 per cent of the draft outlays for Housing was recommended by the Union Planning Commission. The Plantation Labour Housing scheme envisaged assistance to planters for construction of tenements for their worker in the shape of loan of 50 per cent and subsidy of 37½ per cent on the ceiling cost of construction. Out of 33,625 standard houses registered for the single workers and families 32,344 standard houses had been provided by the employers till the end of the year 1971. During the Fourth Plan training was offered in tailoring to the dependents of plantation workers. Under the Tamil Nadu Industrial Nutrition Programme the highly nutritious food materials made available by the CARE Administration were cooked and supplied to the pregnant and lactating women and pre-school children of workers

families to supplement their daily food. This programme was in operation in 77 factories and plantations covering 18,857 beneficiaries as on January, 1973. By the end of the Fourth Five-Year Plan a combined Industrial Health and Hygiene Unit and a Laboratory in the State Factory Inspectorate under the control of the Chief Inspector of Factories Madras, will be established besides the appointment of Medical Inspector and staff.

#### OUTLOOK FOR PERSPECTIVE PLAN :

12.5. On a perusal of the recommendations of the National Commission on Labour and taking into consideration Tamil Nadu, the following points appear to be important and urgent for plan formulation as a prelude to a major breakthrough in labour welfare including the need for the establishment of an agency for authentic information and knowledge on labour relations :

- (i) establishment of a Tamil Nadu Bureau for Labour services and Information ;
- (ii) the machinery for settlement of disputes ;
- (iii) the determination of the representative union ;
- (iv) unorganised labour ;
- (v) labour welfare. and
- (vi) the concept of good faith in bargaining.

Each and every item above has been discussed earlier. In this perspective, the following Plan projects are recommended for implementation :—

#### THE PERSPECTIVE PLAN SCHEMES :

##### PROJECT No. 46

12.6. *Industrial Housing.*—With a view to promoting industrial housing, Government of India initiated the Subsidised Industrial Housing Scheme to cover workers coming under the purview of the Factories Act, 1948 and workers in mines other than coal, mica and iron ore mines. Under this scheme, the Government of India provide financial assistance to the State Government, statutory Housing Board, employers and co-operative Societies of industrial workers, in the form of loan and subsidy. For the Fifth Plan an outlay of Rs. 42.00 lakhs will be provided under the Labour Department. The sixth Plan outlay will be Rs. 125.00 lakhs. The total Perspective Plan outlay will be Rs. 167.00 lakhs.

##### PROJECT No. 47

12.7. *Plantation Labour Housing Scheme.*—Under the Plantation Labour Housing scheme financial assistance to the extent of 5 per cent of the ceiling cost as loan and 37½ per cent as subsidy is given to planters for provision of houses to thier workers. As in the case of the subsidised Industrial Housing Scheme, the Commissioner of Labour sanctions the payment of loan and subsidy to the planters at the appropriate stages. The construction work is done by the ploneters. The outlay will be Rs. 5.00 lakhs for the Fifth Plan and Rs. 15.00 lakhs for the Sixth Plan. The total Perspective Plan outlay will be Rs. 20.00 lakhs.

## PROJECT NO. 48

12.8 *Industrial Health and Hygiene Units.*—To detect the causes of diseases like lead poisoning, silicosis, dermatitis and other toxic diseases in the working environments and for suggesting improvement measures against heat, noise, etc., Government have accorded sanction for the setting up of a Combined Industrial Health and Hygiene Unit and a Laboratory in the State Factory Inspectorate under the control of the Chief Inspector of Factories, Madras. The establishment of the Unit and the appointment of the Medical Inspector and staff are being taken up during the fourth year of Fourth Plan. For the Fifth Plan period the outlay on this will be Rs. 5.00 lakhs and the Sixth Plan outlay will be Rs. 15.00 lakhs. Total Perspective Plan outlay will be Rs. 20.00 lakhs.

## PROJECT NO. 49

12.9 *Tamil Nadu Industrial Nutrition Programme.*—The object of the Industrial Nutrition Programme is to supply balanced diet to the pre-school children and pregnant and lactating women of workers' families. Under this programme, the highly nutritious food materials made available by the CARE Administration are cooked and supplied to the pregnant and lactating women and pre-school children of workers' families to supplement their daily food. This is the first venture in the country, wherein CARE food is being supplied to the families of Industrial workers. This programme is in operation in 77 factories and plantations covering 18,857 beneficiaries as on January, 1973. The implementation of the programme has been taken over by the Labour Department with effect from 1st April 1972. The Fifth Plan outlay on this programme will be Rs. 0.50 lakh and the Sixth Plan outlay will be Rs. 1.50 lakhs. The Perspective Plan outlay will be Rs. 2.00 lakhs.

## PROJECT NO. 50

12.10. *Labour Welfare Schemes.*—Workers' stadia in places like Tiruvottiyur, Coimbatore, Madurai, etc., and Welfare Centres in Guindy, Vellore, Tiruchirappalli, Rajapalayam, Sivakasi, Tiruppur, Kovilpatti or Tuticorin, Dindigul or Madurai, Nagercoil, Salem, etc., will be opened during the Fifth Plan on an outlay of Rs. 62.00 lakhs. The Sixth Plan outlay for the Labour Welfare schemes will be Rs. 150.00 lakhs. The Perspective Plan outlay will be Rs. 212.00 lakhs.

## PROJECT NO. 51

12.11. *Tamil Nadu Bureau of Labour Services and Information.*—The need for upto-date, exhaustive and authentic information on various activities of Government management and labour unions and other voluntary agencies concerning labour has been keenly felt. With a view to fulfilling this need a centre for Labour Information will be set up in the office of the Commissioner of Labour. It will have a well-maintained library with facilities for documentation, references, preparation and mailing of labour bulletins, etc. This centre will also disseminate labour information through mass media as also through the organisation of seminars and symposia. The Fifth Plan outlay for this scheme will be Rs. 7.00 lakhs. The sixth plan outlay will be Rs. 20.00 lakhs. Hence the Perspective Plan outlay will be Rs. 27.00 lakhs.



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**STATISTICAL APPENDIX**

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## ANNEXURE I.

## POPULATION OF TAMIL NADU DURING 1971-1984.

<i>Year.</i>				<i>Projected</i>	<i>40 per cent of</i>
				<i>population.</i>	<i>population as</i>
					<i>labour force.</i>
	(1)	(2)	(3)		
1971	.. ..	41,103,300	16,441,320		
1972	.. ..	42,083,500	16,833,400		
1973	.. ..	43,062,000	17,224,800		
1974	.. ..	44,036,900	17,614,760		
1975	.. ..	45,016,000	18,005,400		
1976	.. ..	45,976,400	18,390,560		
1977	.. ..	46,948,800	18,779,520		
1978	.. ..	47,901,100	19,160,440		
1979	.. ..	48,857,000	19,543,200		
1980	.. ..	49,811,600	19,924,640		
1981	.. ..	50,761,100	20,304,440		
1982	.. ..	51,717,000	20,686,800		
1983	.. ..	52,672,300	21,068,920		
1984	.. ..	53,620,400	21,476,160		

## ANNEXURE II.

ESTIMATED POPULATION IN  
TAMIL NADU BY SEX (IN HUNDREDS.)

<i>Year.</i>			<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
	(1)	(2)	(3)	(4)	
1971	.. ..	208,725	203,306	411,031	
1972	.. ..	213,521	208,522	422,043	
1973	.. ..	219,141	213,596	432,737	
1974	.. ..	224,590	218,528	443,118	
1975	.. ..	229,860	223,317	453,177	
1976	.. ..	234,957	227,968	462,925	
1977	.. ..	239,585	232,235	471,820	
1978	.. ..	244,188	236,480	480,668	
1979	.. ..	248,756	240,705	489,461	
1980	.. ..	253,300	244,911	498,211	
1981	.. ..	257,811	249,094	506,905	
1982	.. ..	262,294	253,257	515,551	
1983	.. ..	266,748	257,401	524,149	
1984	.. ..	271,169	261,524	532,693	

**ANNEXURE III.**  
**POPULATION IN 1961 AND 1971.**

Districts	1961.		1971 (P)		1961.		1971 (P).		1961 Non- adults (0-14 years)
	Male.	Females.	Males.	Females.	Rural.	Urban.	Rural.	Urban.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Madras .. .. .	909,701	819,440	1,298,786	1,171,502	..	1,729,141	..	2,470,288	626,399
Oningleput .. .. .	1,120,591	1,075,821	1,488,272	1,400,871	1,740,734	455,678	1,884,558	1,004,585	824,384
North Arcot .. .. .	1,581,826	1,564,500	1,891,886	1,846,387	2,515,101	631,225	2,957,051	781,222	1,229,865
South Arcot .. .. .	1,535,928	1,512,045	1,830,906	1,776,005	2,655,651	392,322	3,094,054	512,907	1,147,340
Dharmapuri .. .. .	676,885	655,366	850,019	824,174	1,239,004	93,247	1,530,328	143,865	1,485,577
Salem .. .. .	1,247,000	1,224,857	1,519,496	1,467,190	1,947,756	524,101	1,291,919	794,767	
Coimbatore .. .. .	1,809,591	1,747,880	2,227,668	2,129,705	2,525,302	1,032,169	2,804,162	1,553,211	1,907,445
The Nilgiris .. .. .	213,833	195,475	252,269	239,061	229,441	179,867	248,806	242,524	169,116
Madurai .. .. .	1,607,229	1,603,998	1,977,819	1,953,285	2,195,482	1,015,745	2,608,945	1,322,159	1,218,305
Tiruchirappalli .. .. .	1,588,429	1,601,649	1,930,368	1,914,533	2,512,007	678,071	2,989,861	855,040	1,138,568
Thanjavur .. .. .	1,610,241	1,635,686	1,921,548	1,911,192	2,584,407	661,520	3,044,645	788,095	1,187,294
Ramanathapuram .. .. .	1,175,769	1,246,019	1,398,196	1,459,228	1,822,307	599,481	2,111,833	745,591	908,703
Tirunelveli .. .. .	1,330,220	1,400,059	1,562,992	1,631,502	1,882,397	847,882	2,166,216	1,028,278	1,013,528
Kanyakumari .. .. .	503,735	493,180	622,324	605,891	846,846	150,079	1,023,887	204,328	410,647
<b>Tamil Nadu .. .. .</b>	<b>16,910,978</b>	<b>16,775,975</b>	<b>20,772,549</b>	<b>20,330,576</b>	<b>24,696,425</b>	<b>8,990,528</b>	<b>28,656,265</b>	<b>12,446,860</b>	<b>12,667,771</b>

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(P)—Provisional.

Vol. IX—Madras General Population—Tables.

(1971— Not available.)

Source.—(1) Census of India, 1961—Part II-A.

(2) Census of India, 1971, Series 17—Tamil Nadu—Paper 1 of 1971.

(3) Census of India, 1961—Vol. IX, Madras General Economic Tables—Part II B (f).

## ANNEXURE IV.

WORKING POPULATION OF MADRAS STATE BY INDUSTRIAL CATEGORY AND SEX (RURAL AND URBAN)—1961.

Category.	Rural.			Urban.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Total Workers</b> .. .. .	12,257,938	7,668,891	4,589,047	3,093,683	2,434,436	659,248
<b>I As Cultivators</b> .. .. .	6,247,978	4,075,154	2,172,824	209,855	154,874	54,981
<b>II As Agricultural Labourers</b> .. .. .	2,673,243	1,361,247	1,311,996	155,131	83,794	71,337
<b>III In Mining, Quarrying, Livestock, Forestry, Fishing, Hunting and Plantations, Orchards and allied activities.</b>	308,476	239,728	68,748	127,022	90,878	36,144
<b>IV As household Industry</b> .. .. .	827,244	472,761	354,483	379,568	208,291	171,277
<b>in Manufacturing other than household Industries.</b>	272,637	231,888	40,749	575,665	518,697	56,968
<b>VI In Constructions</b> .. .. .	102,563	86,560	16,003	102,764	89,377	13,387
<b>VII In Trade and Commerce</b> .. .. .	281,968	224,020	57,948	476,333	436,874	39,459
<b>VIII In transport, Storage and Communications.</b>	52,002	51,381	621	201,599	197,218	4,381
<b>IX In other Services</b> .. .. .	1,491,827	926,152	565,675	865,746	654,432	211,314

Source.—Census of India, Vol. IX Madras, Part II-A.

## ANNEXURE V.

## PERCENTAGE DISTRIBUTION OF POPULATION IN MADRAS STATE BY MARITAL STATUS 1961.

Marital Status.	Rural		Urban		Combined	
	Male.	Female.	Male.	Female.	Male.	Female.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Never married .. ..	54.6	42.6	57.5	45.3	55.4	43.3
Married .. .. .	41.5	43.4	39.7	42.2	41.0	43.0
Widowed .. .. .	3.4	13.1	2.5	11.9	3.2	12.8
Divorced or separated ..	0.5	1.00	0.3	0.6	0.4	0.9
Total ..	100.0	100.0	100.0	100.0	100.0	100.0

Sources : Computed from the data available in Census of India, 1961, Volume IX—Madras—Part IIC(i)—Cultural tables.

## ANNEXURE VI.

## PERCENTAGE DISTRIBUTION OF WORKING POPULATION OF MADRAS STATE BY INDUSTRIAL CATEGORY AND SEX RURAL AND URBAN—1961.

Category.	Rural			Urban.		
	Persons.	Males.	Females.	Persons.	Males.	Females.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total Workers .. ..	100.00	100.00	100.00	100.00	100.00	100.00
I As Cultivators ..	50.97	53.14	47.35	6.78	6.86	8.34
II Agricultural Labourers.	21.81	17.75	28.59	5.01	3.44	10.82
III In Mining, Quarrying, Livestock, Forestry, fishing, Hunting and Plantations, Orchards and Allied activities.	2.52	3.13	1.50	4.11	3.73	5.48
IV At Household ..	6.75	6.16	7.72	12.27	8.56	25.98
V In manufacturing other than household industry.	2.22	3.02	0.89	18.61	21.31	8.65
VI In construction ..	0.84	1.13	0.35	3.32	3.67	2.03
VII In trade and commerce.	2.30	2.92	1.26	15.40	17.95	5.90
VIII In Transport, Storages and communication.	0.42	0.67	0.01	6.52	8.10	0.66
IX Other Services ..	12.17	12.08	12.33	27.98	26.88	32.95

Sources : Computed from the Census of India.

## ANNEXURE VII.

## GROWTH TREND IN THE EDUCATED UNEMPLOYED IN TAMIL NADU.

Year.		Degree holders.	Matric.	Total (All)
(1)		(2)	(3)	(4)
December 1961	..	2,987	35,970	38,965
1962	..	2,114	40,850	42,964
1963	..	2,662	38,514	41,176
1964	..	2,346	43,202	45,548
1965	..	2,801	51,699	54,500
1966	..	4,366	56,444	60,810
1967	..	6,561	70,987	77,498
1968	..	9,487	96,130	1,05,617
1969	..	13,810	98,914	1,12,724
1970	..	21,819	1,44,009	1,65,828
1971	..	27,658	1,53,384	1,81,042
June 1972	..	28,633	1,67,08	1,95,714

(These figures are in respect of Live Registers of Employment Exchanges in Tamil Nadu.)

## ANNEXURE VIII.

## STATISTICS RELATING TO ALL APPLICANTS.

Year.		Registration.	Placement.	Number on the Live register as on 31st December.
(1)		(2)	(3)	(4)
1961	..	226,029	38,555	151,742
1962	..	265,103	43,732	162,936
1963	..	310,337	54,253	193,875
1964	..	296,797	59,779	191,065
1965	..	307,833	61,522	709,618
1966	..	320,219	57,521	213,184
1967	..	320,971	44,875	233,155
1968	..	353,759	41,581	276,930
1969	..	403,404	42,770	354,924
1970	..	385,045	42,232	401,533
1971	..	406,908	41,689	460,676
Up to November 1972	..	375,619	34,337	446,040 (up to November.)

ANNEXURE IX.

WORK DONE IN RESPECT OF EDUCATED APPLICANTS.

	<i>Registration.</i>				<i>Placement.</i>				<i>Live Register.</i>			
	<i>Matrics.</i>	<i>Under Gradua- te.</i>	<i>Gradua- tes.</i>	<i>Total.</i>	<i>Matrics.</i>	<i>Under Gradua- tes.</i>	<i>Gradua- tes.</i>	<i>Total.</i>	<i>Matrics.</i>	<i>Under Gradua- tes.</i>	<i>Gradua- tes.</i>	<i>Total.</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1961 .. .. .	52,453	3,360	6,730	62,543	14,594	771	1,393	16,758	35,978	2,226	2,987	41,191
1962 . . . . .	66,013	4,448	8,128	78,589	15,712	729	1,864	18,305	40,850	2,741	2,114	45,705
1963 .. .. .	59,336	5,185	6,605	71,126	15,805	766	2,452	19,023	38,514	2,366	2,662	43,542
1964 .. .. .	69,863	4,380	6,916	81,159	18,050	890	3,363	22,303	43,202	2,257	2,346	47,805
1965 .. .. .	79,159	3,842	8,707	91,708	22,132	1,416	3,208	26,756	51,699	1,884	2,801	56,384
1966 .. .. .	90,036	5,811	11,726	1,07,573	19,327	888	3,331	23,546	56,444	4,067	4,366	64,877
1967 .. .. .	1,00,997	7,533	15,546	1,24,076	13,244	647	4,046	17,937	70,937	4,100	6,561	81,598
1968 .. .. .	1,06,767	10,436	17,459	1,34,662	11,814	770	3,727	16,311	96,130	9,947	9,487	1,15,564
1969 .. .. .	1,18,510	12,394	21,132	1,52,036	15,743	774	4,090	20,607	98,914	10,992	13,810	1,23,716
1970 .. .. .	1,36,733	14,010	25,762	1,76,505	17,703	1,105	4,842	23,650	1,44,009	13,158	21,819	1,78,986
1971 .. .. .	1,40,848	15,232	24,556	1,80,636	16,881	1,348	5,501	23,730	1,53,384	14,204	27,658	1,95,246
1972 Up to June 1972 .. ..	80,550	8,861	12,206	1,01,337	8,172	571	1,641	10,384	1,67,081	19,662	28,633	2,15,326

ANNEXURE X.

DETAILS RELATING TO THE WORK DONE BY THE EMPLOYMENT OFFICES IN RESPECT OF SCHEDULED CASTE, SCHEDULE TRIBE APPLICANTS, EX-SERVICEMEN, WOMEN, ETC., DURING THE YEARS 1967, 1968, 1969, 1970 AND 1971.

<i>Details.</i>	<i>Scheduled caste.</i>	<i>Scheduled tribe.</i>	<i>Ex-service men.</i>	<i>Women.</i>	<i>P. H. applicants.</i>	<i>Burma Repatriates.</i>	<i>Ceylon Repatriates.</i>	<i>Gold smiths.</i>	<i>S.S.L.C.</i>	<i>Under Graduates.</i>	<i>Graduates.</i>	<i>Total of all applicants.</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
REGISTRATIONS.												
1967 .. .. .	34,707	384	6,357	55,827	332	2,523	211	149	1,00,997	7,533	15,346	3,20,971
1968 .. .. .	36,097	470	7,775	60,448	457	2,574	258	91	1,06,767	10,436	17,459	3,53,759
1969 .. .. .	44,362	590	7,229	69,582	533	1,976	468	119	1,18,510	12,394	1,18,501	4,03,404
1970 .. .. .	40,696	448	7,481	73,200	591	1,697	1,019	145	1,36,733	14,010	25,762	3,85,045
1971 .. .. .	45,689	509	6,193	78,038	537	1,645	2,706	259	1,40,848	15,232	24,556	4,06,903
PLACEMENTS.												
1967 .. .. .	5,178	98	909	8,475	118	294	26	37	13,244	647	4,046	44,875
1968 .. .. .	5,213	123	1,287	7,548	184	383	65	45	11,814	770	3,727	41,581
1969 .. .. .	5,379	114	1,369	7,891	173	297	84	85	15,743	774	3,662	42,770
1970 .. .. .	6,850	149	1,399	9,002	184	303	133	104	17,703	1,105	4,842	42,232
1971 .. .. .	5,906	120	1,305	8,495	145	289	187	163	16,881	1,348	5,501	41,689
LIVE REGISTER AS ON.												
31st December 1967 .. .. .	34,874	236	4,736	40,971	583	1,098	116	103	70,937	4,100	6,561	2,33,155
31st December 1968 .. .. .	39,988	310	5,214	48,924	608	1,735	187	89	96,130	9,947	9,487	2,76,930
31st December 1969 .. .. .	51,592	446	5,168	61,546	788	1,436	312	81	98,914	10,992	13,810	3,54,924
31st December 1970 .. .. .	48,193	386	5,467	74,641	927	1,170	634	113	1,44,009	13,158	21,819	4,01,533
31st December 1971 .. .. .	52,882	511	6,486	86,214	964	2,133	2,087	287	1,53,384	14,204	27,658	4,60,673

ANNEXURE XI.

STATISTICAL DATA RELATING TO EDUCATED APPLICANTS IN TAMILNADU FOR THE YEARS 1967, 1968, 1969, 1970, 1971 AND 1972.

Details.	S.S.L.C.	Under gradua- tes.	Graduates.				Total.	Test- Graduates.	All applicants including illiterates.
			Engineering.	Medical.	Other gradua- tes (Arts, Science, etc.)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
REGISTRATIONS.									
1966	90,036	5,811	738	40	10,083	10,861	865	3,20,219	
1967	1,00,997	7,533	1,199	71	12,625	13,895	1,651	3,20,971	
1968	1,06,767	10,456	2,847	59	13,411	16,317	1,142	3,53,759	
1969	1,18,510	12,394	2,489	95	15,917	18,501	2,631	4,03,404	
1970	136,733	14,010	2,550	231	20,302	23,083	2,679	385,045	
1971	140,848	15,232	2,889	256	18,518	21,663	2,893	4,06,908	
1972 (up to June)	80,650	8,581	994	146	9,695	10,835	1,371	2,10,344	
PLACEMENTS									
1966	19,327	888	34	18	3,150	3,202	99	57,521	
1967	13,244	647	64	9	3,823	3,896	150	44,875	
1968	11,814	770	42	10	3,513	3,565	162	41,581	
1969	15,743	774	472	10	3,100	3,582	428	42,770	
1970	17,703	1,105	635	23	3,878	4,536	306	42,232	
1971	16,881	1,348	1,046	63	3,790	4,899	602	41,689	
1972 (up to June)	8,172	571	160	14	1,352	1,526	115	19,713	
LIVE REGISTER—AS ON 31ST DECEMBER.									
1966	56,444	4,067	298	36	3,634	3,968	398	2,13,184	
1967	70,937	4,100	758	38	4,523	5,319	1,242	2,33,155	
1968	96,130	9,947	1,086	25	7,666	8,777	710	2,76,930	
1969	98,914	10,992	1,639	75	10,407	12,121	1,689	3,54,924	
1970	144,009	13,158	2,083	65	17,790	19,938	1,881	4,01,533	
1971	1,53,384	14,204	2,381	154	22,391	24,926	2,732	4,60,676	
1972 (as on 30th June 1972)	1,67,081	19,662	2,066	164	23,512	25,742	2,891	4,86,628	



## ANNEXURE XII.

NUMBER OF ENGINEERING DIPLOMA HOLDERS ON LIVE REGISTER AS ON 30TH JUNE 1972.

<i>Branches.</i>	<i>Number on Live Register as on 30th June 1972.</i>
(1)	(2)
Civil Engineering .. .. .	450
Mechanical Engineering .. .. .	2,071
Electrical Engineering .. .. .	1,279
Chemical Engineering .. .. .	17
Mining Engineering .. .. .	..
Telecommunication .. .. .	26
Automobile Engineering .. .. .	58
Printing Technology .. .. .	277
Leather Technology .. .. .	..
Textile Technology .. .. .	29
Sound Engineering .. .. .	1
Handloom Technology .. .. .	6
Film Technology .. .. .	2
Mining and Mine Surveying .. .. .	1
Air-Condition and Refrigeration .. .. .	1
Medical Laboratory Technology .. .. .	22
Total ..	4,240

## ANNEXURE XIII.

NUMBER OF ENGINEERING GRADUATES ON LIVE REGISTER AS ON 31ST JULY 1972.

<i>Branches.</i>	<i>Number on Live Register.</i>
(1)	(2)
Civil Engineering .. .. .	95
Mechanical Engineering .. .. .	1,174
Electrical Engineering .. .. .	907
Chemical Engineering .. .. .	190
Metallurgical .. .. .	30
Telecommunication .. .. .	136
Automobile .. .. .	30
Mining .. .. .	2
Leather Technology .. .. .	..
Textile Technology .. .. .	12
Sound Engineering .. .. .	..
Electronics .. .. .	12
Architect .. .. .	9
Aeronautical .. .. .	8
Instrument Technology .. .. .	8
Road Transport .. .. .	1
Total ..	2,614

## ANNEXURE XIV.

STATEMENT SHOWING THE VACANCIES NOTIFIED TO AND FILLED BY THE EMPLOYMENT OFFICES IN TAMILNADU DURING THE YEARS 1961 TO 1971 AND 1972

Year.	Notified.					Filled.				
	Central Government.	State Government.	Local Body and Quasi Government.	Private.	Total.	Central Government.	State Government.	Local Body and Quasi Government.	Private.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1961 .. ..	5,388	25,060	17,804	3,780	52,032	4,282	20,870	11,475	989	37,616
1962 .. ..	4,577	26,715	24,235	4,924	60,451	3,514	23,064	15,786	1,186	43,550
1963 .. ..	12,267	28,645	24,848	6,919	72,679	10,755	25,135	17,331	1,266	54,487
1964 .. ..	6,252	30,577	37,105	9,489	83,423	3,350	24,863	26,194	2,003	56,410
1965 .. ..	4,248	39,448	30,830	8,012	82,538	2,619	33,331	23,240	1,953	61,143
1966 .. ..	3,886	29,230	33,641	10,747	77,504	2,768	25,381	27,099	1,765	57,013
1967 .. ..	3,001	24,432	24,418	10,206	62,857	2,245	20,932	19,324	1,867	44,638
1968 .. ..	4,062	24,191	20,745	8,447	57,445	2,384	20,162	16,897	1,687	44,130
1969 .. ..	3,804	30,198	17,482	7,988	59,472	2,165	24,233	13,422	1,753	41,573
1970 .. ..	3,901	27,990	17,051	7,150	56,092	2,785	23,948	13,325	1,785	41,843
1971 .. ..	6,861	29,323	14,531	5,869	56,584	4,599	24,641	10,311	1,580	41,131
1972 (Up to July 1972)	3,299	16,219	9,433	4,626	33,577	1,894	12,585	7,093	888	22,460

## ANNEXURE XV.

## EMPLOYMENT GROWTH IN TAMIL NADU (IN 000s).

<i>As on</i>			<i>Public sector.</i>	<i>Private sector.</i>	<i>Total employment.</i>
(1)			(2)	(3)	(4)
31st March 1962	..	..	648.8	626.5	1275.3
31st March 1963	..	..	691.9	590.3	1282.2
31st March 1964	..	..	710.7	607.4	1318.1
31st March 1965	..	..	755.3	615.2	1370.5
31st March 1966	..	..	775.5	633.4	1408.9
31st March 1967	..	..	808.7	633.0	1441.7
31st March 1968	..	..	826.1	62.6	1449.7
31st March 1969	..	..	831.5	638.5	1470.0
31st March 1970	..	..	861.5	650.5	1512.0
31st March 1971	..	..	889.4	651.8	1541.2
31st December 1971	..	..	914.5	647.0	1561.5
31st March 1972	..	..	934.9	628.6	1572.5

ANNEXURE—XVI.

TOTAL EMPLOYMENT COVERAGE—DISTRICT WISE EMPLOYMENT AS ON 31ST MARCH.

	District.					1962	1963	1964	1965	1966	1967
	(1)					(2)	(3)	(4)	(5)	(6)	(7)
Madras City	..	..	..	..	..	284,399	283,662	286,263 (17,632)	285,043 (20,467)	293,175 (21,648)	306,905 (23,688)
Kanyakumari	..	..	..	..	..	27,718	26,926	28,430	30,842 (7,753)	31,106 (7,954)	32,550 (8,351)
Ramanathapuram	..	..	..	..	..	54,109	52,120	53,571 (10,013)	56,831 (11,302)	57,911 (11,127)	62,817 (12,499)
Madurai	..	..	..	..	..	126,014	121,245	125,735 (17,565)	130,624 (18,283)	130,090 (18,372)	126,862 (17,999)
North Arcot	..	..	..	..	..	60,742	62,882	64,195 (6,774)	67,561 (7,685)	69,948 (7,920)	76,559 (9,012)
South Arcot	..	..	..	..	..	72,564	73,912	40,430 (2,731)	43,320 (30,31)	44,823 (8,351)	73,475 (5,509)
Salem	..	..	..	..	..	77,396	83,265	85,677 (13,732)	89,831 (13,362)	100,035 (15,579)	81,271 (14,985)
Nilgiris	..	..	..	..	..	65,754	64,008	66,888 (23,527)	62,672 (23,863)	64,736 (25,735)	63,048 (24,672)
Coimbatore	..	..	..	..	..	203,826	210,707	206,933	213,192 (42,327)	205,471 (43,215)	203,450
Tiruchirapalli	..	..	..	..	..	105,204	103,134	112,213 (9,208)	118,046 (9,296)	127,193 (10,851)	127,299 (10,413)
Thanjavur	..	..	..	..	..	59,282	58,772	60,571 (6,224)	63,383 (6,357)	66,085 (6,887)	71,158 (7,832)
Chingleput	..	..	..	..	..	69,108	78,830	88,391 (6,683)	103,708 (7,432)	107,607 (8,850)	111,177 (9,829)
Tirunelveli	..	..	..	..	..	76,454	76,914	75,857	77,270	82,631 (13,650)	84,462
Neyveli	..	..	..	..	..		Not functioning.		28,028 (2,285)	29,285 (2,219)	30,449 (2,287)
Dharmapuri	..	..	..	..	..		Not functioning.				18,722 (2,345)

## ANNEXURE—XVI—cont.

Total Employment Coverage District wise						Employment as on 31st March				
						1968	1969	1970	1971	1972
District.						(8)	(9)	(10)	(11)	(12)
Madras City	..	..	..	..	..	316,879 (25,790)	320,906 (26,189)	319,709 (26,326)	320,208 (274,475)	32,7709 (29,480)
Kar yukumari	..	..	..	..	..	33,478 (8,846)	32,773 (8,725)	37,739 (11,101)	40,985 (11,338)	41,624 (16,093)
Ramanathapuram	..	..	..	..	..	64,140	65,247 (12,750)	65,339 (13,187)	68,353 (13,645)	73,648 (14,347)
Madurai	..	..	..	..	..	128,717 (17,788)	130,990 (18,032)	133,815 (18,079)	135,888 (17,604)	135,818 (18,194)
North Arcot	..	..	..	..	..	77,421 (9,097)	81,766	82,697 (9,642)	87,407 (9,847)	92,063 (10,631)
South Arcot	..	..	..	..	..	73,771 (5,405)	76,938 (5,253)	78,076 (5,451)	80,476 (5,889)	50,476 (4,164)
Salem	..	..	..	..	..	82,792 (15,610)	85,566 (16,750)	88,685 (17,415)	90,743 (16,906)	94,071 (17,646)
Nilgiris	..	..	..	..	..	61,977 (24,128)	62,506 (25,126)	63,607 (24,867)	63,463 (24,822)	64,404 (21,772)
Coimbatore	..	..	..	..	..	199,591 (412,85)	200,042 (39,506)	204,485 (52,215)	206,423 (41,147)	203,799 (42,721)
Tiruchirappalli	..	..	..	..	..	124,045 (10,870)	121,999 (10,948)	125,431 (10,922)	123,664 (11,232)	128,495 (11,765)
Thanjavur	..	..	..	..	..	71,694 (7,802)	72,790 (8,041)	74,393 (8,177)	78,874 (8,530)	80,393 (8,910)
Cningleput	..	..	..	..	..	113,218 (10,461)	110,251 (9,771)	118,224 (10,050)	115,581 (10,065)	119,134 (10,524)
Tirunelveli	..	..	..	..	..	84,359	89,110 (16,942)	93,189 (15,985)	95,820 (16,731)	95,218 (16,910)
Neyveli	..	..	..	..	..	29,247 (1,857)	30,757	30,749 (1,762)	31,690 (1,686)	(2,518)
harmapuri	..	..	..	..	..	19,143 (2,457)	23,945 (3,629)	28,102 (5,008)	31,458 (6,210)	33,204 (4,848)

The figures within the brackets denote women employment.

## ANNEXURE XVII

## NUMBER OF EMPLOYMENT OFFICES IN, TAMIL NADU AND FUNCTIONAL AND GEOGRAPHICAL JURISDICTION.

<i>Number of Office.</i>	<i>Type of Office.</i>	<i>Functional and Geographical Jurisdiction.</i>
(1)	(2)	(3)
16	District Employment Office .. .. .	<p><i>Geographical</i>: Situated at headquarters of each district with revenue district as jurisdiction.</p> <p><i>Functional</i>: Caters for all categories of applicants including women, <i>except</i> Professional and Executive category applicants and Physically Handicapped applicants.</p> <p>But, in Madras City the District Employment Office, North Madras caters only unskilled categories.</p> <p>The jurisdiction for District Employment Office, Cuddalore covers only Cuddalore, Tindivanam Villupuram, Gingee and Tirukoilur Taluks.</p> <p>The jurisdiction for District Employment Office, Neyveli covers Virudachalam, Chidambaram and Kallakurichi Taluks.</p>
6	Sub-Employment Offices .. .. .	<p><i>Situated at</i>:</p> <ol style="list-style-type: none"> <li>1. Erode for Erode Taluk.</li> <li>2. Dindigul for Dindigul and Vedasandur Taluks.</li> <li>3. Pudukottai for Pudukottai Thirumayam and Alangudi Taluks.</li> <li>4. Kancheepuram for Kancheepuram Taluk.</li> <li>5. Ambattur for [Ambattur Avadi and Ambattur surrounding.</li> </ol> <p>All functions of an Employment Exchange excepting Employment Market Information and Vocational Guidance Programme are carried out by these offices.</p> <p>6. <i>Mandapam</i>: Registers only Ceylon repatriates arriving at Rameswaram Port.</p>
	University Employment Information and Guidance Bureaux.	Function at Madras, Madurai and Annamalai Nagar. Universities cater Employment assistance to alumni of the respective Universities.
1	Employment Office for Physically Handicapped Madras.	Functions at Madras for the <i>entire State</i> for providing employment assistance to all physically handicapped candidates.
1	Professional and Executive Employment Office. Madras.	Functions at Madras for the <i>entire State</i> for providing employment assistance to all highly qualified Professional and Executive categories of applicants.

ANNEXURE XVIII.

OCCUPATIONAL CLASSIFICATION OF WORKERS OTHER THAN CULTIVATORS BY DISTRICTS IN TAMIL NADU 1961.

687C-87-40

Districts.	Profes- sional Technical and related workers.	Adminis- trative' Executive and managerial workers.	Clerical and related workers.	Sales workers.	Farmers, Fishermen, Hunters, Loggers and related workers.	Miners, Quarry- men and Related workers.	Workers in Transport and Communi- cation occupations.	Craftsmen, Production, Process Workers and Labourers. not else where classified.	Service Sport and Recreation workers.	Workers not classifiable and occupation.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1 Madras .. ..	39,545	19,973	90,601	59,357	11,301	29	28,681	2,11,537	64,209	1,451	5,26,684
2 Chingleput ..	16,316	19,964	19,320	28,906	26,640	3,444	9,332	2,20,465	3,2,019	721	3,76,947
3 North Arcot ..	21,460	17,134	19,350	46,647	38,590	2,589	11,532	2,81,586	33,494	239	4,62,61
4 South Arcot ..	19,743	13,376	15,015	31,525	25,563	3,739	9,576	1,56,343	30,777	113	3,05,77
5 Dharmapuri ..	20,212	15,489	15,223	57,201	22,413	8,845	11,373	4,46,518	36,451	113	6,33,838
6 Salem .. ..											
7 Coimbatore ..	29,167	20,824	28,413	79,637	73,700	2,935	18,014	6,01,775	67,151	1,254	9,33,870
8 The Nilgiris ..	5,517	6,173	5,370	5,999	53,940	757	25,12	39,311	11,797	163	1,31,539
9 Madurai .. ..	27,275	16,070	29,053	70,471	45,240	3,310	14,829	3,33,651	57,036	212	5,97,147
10 Tiruchirapalli ..	24,711	17,100	23,479	49,391	22,732	5,436	12,299	2,54,993	42,753	319	4,53,213
11 Thanjavur ..	31,374	22,365	21,095	64,859	36,915	851	13,702	1,88,858	42,562	322	4,22,903
12 Ramanathapuram.	21,177	11,239	15,400	43,689	28,231	645	8,068	2,13,190	36,009	255	3,77,902
13 Tirunelveli ..	29,894	13,929	20,918	59,940	59,548	2,095	13,692	3,54,186	51,566	189	6,05,937
14 Kanyakumari ..	11,981	3,895	5,780	19,867	37,590	2,310	4,316	1,48,939	12,330	25	2,47,042
15 Tamil Nadu ..	2,98,372	1,97,531	3,09,017	6,17,489	4,72,223	37,985	1,57,926	34,51,362	5,18,163	5,346	60,65,414

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(Source.—Census of India 1961 Vol. IX—Part II-B (ii) General Economic Tables.)

ANNEXURE XIX.

STATEMENT SHOWING THE NUMBER OF ESTABLISHMENTS EMPLOYMENT AND EMPLOYMENT INDICES IN TAMIL NADU DURING MARCH 1966 TO MARCH, 1970.

Quarter ended,	Establishments.					Public and Private.
	Public.	Private.			Total.	
		Larger.	Smaller.	Total.		
(1)	(2)	(3)	(4)	(5)	(6)	
31st March 1966 .. .. .	4,248	4,082	8,010	12,092	16,340	
31st March 1967 .. .. .	4,351	4,082	7,594	12,076	16,427	
31st March 1968 .. .. .	4,341	4,078	7,765	11,843	16,184	
31st March 1969 .. .. .	4,393	4,151	8,552	12,703	17,096	
31st March 1970 .. .. .	4,450	4,120	8,022	12,142	16,592	
31st March 1971 .. .. .	4,895	4,058	8,232	12,290	17,185	
31st March 1972 .. .. .	5,511	4,075	8,089	12,164	17,675	

NOTE—Larger establishments in the statement above refers to establishments employing 25 persons or more.  
Smaller establishments in the statement refer to establishments employing 10 or more but less than 25 persons.

Quarter ended.	Employment in 000s.					Employment Indices.		
	Public.	Private.			Public.	Private.	Total. . .	
		Larger.	Smaller.	Total.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
31st March 1966 .. .. .	784.2	529.4	108.7	638.1	1,422.3	100.0	100.0	100.0
31st March 1967 .. .. .	81.30	527.6	107.1	634.7	144.50	103.3	99.4	101.5
31st March 1968 .. .. .	826.1	521.2	102.4	623.6	1,449.7	105.3	97.7	101.9
31st March 1969 .. .. .	831.5	528.8	109.7	638.5	1,470.0	106.0	100.0	103.3
31st March 1970 .. .. .	861.7	543.8	106.5	650.3	1,512.0	109.8	101.9	106.3
31st March 1971 .. .. .	883.8	541.4	110.3	651.7	1,535.5	112.7	102.1	117
31st March 1972 .. .. .	934.9	528.4	110.1	638.5	1,573.4	119.2	100.0	119.8



## ANNEXURE XX.

EMPLOYMENT IN PUBLIC AND PRIVATE SECTOR COVERED UNDER EMPLOYMENT MARKET INFORMATION SCHEME  
FOR THE QUARTER ENDED 31ST MARCH 1972.

(District-wise figures).

Serial number and district.	Public Sector.	Private Sector.		Total.
		Act.	Non-Act.	
(1)	(2)	(3)	(4)	(5)
1 Madras .. .. .	2,33,326	82,610	11,873	3,27,809
2 Chingleput .. .. .	58,140	56,919	3,999	1,19,058
3 North Arcot .. .. .	60,779	22,422	8,862	92,063
4 Cuddalore .. .. .	38,327	8,596	3,556	50,479
5 Neyveli .. .. .	26,222	3,877	3,342	33,441
6 Thanjavur .. .. .	56,527	14,602	9,264	80,393
7 Tiruchirappalli .. .. .	97,433	23,704	7,271	1,28,496
8 Salem .. .. .	47,973	38,050	13,848	93,871
9 Dharmapuri .. .. .	26,455	3,719	3,030	33,204
10 Coimbatore .. .. .	82,145	1,13,124	8,463	2,03,732
11 The Nilgiris .. .. .	20,806	40,626	2,972	64,404
12 Madurai .. .. .	77,845	46,455	11,518	1,35,818
13 Ramanathapuram .. .. .	41,772	25,624	6,462	73,858
14 Tirunelveli .. .. .	46,110	37,943	11,160	95,213
15 Kanyakumari .. .. .	21,717	14,950	4,960	41,627
Total .. .. .	9,34,577	5,28,308	1,10,580	15,73,465

## ANNEXURE XXI.

## NUMBER OF ESTABLISHMENTS, WORKERS, ETC., UNDER LABOUR ACTS.

Year.	Number of establishments.	Number of persons employed.	Licence fees collected.
(1)	(2)	(3)	(4)
<b>I. Factories Act, 1948—</b>			
1970 .. .. .	6,365	4,22,640	17,42,254
1971 .. .. .	6,412	4,32,488	19,45,320
1972 .. .. .	6,651	4,45,100	21,23,122
<b>II. Tamil Nadu Shops and Establishments Act, 1947—</b>			
(At the beginning of the year).			
1971 .. .. .	2,11,190	2,15,155	Does not arise.
1972 .. .. .	2,15,887	2,15,816	Do.
1973 .. .. .	2,02,834	2,22,970	Do.
<b>III. Tamil Nadu Catering Establishments Act, 1958—</b>			
(At the beginning of the year).			
1971 .. .. .	19,776	70,069	1,89,452
1972 .. .. .	18,811	70,996	1,52,275
1973 .. .. .	19,786	71,765	1,48,240

## ANNEXURE XXI—cont.

## NUMBER OF ESTABLISHMENT, WORKERS ETC. UNDER LABOUR ACT—cont.

Year.	Number of establishments.	Number of persons employed.	Licence fees collected.
(1)	(2)	(3)	(4)
			RS.
<b>IV. Plantations Labour Act, 1951—</b>			
1970	307	85,528	Does not arise.
1971	319	85,583	Do.
1972	340	86,643	Do.
<b>V. Beedi and Cigar Workers (Conditions of Employment) Act 1966—</b>			
1970-71	909	1,183	12,517-00
1971-72	623	5,031	15,720-50
1972-73	364	2,785	4,983-00
<b>VI. Motor Transport Workers Act, 1961—</b>			
1970	1,138	34,334	43,716-25
1971	1,155	41,705	37,233-75
1972	1,283	38,584	39,856-85
<b>VII. Payment of Wages Act, 1936—</b>			
1970	27,197	5,38,299	Does not arise.
1971	18,717	5,59,677	Do.
1972	18,975	6,75,170	Do.
<b>VIII. Minimum Wages Act, 1948—</b>			
1970	8,748	1,55,562	Do.
1971	9,052	2,42,948	Do.
1972	8,835	2,55,417	Do.
<b>IX. Trade Unions Act, 1926—</b>			
	1971	1972	1973
	1,856	2,033	2,136
<b>X. Industrial Disputes Act, 1947—</b>			
Strikes and Lockouts.			
Year.	Number of strikers and lockouts.	Mandays lost.	
(1)	(2)	(3)	
1970	277	1,033,377	
1971	308	2,286,507	
1972	356	3,718,448	

## ANNEXURE XXII.

## EMPLOYEES PROVIDENT FUND AND FAMILY PENSION FUND AOE.

Year.	Number of establishments covered.	Number of workers covered.	Contributions realised.	Administrative charges.	Inspection charges.
(1)	(2)	(3)	(4)	(5)	(6)
			(RS. IN CRORES.)	(RUPEES IN LAKHS.)	
1970-71	6,602	5,54,44	17.34	32.23	4.28
1971-72	7,239	6,14,485	20.17	31.31	4.89
1972-73 (up to 30th September 1972)	7,569	6,71,385	7.60	16.72	2.46
Family Pension members		1,24,076	0.43	..	

## ANNEXURE XXIII.

## EMPLOYEE'S STATE INSURANCE ACT.

Year.	Number of places covered.	Workers covered.		Sickness benefit including extended sickness benefit for long drawn diseases.	
		(a) Insured persons.	(b) Family units.	S.B.	E.S.D.
(1)	(2)	(3)	(4)	(5)	(6)
				(RUPEES IN LAKHS.)	
1971	95	4,02,500	4,02,500	152.0	8.8
1972	39	3,90,150	3,90,150	188.7	8.4

## II. EMPLOYMENT INJURY BENEFIT.

Year.	Temporary Disablement Benefit.	Permanent Disablement Benefit.	Dependants Benefit.	Maternity Benefit.	Expenditure on provision of Medical Care.
					(RUPEES IN LAKHS.)
1971	17.1	14.6	1.8	6.9	327
1972	16.0	9.2	2.0	7.2	329

**ANNEXURE XXIV.**

		NUMBER OF STRIKES AND LOOKOUTS												(In percentage.)	
		1950.	1951.	1952.	1953.	1954.	1955.	1956.	1957.	1958.	1959.	1960.	1961.	1962.	1963.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
1 Textiles ..	15.45	21.42	35.00	44.10	60.56	57.63	34.71	51.38	23.57	33.96	59.52	51.70	34.87	47.00	
2 Fute ..	5.69	3.76	5.77	2.62	..	..	..	..	..	..	..	..	..	..	
3 Engineering ..	4.88	9.39	4.23	4.24	3.38	4.23	3.70	7.51	18.92	10.38	7.55	14.97	19.75	14.22	
4 Railways ..	2.44	1.13	1.15	5.68	0.38	0.85	1.72	0.40	5.02	..	1.81	..	0.66	0.85	
5 Mines .. ..	8.13	6.40	13.08	7.86	3.30	0.43	1.37	3.16	4.63	2.36	1.21	..	1.32	2.59	
6 Miscellaneous	63.41	57.90	40.77	34.50	32.30	36.86	58.42	37.55	42.86	53.30	29.91	33.33	43.40	35.34	
Total Number ..	123	266	260	229	266	236	291	253	259	212	331	147	152	232	
Total Percentage.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	

		(In percentage.)							
		1964	1965	1966	1967	1968	1969	1970	1971
		(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1. Textiles .. ..	..	47.50	43.70	58.53	54.75	37.23	26.37	31.12	46.43
2 Engineering .. ..	..	16.44	17.72	6.25	14.42	26.41	32.18	21.86	25.00
3 Tannery .. ..	..	6.85	8.22	13.06	3.70	3.03	1.15	1.08	1.30
4 Tobacco and Beedi	..	4.55	5.92	3.98	4.59	3.46	1.15	8.05	1.30
5 Plantations .. ..	..	0.91	4.44	1.14	0.03	1.73	5.75	4.32	2.92
6 Other .. ..	..	23.75	20.00	17.04	22.51	20.14	33.40	33.57	23.05
Total Number .. ..	..	219	135	176	305	231	174	277	830
Total Percentage .. ..	..	100	100	100	100	100	100	100	100

## ANNEXURE XXV.

## NUMBER OF WORKERS INVOLVED IN STRIKES AND LOCKOUTS.

(In Percentage)

	1950.	1951.	1952.	1953.	1954.	1955.	1956.	1957.	1958.	1959.	1960.	1961.	1962.	1963.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1 Textiles ..	40.02	46.47	26.10	40.89	66.91	83.20	81.99	77.18	57.84	44.85	75.56	62.93	49.10	74.12
2 Jute .. ..	10.58	8.45	13.53	1.85	..	..	..	..	..	..	..	..	..	..
3 Engineering ..	10.21	16.30	4.86	5.69	1.90	1.85	1.35	2.16	9.98	5.49	3.01	15.52	15.52	9.00
4 Railways ..	0.07	0.31	6.97	1.68	0.12	4.94	1.07	0.04	10.36	..	4.09	..	1.21	0.81
5 Mines .. ..	8.26	5.29	24.08	21.19	4.83	0.03	2.05	2.95	8.32	1.01	0.82	..	0.53	6.08
6 Miscellaneous ..	30.86	23.18	24.48	28.70	26.24	9.90	13.54	17.67	13.50	48.65	16.52	21.55	33.64	9.99
Total Number	63,426	99,946	1,33,392	95,021	68,943	98,718	11,15,425	1,21,060	1,18,670	1,11,072	22,00,97	4,51,91	30,654	64,626
Percentage	100	100	100	100	100	100	100	100	100	100	100	100	100	100

(In Percentage)

	1964	1965	1966	1967	1968	1969	1970	1971
	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1 Textiles .. ..	42.78	46.53	74.27	83.50	48.10	37.21	29.62	49.24
2 Engineering .. ..	14.35	7.88	6.97	12.27	13.39	21.83	6.65	16.41
3 Tannery .. ..	13.42	5.07	2.26	1.00	3.41	0.15	0.74	1.34
4 Tobacco and Beedi .. ..	7.25	26.69	2.72	0.59	9.86	2.86	9.05	0.24
5 Plantations .. ..	1.64	6.58	4.00	0.00	1.74	3.34	1.69	4.33
6 Others .. ..	20.56	7.25	9.78	32.64	23.50	34.61	52.25	28.44
Total Number	64,514	49,557	69,310	1,17,151	1,15,366	41,900	1,41,186	1,37,794
Total Percentage	100	100	100	100	100	100	100	100



**ANNEXURE XXVI**

**NUMBER OF MANDAYS LOST DUE TO STRIKES AND LOCKOUTS.**

(In Percentage)

	1950.	1951.	1952.	1953.	1954.	1955.	1956.	1957.	1958.	1959.	1960.	1961.	1962.	1963.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Textiles ..	36.05	62.45	21.28	43.30	79.93	82.01	84.56	82.19	67.41	80.13	62.13	40.57	54.32	88.48
Jute ..	0.97	1.53	11.32	1.03	..	..	..	..	..	..	..	..	..	..
Engineering ..	9.32	5.92	55.4	31.91	1.10	5.33	0.76	1.67	6.51	2.29	8.55	25.48	20.17	4.60
Railways ..	0.00	..	3.74	0.68	0.02	1.96	0.31	0.01	1.53	..	2.27	..	0.05	0.0
Mines ..	8.89	4.84	21.22	15.41	2.92	..	0.40	0.46	13.47	0.20	0.24	..	0.31	0.74
Miscellaneous ..	44.77	25.26	36.90	7.67	16.03	10.70	13.97	15.67	11.08	17.38	26.81	33.95	25.15	6.73
Total Number	3,39,296	5,93,096	2,66,837	1,70,470	2,16,239	2,19,370	4,22,937	7,22,771	8,09,106	11,02,472	7,65,990	1,91,988	1,59,845	4,63,664
Total Percentage	100	100	100	100	100	100	100	100	100	100	100	100	100	100

(In Percentage)

	1964.	1965.	1966.	1967.	1968.	1969.	1970.	1971.
	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
1 Textiles ..	44.15	38.29	75.34	31.24	14.29	27.45	34.11	48.25
2 Engineering ..	9.53	16.32	8.75	44.23	22.82	35.20	17.25	28.23
3 Tannery ..	7.19	1.48	2.38	1.02	1.49	0.05	0.30	0.97
4 Tobacco and Beedi ..	2.33	29.41	5.82	0.18	9.50	1.41	13.18	0.14
5 Plantations ..	0.23	8.89	2.07	0.10	0.72	6.08	2.63	5.16
6 Others ..	36.57	5.61	5.64	23.33	51.18	29.81	32.55	17.25
Total Number	4,60,805	4,59,401	7,53,612	11,20,517	18,81,559	6,83,059	8,83,377	22,86,507
Total Percentage	100	100	100	100	100	100	100	100

National Institute of Educational  
 Planning and Administration  
 17-B, SriAurobindo Marg, New Delhi-110016  
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