

The analysis of the problem of educated unemployment is made against the backdrop of the trends in educational and economic development of the State since 1957. The tremendous expansion in secondary and University enrolment in the state during the 1960's, 1970's and 1980's, due to the open door policy in admission and the opening of new institutions has resulted in a large and ever-rising supply of educated manpower. At the same time, employment opportunities in the State did not increase commensurate with the increase in the supply of educated manpower. Thus the imbalance between the supply of and the demand for educated in the labour market led to the growing problem of unemployment of the educated.

The analysis of the census figures relating to employment by industry, occupation and education brought to light not only the fact that employment opportunities for the educated in various industries and occupations in the State have not increased commensurate with the increase in the supply of educated manpower, but also the dismal picture of slackening industrial development. A closer examination of the recent trends in the growth of employment opportunities is the

CHAPTER 1X**SUMMARY AND CONCLUSIONS**

The analysis of the problem of educated unemployment is made against the backdrop of the trends in educational and economic development of the State since 1957. The tremendous expansion in secondary and University enrolment in the state during the 1960's, 1970's and 1980's due to the open door policy in admission and the opening of new institutions has resulted in large and ever-rising supply of educated manpower. At the same time, employment opportunities in the State did not increase commensurate with the increase in the supply of educated manpower. Thus the imbalance between the supply of and the demand for educated in the labour market led to the growing problem of unemployment of the educated.

The analysis of the census figures relating to employment by industry, occupation and education brought to light not only the fact that employment opportunities for the educated in various industries and occupations in the State have not increased commensurate with the increase in the supply of educated manpower, but also the dismal picture of slackening industrial development. A closer examination of the recent trends in the growth of employment opportunities in the organised public and

Private sectors which absorb majority of the educated manpower, also revealed that growth in employment opportunities for the educated has not kept pace with the rapid growth in the supply of educated manpower.

Among the educated persons unemployed in the State, matriculates constituted the highest proportion in 1961, 1971 and 1981, while graduates and post graduates accounted for only a small part indicating lesser employment opportunities for the matriculates in the State. The number of educated unemployed in urban areas increased from 18 thousand in 1961 to 221 thousand in 1981; the corresponding figures for rural areas were 56 thousands and 719.19 thousand respectively.

The incidence of unemployment was higher among the younger age groups and lower among the higher age groups in 1961, 1971 and 1981. About two-thirds of the unemployed in 1971 were seen to be in the age group 15-24; the corresponding proportion in 1981 formed about three-fourth indicating the lengthening of the waiting period for the entrants to the employment market.

Incidence of unemployment is found to be higher in urban areas than in rural areas in 1981 both for males and females, while in 1971, it was higher in rural areas than in urban areas. Analysis of unemployment by levels of education reveals that incidence of unemployment was lower in urban areas for matriculates, 'graduates and above' category and technical diploma holders while it was higher

for other levels of education. Among the educated (SSLC and above) unemployed, incidence of unemployment is found to be the highest for the matriculates both for males and females in 1981 followed by 'graduates and above', non-technical diploma holders, technical diploma holders and technical degree holders.

It is the incidence of unemployment is found to be significantly higher for females than males in almost all levels of education except among the technical diploma holders irrespective of rural-urban difference.

2. With in The NSS 43rd round (1988-89) estimated that there are 15.16 lakhs open unemployed persons in the state constituting 9.42 percent of the total labour force. Among them, the educated unemployed constituted 6335 thousand representing 41.8 percent of the total unemployed. The Live

Register figures of the Employment Exchanges, despite their various limitations indicate that the problem of educated unemployment has been worsening progressively during the last decade, especially after 1977.

To make a detailed study of the nature, magnitude, causes and characteristics of educated unemployment primary data were collected through personal investigation with the help of a detailed pre-tested structured schedules from a random sample of 400 households chosen from four towns namely, Thrissur, Chalakudy, Aluva and Ernakulam spread over

Scheduled Castes and Muslims. In the wage

households females account for higher proportion than males

Thrissur and Ernakulam Districts. The study has

in almost all the castes except forward

highlighted some important characteristics of educated

unemployed in the State which are listed below.

Unemployment is inversely related to father's

1. Proportion of unemployed is the highest both for males

and females in the salaried white collar households while

it is the lowest in households with agriculture as the main

occupation. Whereas wage labour households belong mostly

to low income groups white collar families belong mostly to

the high income groups.

2. With increase in the income of households, proportion of

unemployed decreases.

3. Among the unemployed, females dominate males in almost

all the income groups and in almost all the occupational

categories of households.

4. Households belonging to lower castes are characterised

by lower levels of income and education while the forward

caste households have higher levels of income and

education.

5. Majority of forward caste households have a regular

source of income while majority of the backward castes do

not have any regular source of income. Females constitute

lower proportion than males in salaried white collar

households among the forward Hindu castes and Christians

while their proportion is higher in the same occupational

category of household among the Other Backward Castes and

Scheduled Castes and Muslims. In the wage labour households, females account for higher proportion than males in almost all the castes except forward Hindu castes and scheduled castes.

6. Unemployment is inversely related to father's educational level, both for males and females with the exception of illiterate fathers.

7. Incidence of unemployment is more chronic among the youth in the age group 15-29; it is more acute among females than males.

8. Among the unemployed in the general education group, graduates constitute the highest proportion followed by matriculates, undergraduates and post-graduates. The larger proportion of graduates than matriculates among the unemployed indicate increasing demand for higher education.

9. Among the graduates in the general education group unemployment is more severe among Arts graduates followed by science and commerce graduates. Among the professional and technical graduates unemployment is the highest for females. The rate of unemployment is significantly higher for graduates in engineering and the lowest for graduates in Education.

10. Lower levels of education are associated with lower levels of family income and higher levels of education are associated with higher levels of family income. Among the

Other Backward Castes; it is lowest for forward Hindus and

Brahmins. The rate of unemployment is significantly higher for females than males in all the castes. Matriculates constitute higher proportion in the lowest income group followed by graduates.

11. Rate of unemployment is inversely related with age and family income; it is strikingly higher for females than males in all the age groups and all the income groups. Higher levels of education are associated with Forward castes and Lower levels of education, with Backward Castes. Among the unemployed, graduates account for the highest proportion among the Forward Castes while matriculates constitute the highest proportion among Other Backward Castes and Scheduled Castes.

12. Lower levels of education are associated with lower levels of family occupation and vice versa. Among the unemployed in the general education category, matriculates and technical diploma holders. The survey reveals that in the general education group the rate of unemployment is the lowest for professional and technical degree holders while it is the highest for professional and technical diploma holders. The survey reveals that in the general education group the rate of unemployment is the lowest for professional and technical degree holders while it is the highest for professional and technical diploma holders. The survey reveals that in the general education group the rate of unemployment is the lowest for professional and technical degree holders while it is the highest for professional and technical diploma holders. In contrast, graduates and postgraduates account for the highest proportion in the salaried white Collar families. A sex-wise break-up shows significantly higher rates of unemployment for females

13. The rate of unemployment is found to be the highest among the wage labour households and the lowest among the salaried white collar households both for males and females. The rate of unemployment is significantly higher for females than males in almost all the occupational categories of households except agricultural households. Clerical grade is the most preferred job for the matriculates while the officers job is the most preferred job for graduates and post graduates in the general

14. Unemployment rate is higher among the low castes than the high castes. The rate of unemployment is found to be the highest for Muslims followed by Scheduled Castes and Other Backward Castes; it is lowest for forward Hindhus and

Brahmins. The rate of unemployment is significantly higher for females than males in all the castes.

15. Rate of unemployment is inversely related with age and family income; it is strikingly higher for females than males in all the age groups and all the income groups.

16. The rates of unemployment are lower for the professionally and technically qualified persons and higher for those without any additional qualifications. In the professional and technical education group, the rate of unemployment is the lowest for professional and technical degree holders while it is the highest for professional and technical diploma holders. The survey reveals that in the general education group the rate of unemployment is inversely related to the level of education with the exception of undergraduates. A sex-wise break-up shows significantly higher rates of unemployment for females than males in almost all levels of education.

17. All the unemployed have a marked preference for white collar jobs irrespective of the educational background. Clerical grade is the most preferred job for the matriculates while the officers job is the most preferred job for graduates and post graduates in the general education group. In the professional and technical education category, the professional and technical diploma holders and engineering graduates prefer to be employed as engineers while most of the graduates and post graduates in

education want to be teachers and largest proportion of the ITI certificate holders prefer to be technicians indicating the tendency of the unemployed to prefer occupations which are suited to the training they have received.

18. Job preference is broadly related to economic background of the unemployed. It is observed that the largest percentage of the unemployed in the highest income group prefer officer's job while the largest proportion of the unemployed in the lower income group prefer clerical jobs. Significant difference is not observed between males and females in respect of job preference. However females show greater preference for white collar work and aversion to manual work than males.

19. When the minimum acceptable job pattern is examined, a significant downward shift is seen in the job preference of all income groups. The proportion of the unemployed willing to under-take lower grade jobs declines with rise in family income.

20. The minimum acceptable salary is found to be influenced by household income and educational qualification. A direct relationship is observed between household income and minimum acceptable salary both for males and females. A positive relation is also found between the minimum acceptable salary and the levels of the education.

21. The average job-search period is found to be inversely related to the minimum acceptable salary both for males and females.

22. More than three-fourth of the total unemployed prefer public sector job. Wide gender difference is not observed in sectoral preference. The proportion of unemployed preferring public sector jobs is higher in the general education group. It is observed that among the unemployed preferring public sector jobs, females constitute higher proportion than males in the general education group and among the professional and technical certificate holders.

23. As for locational preference only 17 percent are willing to go abroad for employment. The largest proportion of the unemployed insist on employment in the home district indicating lower mobility of the unemployed, worsening the problem of educated unemployment in the state. The willingness to move to distant locations in search for job is also influenced by the educational background of the unemployed. A positive relationship is discernible between locational preference and educational qualification. Significant gender difference is found in

27. The average job-search period is longer for the unemployed Scheduled Castes and Other Backward Castes than those from forward castes/communities. It is the longest for scheduled castes and shortest for Muslims. Average job-search period is longer for females in almost all the

castes except Muslims.

and technical certificate holders show greater mobility. Marital status also influences the locational preference of the unemployed.

24. Majority of the unemployed are seen to be depending on parents, for their livelihood during the job-search period. Among them females account for the largest proportion.

25. Majority of the unemployed have a job-search period of more than one year. In the case of about one-third among them the job-search period has been over five years; another one-third has searched unsuccessfully for job for two to three years. In general an educated unemployed person seeks for job for about four years in the labour market.

26. Average job-search period is inversely related to family income. The largest percentage of the job-seekers have been searching for job for above 60 months in all the income brackets. Average job-search period is longer for females in almost all the income brackets, except in the highest income bracket.

27. The average job-search period is longer for the unemployed Scheduled Castes and Other Backward Castes than those from forward castes/communities. It is the longest for scheduled castes and shortest for Muslims. Average job-search period is longer for females in almost all the castes except Muslims.

28. Inverse relationship is found between average job-search period and father's educational level; it is the longest for the unemployed whose father are illiterate and the shortest for those whose fathers are graduates and post-graduates.

29. Job-search period of the unemployed is seen to decline with educational qualification. An inverse relationship is found between average job-search period and levels of education. It is the longest for matriculates (78.1months) and shortest for post-graduates (14.4months).

Average job-search period is significantly higher for the unemployed with third class than those with first class at all levels of education both in general education and professional and technical education group. Average job-search period is relatively longer for females than males at all levels of academic performance in almost all levels of education.

30. Among the unemployed graduates in the general education group, average job-search period is the longest for the Arts graduates and the shortest for the Commerce graduates; in the professional and technical education category, it is the shortest for engineering graduates and the longest for graduates in Education. An inverse relationship is noted between the average job-search period and academic performance in almost all the faculties except

the faculty of science. Average job-search period is relatively longer for those with out any additional qualification in professional and technical courses. The waiting period is also found to decline with the educational qualification. Among the professionally and technical courses. Among the professionally and technical courses. Among the professionally and technical courses.

31. The waiting period for the first salaried job for the employed is also found to decline with the educational qualification. for professional and technical certificate holders.

32. The average waiting period among the employed is also found to be inversely related to family income, levels of education, performance in education and father's level of education. education group.

33. Average waiting period among the employed is also found to be the longest for scheduled castes and the shortest for Muslims. Waiting period is longer for females than males in almost all the castes except Christians and scheduled castes. ion category the average waiting period

34. Average waiting period for the employed is also found to be significantly lower for the salaried white collar families. It is the longest for wage labour households faculty of Arts, Medicine and Education. Average waiting period is inversely related to academic performance in the faculty of Arts, Science, Commerce, Medicine and Engineering indicating higher degree of absorption for the business households. first divisioners in the labour market.

35. Among the employed graduates, waiting period is

relatively longer for those with out any additional qualification in professional and technical courses, than those with additional qualification in professional and technical courses. Among the professionally and technically qualified persons, average waiting period is the shortest for professional and technical degree holders and the longest for professional and technical certificate holders.

36. Average waiting period is longer for females in almost all levels of education except the post graduates in the general education group.

37. Among the employed graduates in the general education group, the average waiting period is found to be the longest for Arts graduates and the shortest for Commerce graduates. Among the graduates in professional and technical education category the average waiting period is the longest for graduates in education and the shortest for graduates in Law. The waiting period is longer for female graduates than their male counterparts in the faculty of Arts, Medicine and Education. Average waiting period is inversely related to academic performance in the faculty of Arts, Science, Commerce, Medicine and Engineering indicating higher degree of absorption for the first divisioners in the labour market.

Regional Variations

1. The levels of income of households vary widely in Thrissur and Ernakulam Districts. The proportion of the unemployed is the highest in the income group Rs 1501-2500 in Thrissur district while their proportion is the highest in the income group Rs 501-1500 in Ernakulam district. In both the districts the proportion of the unemployed is the lowest in agricultural households and the highest in salaried white-collar households.

2. The wage labour households belong mostly to the low income groups while the salaried white collar families belong mostly to the high income groups in both districts. However Ernakulam District exhibits a significantly higher proportion of the unemployed in wage labour households in the lowest income bracket than Thrissur District.

3. The backward castes are associated with low income groups and forward castes are associated with high income groups in both districts. The proportion of the unemployed among 'Other Backward Castes' in the lowest income group is found to be lower in Ernakulam District compared to Thrissur District. Among the unemployed Muslims, larger proportion belongs to higher income groups in both the districts. However their proportion in the highest income

professionally and technically qualified persons than for those without any additional qualification in both the districts.

8. Lower levels of education are associated with lower

levels of family income in both the districts. The proportion of unemployed matriculates and undergraduates in group is strikingly higher in Ernakulam District as compared to Thrissur District.

4. Forward Castes belong mostly to the salaried white collar households while backward castes belong mostly to the wage labour households in both districts. However, the highest proportion of the unemployed among Other Backward Castes in Thrissur District belongs to wage labour households while the largest proportion of the unemployed in the same caste belong to salaried white collar households in Ernakulam District.

5. Maximum proportion of unemployment is observed among the wards of the parents having educational qualification at the primary level in both districts.

6. Most of the unemployed fall within the age group of 20-24 years in both the districts. A male-female break-up reveals that incidence of unemployment is higher among females than males in almost all the age groups in both the districts.

7. Unemployment is seen to be lower for the professionally and technically qualified persons than for those without any additional qualification in both the districts.

8. Lower levels of education are associated with lower

holders in both the districts. However, the average job-search period is markedly higher in Thrissur District at all levels of education as compared to Ernakulam District. The proportion of unemployed matriculates and undergraduates in the general education group is seen to be the largest in the lower income group 'Rs 501-1500' in both the districts. indicating lower employment opportunities for the educated in Thrissur District than Ernakulam District.

9. Higher levels of education are associated with forward castes and lower levels of education are associated with backward castes in both districts. Among the unemployed graduates in the general education category, the average job-search period is found to be the shortest for Commerce graduates and the longest for Arts

graduates in both districts. Average job-search period is longer for females than males in the faculties of Arts, Science and Commerce in both the districts. 10. Considerable differences are not observed between the unemployed in different age groups.

11. The average job search period is found to be inversely related to the family income, level of education, academic performance, and father's level of education in both the districts. The average waiting period among the employed is also found to be the shortest for those coming from business households in Thrissur District; it is the longest for those coming from the wage labour households in both the districts.

12. The average job-search period is the longest for the scheduled castes and the shortest for the Muslims in both the districts. However, the average job-search period is found to be markedly higher for Scheduled Castes in Thrissur District than in Ernakulam District. well as non-professional qualifications. Other things

13. Among the professionally and technically qualified persons, the average job search period is found to be the longest for the professional and technical certificate

holders in both the districts. However, the average job-search period is markedly higher in Thrissur District at all levels of education as compared to Ernakulam District indicating lower employment opportunities for the educated in Thrissur District than Ernakulam District.

14. Among the unemployed graduates in the general education category, the average job-search period is found to be the shortest for Commerce graduates and the longest for Arts graduates in both districts. Average job-search period is longer for females than males in the faculties of Arts, Science and Commerce in both the districts.

15. The average waiting period among the employed is also found to be the shortest for those coming from business households in Thrissur District; it is the longest for those coming from the wage labour households in both the districts.

16. The waiting period is seen to have significantly associated with levels of education, performance in education, father's level of education and family income. This is true with reference to persons with professional as well as non-professional qualifications. Other things being the same the waiting period for females is longer than their counter parts in both the districts.

Burgess, T.S., Layard, R. and Pant, P. (1968), Manpower and Educational Development in India, 1961-68, Oliver & Boyd, Edinburgh and London.

BIBLIOGRAPHY

- Books
- M., (1986), Higher Education and unemployment in India : A summary of three case studies, Paris, IIEP(Mimeo).
- Agarwal, J.C., (1982), Development and Planning of Modern Education with Special Reference to India, Vikas, New Delhi.
- Agarwal, S.P., (1970), Manpower Demand: Concepts and Methodology, Meenakshi Prakashan, Meerut.
- Agarwal, S.P., (1970), Manpower Supply: Concepts and Methodology, Meenakshi Prakashan, Meerut.
- Alan, L. Sorkin, (1974), Education, Unemployment and Economic Growth, Lexington Books, D.C. Health and Company, Lexington.
- Amrik Singh & G.D. Sharma, Ed., (1989), Higher education in India, The Institutional context, Kanarak Publishers Pvt. Ltd.
- Anderson, C.A. and Bowman, M.J. (eds.), (1966). Education and Economic Development, Frank Cass, London.
- Bangladesh Planning Commission, (1974), Employment Market for the Educated in Bangladesh, Government of Bangladesh Planning Commission.
- Bhattacharya, A.K., (1982), The Problem of Educated Unemployment in India, Meenakshi Prakashan, Meerut
- Berg, Ivar, (1973), Education and Jobs: The Great Training Robbery, Centre for Urban Education, New York.
- Blaug, M. (ed.), (1969), Economics of Education, Vols. I & II, Penguin Books, London.
- Blaug, M., Layard, R. and Woodhall, M., (1969), The Causes of Graduate Unemployment in India, Allen Lane The Penguin Press, London.
- Dhar, T.N., (1979), The Politics of Manpower Planning
- Bose, P.K., (1977), Higher Education at Cross-Roads, World Press, Calcutta.
- Bose, P.K., Sanyal, B.C & Mukherjee, S.P., (1983), Graduates employment and Higher Education in West Bengal, Paris, IIEP.
- Brosan George, et al., (1971), Patterns and Policies in Higher Education, The Penguin Books, London.

- Burgess, T.S., Layard, R. and Pant, P. (1968), Manpower and Educational Development in India, 1961-68, Oliver & Boyd, Edinburgh and London.
- Carnoy, M., (1986), Higher Education and unemployment in India : A summary of three case studies, Paris, IIEP (Mimeo).
- Carter, (1965), Economics of Higher Education, Manchester School, London.
- Centre for Development Studies, (1975), Poverty, Unemployment and Development Policy : A Case Study of Selected Issues with reference to Kerala, Orient Longman, Madras.
- Chandan Mukherjee, (1979), The Market for the Educated in Kerala, Working Paper No. 32, Centre for Development Studies, Trivandrum.
- Coombs Philip Hall, (1985), World Crisis in Education: The View from the Eighties, OUP, PB, New York.
- Das, A.K., (1981), Unemployment of Educated Youth in Asia: A Comparative Analysis of the Situation in India, Bangladesh and the Philippines, UNESCO International Institute for Educational Planning, Paris.
- David Turnham, (1971), The Employment Problem in Less Developed Countries, Development Centre of the Organisation for Economic Co-operation and Development, Paris.
- Deraniyagala, C.R., Dore, and Little, A.W., (1978), Qualifications and Employment in Sri Lanka, University of Sussex.
- Desai, D.M., (1970), Some Critical Issues in Higher Education in India, A.R. Sathi, Bombay.
- Dhar, T.N. and Others, (1976), Education and Employment in India : The Policy Nexus, Minerva, Calcutta.
- Dhar, T.N., (1979), The Politics of Manpower Planning: Graduate Unemployment and the Planning of Higher Education in India, Minerva, Calcutta.
- George Psacharopoulos & Bikas.C.Sanyal, (1981), Higher Education and employment: The IIEP Experience in five less developed countries, Unesco, IIEP.
- Ginzberg Eli, (1975), Manpower Connection: Education and Work, Harvard University Press, HB, Cambridge.

- Godfrey Martin, (1986), Global Unemployment: The New Challenge to Economic Theory, Great Britain, Harvester Press.
- Gopinathan, P.R., (1978), Education and Economic Change in Kerala, Centre for Development Studies Publication, Trivandrum.
- Gopinathan Nair, P.R., (1981), Primary Education, Population Growth and Socio-Economic Change, Allied Publishers Private Limited, New Delhi.
- Gordon, M.S. (ed.), Higher Education and Labour Market, McGraw Hill, New York.
- Gracy, C.C., (1974), Unemployment of Kerala, Ph.D. Thesis, University of Kerala (Unpublished).
- Harbison, P.H. and Myers, C.A., (1964), Education, Manpower and Economic Growth : Strategies of Human Resource Development, McGraw-Hill, London.
- Harbison, P.H. and Myess, C.A. (ed.), (1965), Manpower and Education, Country Studies in Economic Development, McGraw-Hill, London.
- Harriet Greenaway and Gareth Williams (ed.), (1973), Patterns of Change in Graduate Employment, Society for Research into Higher Education, 25 Northampton Square EC IV, OHL.
- Heyneman Stephen, P. and White Daphne Siev. (ed.), (1986), Quality of Education and Economic Development, World Bank, Washington.
- Huq, M., Shamsul, (1975), Education, Manpower and Development in South-East Asia, Praeger, New York.
- Huq, M. Shamsul, Bikas, C. Sanyal and Others, (1983), Higher Education and Employment in Bangladesh, University Press, Dhaka.
- International Institute of Educational Planning, (1984), Postgraduate employment experience of weaker castes : Marathwada Region, India, Paris, IIEP (Mimeo)
- Jaganatha Reddy, D., (1974), Issues in Higher Education, Seshachalam, Madras.
- John Oxenham, (1984), Education Versus Qualification, George Allen and Unwin, London.
- Michael, W. Banks and Philip Ullian, (1988), Youth Unemployment in the 1980s: Its Psychological Effects, Croom Helm, London.

- Modi, Buddhish, M., (1984), Income Patterns and Education, Social Abhidhan.
- Joseph, K.V., (1986), Migration and Economic Development in Kerala, Ph.D. Thesis, Department of Economics, University of Kerala.
- Joshi, K.L., (1976), Problems of Higher Education in India, Popular Prakashan, Bombay.
- Kapur, J.N., (1975), Current Issues in Higher Education in India, S. Chand, New Delhi.
- Karwanski, Ryszard, A., (1979), Education and Supply of Manpower in Pakistan, National Commission on Manpower and Education Research Study No.2, Manager of Publication, Karachi.
- Kaul, J.M., (1974), Indian Higher Education: Two Decades of Planned Drift, Indian Institute of Advanced Studies, Simla.
- Kaul, J.N., (ed.), (1975), Higher Education, Social Change and National Development, Indian Institute of Advanced Study, Simla.
- Kidder, E., (1973), Education and Manpower Planning in India, Progressive, Bombay.
- Kochar, S.K., (1981), Pivotal Issues in Indian Education, Sterling, New Delhi.
- Lyn Squire, (1981), Employment Policy in Developing Countries: A Survey of Issues and Evidences, Oxford University Press.
- Mahendrakumar Premi, (1972), Educational Planning in India, Sterling Publishers, New Delhi.
- Mark Blaug, (1973), Education and the Employment Problem in Developing Countries, International Labour Office, Geneva.
- Mark Blaug, (1989), The Economics of Education and the Education of an Economist, Edward Elgar.
- Martin Carnoy, (1977), Education and Employment: A Critical Appraisal, UNESCO: International Institute for Educational Planning, Paris.
- Michael Hopkins, (1985), Alternatives to Unemployment and Underemployment: The Case of Colombia, Westview Press, London.
- Michael, H. Banks and Philip Ullah, (1988), Youth Unemployment in the 1980s: Its Psychological Effects, Croom Helm, London.

- Modi, Buddish. M., (1984), Income Patterns and Education, Sonal, Ahmedabad.
- Mohan, Madan, (1972), Problems of University Education in India, Meenakshi Prakashan, Meerut.
- Mohan, T.C. and Narasimham, C.L., (1977), The Status of Unemployed ITI Craftsmen in Tamil Nadu, Sangam Publishers, Madras.
- Mohandas, Mand Rajan Nair.N., (1989), Concurrent Evaluation of the Self-Employment Programme for the educated unemployed youth in Trichur District, Directorate of Extension, Kerala Agricultural University, Mannuthy.
- Muhamad Shamsul HUQ, (1975), Education, Manpower and Development in South and South-East Asia, Sterling, New Delhi.
- Murgo John, D. (ed.), (1972), Readings in the Economics of Education, MSS Information Corporation, New York.
- Myrdal, G., (1968), Asian Drama: An Inquiry into the Poverty of Nations, Allen Lane The Penguin Press, London.
- Naik, J.P., (1965), Educational Planning in India, Allied Publishers, Bombay.
- Naik, J.P., (1975), Policy and Performance in Indian Education (1947-74) (Orient Longman, Bombay).
- Naik, J.P., (1975), Equality Quality and Quantity: The Elusive Triangle in Indian Education, Allied Publishers, Bombay.
- Naik, J.P., (1982), Education Commission and after, Allied Publishers Pvt. Limited, New Delhi.
- Nair, P.A., (1968), Employment Market in An Industrial Metropolis: A Survey of Educated Unemployment in Bombay, Lalvani Publishing House, Bombay.
- Narayana, D.L., Deshpande, L.K. and Sinha, R.K. (ed.), (1980), Planning for Employment, Sterling Publishers Pvt. Ltd., New Delhi.
- Oberai, A.S., (1978), Changes in the Structure of Employment with Economic Development, International Labour Office, Geneva.
- O'Donoghue Martin, (1971), Economic Dimensions in Education, Aldine, Chicago.

- Raj, Samuel, (1984), India's Educational Policy, Select Books, New Delhi.
- Oommen, M.A. (ed.), (1979), Kerala Economy since Independence, Mohan Premilane, Oxford and IBH Publishing Co., New Delhi.
- Oommen, M.A., (1993), Essays on Kerala Economy, Oxford and IBH Publishing Co., New Delhi.
- Panchamukhi, P.R., (1984), Graduates and Job Market: A Quantitative study in India, Paris, IIEP (Mimeo).
- Panchamukhi, P.R. (ed.), (1989), Studies in Educational Reform in India Volume II Educational Reforms at Different Levels, Indian Institute of Education, Pune, Himalaya Publishing House, Bombay.
- Panitchpakdi, S., (1974), Educational Growth in Developing Countries, An Empirical Analysis, Rotterdam University Press, Rotterdam.
- Parkh, G.D. (ed.), (1972), The Crisis in Higher Education, Leslie Sawhny Centre, Bombay.
- Parmaji, S., (1979), Education and Jobs, Leeladevi, Delhi.
- Parness, H.S., (1962), Forecasting Educational Needs for Social and Economic Development, O.E.C.D., Paris.
- Parness, H.S. (ed.), (1964), Planning Education for Social and Economic Development, O.E.C.D., Paris
- Parvathamma, C., (1984), Employment Problems of University Graduates, Ashish, New Delhi.
- Patil, V.T. and Patil, B.C., (1982), Problems in Indian Education, Oxford and IBH, New Delhi.
- Perlman Richard, (1973), Economics of Education: Conceptual Problems and Policy Issues, McGraw-Hill, London.
- Prasad, Eswara, K.V., (1982), Analysis of the Labour Market for technical Manpower in India, Ph.D Thesis, Jawaharlal Nehru University, New Delhi.
- Prasoon Kumar Roy, (1983), Problems of Unemployment: A case Study of Bihar State, Capital Publishing House, Delhi.
- Premi, M.K., (1972), Educational Planning in India, Sterling Publishers, New Delhi.
- Puttaswamaiah, K., (1977), Unemployment in India: Policy for Manpower, Oxford & IBH Publishing Co., New Delhi.

- Raj, Samuel, (1984), India's Educational Policy, Select Books, New Delhi.
- Rajeev, P.V., (1983), Economic Development and Unemployment, Asian Publication Services, New Delhi.
- Raju Kakkadan Nandanath, (1971), Crisis of Higher Education in India, Publishing Division, Ministry of Information and Broadcasting, New Delhi.
- Rao, V.K.R.V., (1961), University Education and Employment: A Case Study of Delhi Graduates, Asia Publishing House, Bombay.
- Rao, V.K.R.V., (1961), Education and Employment : A Case study of Delhi Graduates, Occasional Paper No. 3, Institute of Economic Growth, Delhi.
- Rao, V.K.R.V. (ed.), (1968), Employment and Unemployment, Allied Publishers Pvt. Ltd., Bombay.
- Reddy, D.J., (1972), Challenges in Higher Education, Sri Venkateswara University, Tirupathi.
- Reddy, D., Jaganatha, (1973), Issues in Higher Education, Seshachalam, Madras.
- Richard Victor Knight, (1973), Employment Expansion and Metropolitan Trade, Praeger Publishers, New York.
- Richard W. Franke, Barbara H. Chasin, (1992), Kerala Development through Radical Reform, Promilla & Co., Publishers New Delhi.
- Roger Dale, (ed.), (1985), Education, Training and Employment Towards a New Vocationalism?, Pergamon Press, Oxford.
- Rurd, Kaare, (1970), Manpower and Educational Requirements of Pakistan 1961-90 Islamabad, Planning Commission, Government of Pakistan.
- Sankaranarayanan, K.C. and Karunakaran, V., (1985), Kerala Economy, Oxford & IBH publishing Co. New Delhi.
- Sanyal, Bikas, C., (1982), Higher Education and the Labour Market in Asia, UNESCO, Paris.
- Sanyal, Bikas, C. and Others, (1983), University Education and Graduate Employment in Sri Lanka, UNESCO/Colombo, Marga Institute, Paris.
- Sapra, C.L. and Yash Agarwal, (ed.), (1987), Education in India: Some Critical Issues, National Bank Organization, New Delhi.

- Saxena, J.P., (1972), Educated Unemployment in India, Commercial Publications Bureau, New Delhi.
- Schultz Theodore, W. (ed.), (1972), Investment in Education: The Equity, Efficiency Quandary, Chicago Press, Chicago University.
- Sha, K.R. and Srikanthiah, S., (1984), Education, Earnings and Income Distribution, Criterion, New Delhi.
- Sanyal, B.C., (1985), Higher Education and Employment: A synthesis of IIEP Research, Paris, IIEP (Mimeo).
- Sharma, Swash Raj, (1981), Education and Employment Policies in Nepal; A Perspective View, UNESCO, Bangkok. Shukla, P.D., (1984), Towards New Pattern of Education in India, Apt, New York.
- Simone Morio and Yarisse Zocizouon, (1980), Two studies on Unemployment among Educated Young People, United Nations Educational Scientific and Cultural Organization, Paris.
- Singh, Amrik and Altbach, P.G. (ed.), (1974), Higher Learning in India, Vikas, Delhi.
- Sitapathi, P., (1970), Manpower, Planning and Employment in India, Vora Publishers, Bombay.
- Stephen Fineman, (1987), Unemployment, Personal and Social Consequences, Tavistock Publications, London.
- Thomas, L., (1956), The Occupational Structure and Education, Prentice Ltd., London.
- Tilak Jandhyala, B.G., (1982), Educational Planning and Unemployment in India, National Institute of Educational Planning and Administration, New Delhi.
- Tilak Jandyala, B.G. (ed.), (1986), Education and Regional Development, Yatan, New Delhi.
- Tyrrell Burgess, (1972), The Shape of Higher Education, Cornmarket Press, London.
- Uddesh Kohil and Vinayashil Gautam, (1988), Human Resource Development and the Planning Process in India, Vikas - HB, New Delhi.
- Varghese N.V., (1982), Manpower planning in a Developing Economy: A study in Education-Employment Linkages, Ph.D Thesis, New Delhi, Jawaharlal Nehru University.
- Amitabha Sen, (1987), Forging Linkages between Higher Education and Employment, Manpower Journal, Vol. XXIII, No.3.

Angus Home, (1968), Unemployed Engineers, Economic and Political Weekly, No.3, No.15.

Varghese N.V., (1986), Higher Education and Employment in India: A Review, New Delhi, NIEPA (Mimeo).

_____, (1986), Education and Labour Market A survey of Indian evidence, NIEPA, New Delhi.

_____, (1988), Education-employment relations: A case study of organised sectors in India, Unesco, International Institute for Educational planning.

Veena, D.R., (1987) Education and Economic Growth, (Abhish Publishing House, 8/81, Punjabi Bagh, New Delhi.

Watson Keith (ed.), (1983), Youth, Education and Employment International Perspectives, Groom Helm HB, London.

Willy Van Rijckeghom (ed.), (1976), Employment Problems and Policies in Developing Countries, Rotterdam University Press.

Worswick, GDN (ed.), (1985), Education and Economic Performance, Joint Studies in Public Policy Series, 9, Gower, PB, Aldersht.

Wykstra Ronald, A. (ed.), (1971), Education and the Economics of Human Capital, Free Press, New York.

Articles

Abraham, K., (1971), Higher Education in the States: Kerala, New Frontiers in Education, No. 1.

Adiseshiah Malcolm, S., (1980), Future Asian Education: The Challenge of Numbers, Prospects, Vol. 10, No.4.

Agarwal, S.P. and Kumar, S., (1967), Methods of Estimating Stocks of Educated Manpower, Manpower Journal, Vol.2, No.4.

Ahmed Rias, (1982), Universities: Perspectives and Problems, Journal of Higher Education, No.7.

Altback Philip, G., (1968), India and the World University Crisis, The Student Revolution.

Amba Rao, U., (1976), Higher Education and Occupational Mobility among the Scheduled Caste Youth, Journal of Higher Education, Vol11, No.3.

Amba Rao, U., (1978), A Sociological study of Occupational Choice of Undergraduate Girl Students, Indian Journal of Social Work, No.37.

Amitabha Son, (1987), Forging Linkages between Higher Education and Employment, Manpower Journal, Vol. XXIII, No.3.

- Angus Home, (1968), Unemployed Engineers, Economic and Political Weekly, No.3, No.15.
- Bose, P.K. and Mukherjee, S.P. (1968), Graduate Employment and Higher Education, Journal of Economic and Political Weekly, Vol.3 No.30.
- Apte, M.D., (1975), Education and Unemployment in Kerala, Economic and Political Weekly, Vol. 10, No.28.
- Bright Singh, D. (1977), Educated Unemployment in Tamil Nadu, Southern Economic Review, Vol. VI No.1.
- Arrow K.J., (1973), Higher Education as Filter, Journal of Public Economics vol.2.
- Asian Productivity Organisation (1991), Educated Unemployment in Asia, Productivity, Vol. 32, No.1.
- Augustus N. Ghosi, (1990), graduate unemployment in Nigeria, I.C.S.S.R. News letter, vol.XXI, No.2
- Balasubramanyan, Vimal, (1980), Qualification Syndrome, Mainstream.
- Bhagavan, K. Naik, (1980), Problem of Educated Unemployed, Commerce, Vol. 140, No.3582.
- Bhalla, A.S., (1966), Manpower and Economic Planning in the Philippines, International Labour Review.
- Chaudhri, D.P., (1970), Private and Social Returns to Education, Journal of Public Economics, vol.7
- Bhagwati J.N. and Srinivasan, T.N., (1977), Education in a Job-ladder Model and fairness in Hiring Rule, Journal of Public Economics, vol.7
- Chitris Suma, (1969), Urban Concentration of Higher Education, Journal of Higher Education, No. 7.
- Bhandari, R.K., (1984), Crisis in Education in India, New Frontiers in Education, No.14.
- Bhandari, R.K., (1985), Educational Development during Six Five Year Plans: An Evaluation, New Frontiers in Education, No. 15.
- Choudhuri, P.K. and Nandy, R.K., (1971), Towards Better Education, Indian Journal of Economics.
- Bhargava, P.K., (1967), Economic Development and Investment in Human Capital, Indian Journal of Economics.
- Bhatawdekar, M.V., (1965), The Role of Education in Economic Development, Artha Vijnana, No.5.
- Bhiday, M.R., (1980), Integration of Higher Education for Effective Vocational Training, Journal of Higher Education, No. 5.
- Bikas, C. Sanyal, (1982), Higher Education and the Labour Market in Asia, Journal of Higher Education, Vol.8, No.2.
- Blaug, M., (1966), An Economic Interpretation of Private Demand for Education, Economica, Vol.2, No.2.

- Bose, P.K. and Mukherjee, S.P. (1980), Graduate Employment and Higher Education in West Bengal, Journal of Higher Education.
- Brems, M. (1962), Acceleration Theory in Education, Indian Economic Review, Vol. 6, No.1.
- Bright Singh, D. (1977), Educated Unemployment in Tamil Nadu, A Forecast, Southern Economic Review, Vol. VI, No.1.
- Calder Ritchi, (1965), Utilization of Human Resources, Manpower Journal, Vol. I, No. 1.
- Cambell and Sigal, (1969), The Demand for Higher Education in U.S. 1919-64, American Economic Review.
- Chandrakant, L.S. and Others (1982), New Perspectives for Technical Education Industry Interaction, Journal of Higher Education, No. 7.
- Charles, K.J. and P.G.K. Panikar (1968), Education and Economic Development - A Case Study of Kerala, Development Digest.
- Chaudhri, F.D.P., (1970), Private and Social Returns to Education: A Case Study of Delhi Graduates, Economic and Political Weekly, Vol.5, No.14.
- Chitris Suma, (1969), Urban Concentration of Higher Education, Economic and Political Weekly, Vol. 4, No.28.
- Chitris, S. (1975), Investment in Higher Education: A Reconsideration, New Frontiers in Education, No. 5.
- Choudhuri, P.N. and Nandy, R.K., (1971), Towards Better Utilization of Scientific Manpower, Economic and Political Weekly, No.6.
- Dabholkar, Devadatta, (1980-81), Striving for Height in Higher Education, Journal of Higher Education, No.6.
- Datt, R. and Ruddar, (1977), Higher Education for a Future Educational Policy, Journal of Higher Education, No.3.
- Deshmukh, A.G. and A.R. Komat (1960), Wastage in College Education - Arts Students, Artha Vijnana, Vol.2, No.1.
- Deshmukh, A.G. and A.R. Kamat, (1960), Waste in College Education - Science Students, Artha Vijnana, Vol.2, No.2.

- Deshmukh, A.G. and A.R. Kamat, (1960), Stagnation in College Education, Artha Vijnana, Vol 2, No. 2.
- Deva Satya, (1985), The New Education Policy, Economic and Political Weekly, No.2.
- Dholakia, J. (1970), Some Aspects of Unemployment among the Educated in Gujarat, Artha Vijnana, Vol. 6, No.2.
- Dutt, Lirthi Ela, (1979), Education, Unemployment and Youth Unrest : The South Asian Syndrome, Prospects, Vol. 7, No.1.
- Edgar, O., Edwards and Michael, P.Todasa (1973), Educational Demand and Supply in the Context of Growing Unemployment in Less Developed Countries, World Bank Vol.1, No.5.
- Enno, W. Homes and Nivedita Trivedi (1971), The Market for Graduates - A Field Report, Economic and Political Weekly, Vol. 6, No.50.
- Finance Department of Maharashtra (1967), Utilization Pattern of Educated Persons in Maharashtra during Third Plan, Manpower Journal, Vol3, No.1.
- Gary, S. Fields, (1974), The Private Demand for Education in relation to Labour Market Conditions in Less Developed Countries, The Economic Journal.
- Ganchi, D.A., (1989), Conflict in Higher Education, The Indian Scenario, University News, Vol. 27 No.25.
- Ginzberg Eli, (1971), Perspective on Indian Manpower, Employment and Income, Manpower Journal, Vol. 7, Nos. 1,2.
- Harbison, F. and Myers, C.A., (1964), Education and Employment in Newly Developing Economies, Comparative Education Review, Vol. 8, No.1.
- Heyneman Stephen, P., (1980), Investment in Indian Education Uneconomic?, World Development, No.8.
- Homes, E.W., and N. Trivedi, (1971), Market for Graduates - A Field Report, Economic and Political Weekly, No.6.
- Hone, K., (1968), Unemployed Engineers, Economic and Political Weekly, No.3.
- Iichman, W.F., and Dhar, T.N., (1970), Student Discontent and Educated Unemployment, Economic and Political Weekly.

- Iyer, K.V., (1967), More men for fewer jobs, Yojana, Vol. XI, No.17.
- Iyer, R.R., (1966), Medical Manpower in Kerala, Kerala Labour and Industries Review, Vol. 4, No. 4.
- Iyer, R.R., (1967), Level of Education and Manpower Development in Kerala, Kerala Labour and Industries Review, Vol.5, No.1.
- Idowu Oladeji, (1989), Graduate Unemployment in Developing Countries and the over-production Hypothesis: Nigeria as a case study, Manpower Journal, Vol. XXV, No. 1 & 2.
- Jaime Tenjo, (1990), Opportunities, Aspirations, and Urban Unemployment of youth: The case of Colombia, Economic Development and Cultural Change, Vol. 38, No.41
- Jandyala B.G. Tilak, (1980), Education and Labour Market Discrimination, Indian Journal of Industrial Relations, , Vol.16, No.1.
- Jagathpathi, G. (1968), Manpower Development and the National Context, Manpower Journal, Vol. 3, No.4.
- Jha, L.K., (1982), Education and Employment Social Welfare, Vol. 28, No.11.
- Joe U. Umo, (1983), Education - Employment Connection: The Nigerian Experience, Manpower Journal, Vol.18 No.4.
- John, V.V. (1984), India's Challenge: Education for Social Justice, New Frontiers in Education, No. 14.
- Joshi Nandini, U., (1969), Nature of Manpower Shortages, Manpower Journal, Vol. 4, No.4.
- Kamat, A.R., (1980), Educational Policy in India: Critical Issues, Sociological Bulletin, No. 29.
- _____, (1982), Higher Education: Kothari Commission and After, Journal of Higher Education, No. 8.
- Kaul, J.N., (1972), Development of Indian Higher Education, Economic and Political Weekly, NO.7.
- Khan, Q.V., (1968), Educational Planning, Manpower Journal, Vol. IV.
- _____, (1979), Higher Education in India Some Issues, Journal of Higher Education, No. 5.
- Pradhan.N., (1987), Educated Unemployment, Causes and Remedies University News.

- Pravin Visaria, (1970) Unemployment in India in Perspective Economic and Political weekly.
- Kothari.V.N., (1967), Economic issues in Education policy in India, Education and Psychology Review.
- Prasad K.V., (1970), Educated Unemployment in India Artha Vikas.
- Lewis.W.A., (1962), Education and Economic Development International Social Science Journal, Vol.14, No.4.
- _____ (1968) Manpower Directorate of the Ministry of Home Affairs, Educated unemployment Manpower Journal, Vol.IV, No.1.
- Raj.K.N., (1977), Higher Education in India, Science and Culture, Vol.37, No.3.
- Mark Blaug, (1977), Educated Unemployment in Asia with special reference to Bangladesh, India Sri Lanka, Economic Bulletin for Asia and the Pacific, Vol.XXVIII, No.1/2.
- Rao.V.K.R., (1972) Kerala Colleges in Turmoil Quest No.78.
- Mathias.T.A., (1972) Kerala Colleges in Turmoil Quest No.78.
- Modi Lakshmi Narain, (1980), Miseducation Economic Trend, Vol.5, No.4.
- Naik.J.P., (1965), Objectives of Educational Development Manpower Journal, Vol.1, No.2.
- _____, (1969) The problem, Seminar Vol.120.
- Nalla Gounen.A.M., (1967), Investment in Education in India The Journal of Human Resources, Vol.2, No.3.
- Schultz.T., (1967) Investment in Education in India The Journal of Human Resources, Vol.2, No.3.
- Navin Chandra Joshi, (1983), The Specture of Unemployment Yojana, Vol.27, No.16.
- Sharma.G.D., (1975) Graduate Unemployment in India Economic and Political Weekly Vol.11, No.25.
- Panchamukhi.P.R., (1975), Devaluation of education : A Quantitative Analysis Journal of Higher Education, No.1.
- Singh, A., (1972) Graduate Unemployment in India Economic and Political Weekly Vol.11, No.25.
- Papanek.H., (1985), Class and Gender in Education - Employment Linkages Comparative Education Review, Vol.29, No.3.
- Sinha.R.P., (1989), The Educated Unemployed manpower
- Peter R.Fallon, (1983), Education and the duration of job search and Unemployment in Urban India, Journal of Development Economics, Vol.12, No.3.
- Sola Faje, (1983) Graduate Unemployment in India: A search analysis from a developing country, Indian Journal of Economics, Vol.23, No.3.
- Pathak, Mahesh, (1970), A Policy Frame for Education and Employment Planning, Artha-Vikas.
- Subrahmanian.K.K., (1964), Educational Planning and
- Pathak, Mahesh and Arun Patel, (1970), Supply of Graduates from the Sardar Patel University during the Fourth Plan, Artha-Vikas.
- Spence.M., (1970) Graduate Unemployment in India: A search analysis from a developing country, Indian Journal of Economics, Vol.23, No.3.
- Pradhan.N., (1987), Educated Unemployment, Causes and Remedies University News.

- Pravin Visaria, (1970) Unemployment in India in Perspective, Economic and Political weekly, Vol.V, Nos.29,30+31, Special number.
- Prasad K.V., Eswara, (1979) Education and Unemployment of Professional manpower in India, Economic and Political weekly, No.14.
- Radha Devi D, (1988) Women in Modern sector Employment in India : a look through the 1981 Census results, Economic Bulletin for Asia & the Pacific Vol.XXXIX, No.1.
- Raj.K.N., (1971) Crisis of Higher Education in India, Science and culture, Vol.37, No.3.
- Rao.V.K.R.V., (1965), Employment information and Manpower Utilization, Manpower Journal Vol.1, No.2.
- Rao.V.R., (1972) Educated Unemployment, Indian labour Journal Vol.13, No.4.
- Roy.K, (1971), Unemployment and Brain Drain, Economic and Political weekly No.6.
- Sanyal, Bikas.C., (1982), Higher Education and the Labour Market in Asia, Journal of Higher Education No.8.
- Saxena.J.P., (1977), Unemployment among Degree and Diploma holders in Engineering, Artha Vignana Vol.19, No.1.
- Schultz.T.W., (1961), Investment of Human Capital, American Economic Review Vol.51.
- Sharma.G.D.and Apte.M.D., (1976), Graduate Unemployment in India, Economic and Political Weekly Vol.11, No.25.
- Singh, Amrik, (1971), Higher Education in the Seventies, Quest No.72.
- Singh.M., (1971), Higher Education in India -Some problems Indian Journal on Public Administration.
- Sinha.R.P., (1969), The Educated Unemployed manpower crisis, Seminar No.120.
- Sola Fajana, (1991), Graduate Unemployment and the job search analysis from a developing country, Indian Journal of Industrial relations Vol.26, No.4.
- Subrahmanian.K.K., (1964), Educational Planning and Economic Growth, Economic Weekly.
- Spence.M., (1973), Job Marketing Signalling, Quarterly Journal of Economics Vol.87.

- Subrahmanian.K.K. and Mohan Pillai.P., (1986) Kerala Industrial backwardness Exploration of Alternative Hypothesis, Economic and Political Weekly Vol.21, No.14.
- Thourow. L.C., (1972), Education and Economic Inequality, Public Interest
- Varghese.N.V., (1981), Some Conceptual problems in manpower planning, Manpower Journal No.17.
- _____, (1987), Higher Education and Employment in India : Some evidences and thier implications, perspectives in Education Vol.5, No.2.
- Venkatraman Naidu, (1982), Creating Employment for the Rural Educated Unemployed, Kurukshetra Vol.30, No.19.
- Virendra Agarwal.S., (1978), Need for Employment Oriented Education policy, Education Quarterly Vol.30, No.1.
- Warren.F. Lichman and Trilok.N. Dhar, (1970), Student discontent and _____, Educated Unemployment, Economic and Political Weekly Vol.V., Special Number.
- Warrier.S.K., (1980), Powerful Industrial Growth Potential in Kerala Economic Trend.
- Wood.G., (1972), National Planning and Public Demand in Indian Higher Education : The case of Mysore Minerva Vol.10, No.1.
- Yogindar.K., Alagh and Gupta.M.M., (1981), Some Aspects of Unemployment and Development in India, Anvesak Vol.X1, No.1-2.

Reports and Publications

- Committee on Education and Total Employment, (1972), Educated Unemployment in India: Challenge and Responses, Hindustan, Delhi.
- Charnden Mukherjee and Thomas Isaac T.M., (1991), Study of Educated Unemployed in Kerala, Report of the Sample Survey of Registrants of Employment Exchanges, Centre for Development Studies, Trivandrum.
- Education Commission, (1966), Education and National Development Report, N.C.E.R.T., New Delhi.

Government of India, (1973), Report on Committee on Unemployment, Department of Labour and Employment.

B.E.S., Trivandrum.

_____, (1983), National sample Survey Organization, Report on the second Quinquennial Survey on employment and Unemployment, Survey Results, Kerala.

Summatation on Unemployment, Survey Results, Kerala. D.E.S., Trivandrum.

_____, Planning Commission, (1956), Outline Report of the study Group on Educated Unemployed.

_____, (1961), Census of India, Vol.V111, Kerala, Part 11-B(ii) General Economic Tables.

_____, (1971), Census of India series-9, Kerala, Part 11 - B(ii) Economic Tables.

Census of India 1981, Series 10, Kerala (Volumes Part 111 a & B (i); Part 111 A & B (ii), Part 111 A & B (iii); Part 1V A; Part V A & B; paper 3 of 1981; and paper 5 of 1981), Controller of Publications, Civil Lines, Delhi.

Census of India 1991, Series-12, Kerala, Paper -2 of 1991, Provisional Population Totals.

Census of India 1991, Series - 12, Kerala, Paper - 3 of 1991, Final Population Totals.

Census of India 1991, Series-1, India, Paper-2 of 1992, Final Population Totals: Brief Analysis of Primary Census Abstract, Amulya RATNA Registrar General & Census Commissioner, India.

Government of Kerala, (1971), Report of the Committee on Unemployment in Kerala Part 1.

_____, (1963), N.S.S. Report No.1 Bureau of Economics and Statistics, Trivandrum.

_____, (1965), N.S.S. report No.4 B.E.S., Trivandrum.

_____, (1970), N.S.S. Report No.12 B.E.S., Trivandrum.

_____, Fact Book on Manpower B.E.S., Trivandrum, for the years 1966 and 1976, 1984 and 1988.

_____, (1976), Planning for Employment in Kerala B.E.S., Trivandrum.

_____, Statistics for Planning B.E.S., Trivandrum, Various issues.

I.A.N.R., (1965), Nature and Situation of Unemployment Among Educated Persons in India, 1953 to 1964 I.A.N.R., New Delhi.

Govt. of Kerala, (1977, '79 & '80) Manpower Studies, (Vol.1, to v) B.E.S., Trivandrum.

_____, (1978), N.S.S. Report No.20, some Summary information on employment and Unemployment, 27th Round, D.E.S., Trivandrum.

_____, (1982), Survey on Housing and Employment-1980 D.E.S., Trivandrum.

_____, (1986), Progress of Kerala in three decades, 1956-1985 D.E.S., Trivandrum.

_____, (1983), Economic Review State Planning Board, Trivandrum, Various issues.

_____, (1978), Draft five Year Plan, Vol.1. 1978-83 State Planning Board.

_____, (1980), Draft Sixth Five Year Plan 1980-85 and Annual Plan 1981-82, Vol.1. state Planning Board, Trivandrum.

_____, (1981), Sixth Five Year Plan 1980-85 State Planning Board, Trivandrum.

_____, (1982), School Education in Kerala, A statistical Profile, Data Bank, State planning Board, Trivandrum.

_____, (1984), Draft Seventh Five Year Plan 1985-90 and annual Plan 1985-86, Vol.1 State Planning Board, Trivandrum.

_____, (1984), High level Committee on Education and Employment, Vol.1 to 1V State Planning Board, Trivandrum.

_____, (1984), Report of the High level Committee on Industry, trade and power, Vol.1 to 111, State Planning Board, Trivandrum.

_____, (1991), Draft Eighth Five Year Plan 1992-97 and annual plan 1992-93, Vol.1 & 11, State Planning Board, Trivandrum.

_____, (1992), Resources Commission, Interim Report.

Government of Travancore, (1954), Travancore-Cochin Report of the Survey of Unemployment.

I.A.M.R., (1965), Nature and Dimesion of Unemployment Among Educated Persons in India, 1953 to 1964 I.A.M.R., New Delhi.



G5428-

356

International Labour Office, (1969), Employment in Economic Development: report of a meeting of experts. Geneva.

Mridul Eapen, (1974), Some Aspects of Unemployment problem in Kerala, working paper No.79, Centre for Development studies, Trivandrum.

O.E.C.D., (1978), Youth Unemployment : a Report on the High Level conference, 15-16 December, 1977, Vol.1. Paris.

_____, (1982), The Challenge of Unemployment. A Report to Labour Ministers Paris.

_____, (1983), Politics for Higher Education in the 1980's. Paris.

_____, (1983), Employment Outlook Paris.

_____, (1985), New Policies for the young Paris.

Prakash. B.A., (1988), Educated Unemployment in Kerala : Some Observations Based on a Field Study, Working Paper No.224 Centre for Development studies, Trivandrum.

_____, (1989), Unemployment in Kerala, An Analysis of Economic Causes, Working Paper No.231 Centre for Development Studies, Trivandrum.

State Planning Board, Trivandrum, (1992), Employment Generation strategy in the Eighth Five Year Plan, Report on Rupees Thousand Crore Employment programme.

U.N.E.S.C.O., (1968), Manpower Aspects of Educational Planning, Problems for future I.I.E.P., Paris.

CHAPTER - II

DAIRY DEVELOPMENT IN KERALA - A REVIEW

The first chapter gave an introduction to the study. The present chapter gives a review of dairy development in Kerala. Attempts to organise and develop animal husbandry and dairying in Kerala started only during the First Five Year Plan when the Key Village Scheme was introduced and facilities were provided for artificial insemination. Under the scheme, around 50 artificial insemination centres covering a breedable cattle population of about 5000 were started in the state. During the Second Five Year Plan 11 Key Village Centres were started to upgrade the breed of local cattle.

Since the Third Five Year Plan, a comprehensive attempt for improving the cattle wealth of the state was made. During the Third Plan a collaboration project between the Governments of India, Kerala and Switzerland, known as the Indo-Swiss Project was started with head quarters at Mattupetty in Idukki district. The main objective of this project was to evolve a new species of cross-bred cattle suitable to Indian conditions and to encourage scientific production of fodder. The setting up of a semen bank and liquid nitrogen plant for deep freezing of bovine semen, as part of this project, was an important landmark in the field of cattle breeding in Kerala. Another major

development in the dairy sector of the state during the Third Plan was the establishment of three dairy plants one each at Ernakulam, Palakkad and Kottayam.

During the Fourth Five Year Plan, an Intensive Cattle Development Project was started for improving the quality of cattle and thereby to raise their productivity. The project proposed to cover a population of about one lakh breedable cows and other aspects of cattle development such as breeding, fodder development, balanced feeding practices, effective disease control and marketing of livestock production. At present, there are eight Intensive Cattle Development Projects in the state. They are located at Thiruvananthapuram, Kollam, Pathanamthitta, Idukki, Ernakulam, Palakkad, Kozhikode and Kannur.

As a part of the national programme, 'Operation Flood' project was started in the state from 1980. For implementing this project in the state, the Kerala Co-operative Milk Marketing Federation (KCMMF) was formed on 25th January 1980. The objectives of the Federation are:

1. to carry out activities of production, procurement, processing and marketing of milk and milk products,
2. to manufacture balanced cattle feed and supply it to the milk producers through co-operative societies,
3. to provide veterinary and health service to the milk producers,

4. to advise, guide, assist and control the primary milk co-operative societies in all aspects of management of the society,
5. to impart technical knowledge and training, and,
6. to provide technical, administrative, financial and other assistance to the member unions and village societies.

The primary function of the Federation is to implement the national programme of Operation Flood II and Operation Flood III in Kerala. The project area covered the southern revenue districts of Thiruvananthapuram, Kollam, Pathanamthitta, Alapuzha, Kottayam, Idukki, Ernakulam and Thrissur. The programme was implemented by the Federation in collaboration with the National Dairy Development Board.

2.1.1. Operation Flood - II in Kerala

With the launching of OF -II Programme in the year 1980 in the southern districts, a new era has begun in the field of dairy development in the state. The programme included the setting up of major dairy plants, cattle feed plants and chilling plants in addition to the creation of other infrastructural facilities. The programme had an initial outlay of Rs.19.23 crores which had been later enhanced to Rs.27.98 crores. Following were the physical targets of OF -II Programme in Kerala.

1. Establishment of 1800 APCOS including transformation of the existing societies on APCOS model.

2. An average daily production of 5,70,000 litres of milk and an average procurement of 64 percent of this through dairy co-operatives.
3. Construction of 4,10,000 litres per day processing capacity in five dairy plants.
4. Construction of one cheese plant and six milk collection-cum-chilling centres with sufficient capacity.
5. Construction of a balanced cattle feed plant with 200 MT capacity in addition to the present cattle feed plant at Trichur.
6. Coverage of four lakh milch animals under the milk procurement and technical input programme.
7. To organise training programmes for meeting manpower requirements of co-operatives.
8. Intensification of extension programme to encourage production of fodder, mixed farming and improved animal husbandry.
9. Provision of financial and technical assistance to the above operational programmes and implementation of it through KCMMEF.

During the period of OF -II, dairy sector in the state achieved considerable progress. Milk production increased from 8.66 lakh tonnes in 1980 to 12.20 lakh tonnes in 1985.

Per capita availability of milk during this period increased from 95 grams to 125 grams per day.

2.1.2. Operation Flood III in Kerala

Encouraged by the response to OF -II, the third phase of Operation Flood (OF-III) was launched in 1985. The OF-III (1985-1994) involved a total outlay of Rs.18 crores. By replicating the Anand pattern of co-operatives, OF-III aimed at organising milk procurement at remunerative prices through economically viable village co-operatives, providing efficient marketing facilities for rurally produced milk and dairy products, introducing productivity enhancement measures and organising training programmes and centres for meeting manpower requirements of emerging co-operatives. The scheme further aimed at the establishment of 1928 APCOS by bringing 10,56,600 dairy farmers under its shade, the procurement of 5,83,330 litres per day (lpd) and the marketing of 5,15,000 lpd by 1994.

Under the OF-III Programme, new processing plants were commissioned in the districts of Kollam, Alapuzha and Thrissur each having an installed capacity of 60,000 lpd. The 100,000 lpd dairies of Ernakulam and Thiruvananthapuram were also commissioned raising the total installed capacities of the dairies under the KCMMF to 3.63 lakh lpd. In addition to this, milk chilling plants at Munnar, Pathanamthitta, Muvattupuzha, and

Chalaky each having a capacity of 10,000 lpd have become functional. Kattappana chilling plant of 20,000 lpd was also commissioned during this period.

During the period of OF-III, the state achieved tremendous progress in the dairy sector. Milk production increased from 12.20 lakh tonnes in 1985 to 18.90 lakh tonnes in 1993. During this period the per capita availability of milk also increased from 125 grams to 175 grams per day.

2.2. Dairy Co-operatives in Kerala

Co-operative sector has made remarkable progress in Kerala. Different types of co-operative societies are organised and they are now operating in all areas of human activity. Banking, agriculture, industry, trade, processing, marketing, housing, dairying, etc are some of the fields where co-operatives are operating successfully in Kerala. Even in the fields of education, public health and transport, co-operatives play a significant role in Kerala.

In the field of dairy, co-operatives have made remarkable progress in Kerala during the last decade. The first dairy co-operative in Kerala was the Palakkad Co-operative Milk Supply Union Ltd. which was registered in 1949. After the formation of this society, a number of dairy co-operatives were formed in different parts of Kerala. By 1962 there were 50 dairy co-opera-

tives in Kerala. Table 2.1 shows the growth in the number of primary dairy co-operatives societies and their memberships.

Table 2.1

Number and Membership of Primary Dairy Co-operatives in Kerala

Year	No. of Societies	Membership
(1)	(2)	(3)
1970-71	363	52128
1975-76	521	97764
1980-81	1043	231807
1985-86	1498	416471
1990-91	1963	489185
1992-93	2248	524900

Source:

- (1) Compiled from Annual Reports of Dairy Development Department, Thiruvananthapuram.
- (2) Economic Review, Various years, State Planning Board, Thiruvananthapuram.

Table 2.1 shows that there was about six fold increase in the number of primary dairy co-operatives and about ten fold increase in membership during the span of twenty three years. That is, the number of primary dairy co-operatives increased from 363

in 1970-71 to 2248 in 1992-93 and the membership increased from 52,128 to 5,24,900 during the same period.

2.3. Organisational Structure of Dairy Co-operatives in Kerala

Till 1980, dairy co-operatives had a two-tier structure in the state—Primary Milk Supply Societies at the village level and Milk Supply Unions at the district level. For implementing the Operation Flood Project in 1980, Government of Kerala and Indian Dairy Corporation decided to set up state level Federation on Anand pattern. Accordingly, Kerala Co-operative Milk Marketing Federation (KCMMF) was formed in 1980. When the KCMMF formed Regional Unions of primary co-operatives, the traditional unions¹ lost their importance. There are now three Regional Unions under KCMMF. They are the Thiruvananthapuram Regional Co-operative Milk Producer's Union (TRCMPU) consisting of Thiruvananthapuram, Kollam, Pathanamthitta and Alapuzha districts, Ernakulam Regional Co-operative Milk Producer's Union (ERCMPU) consisting of Kottayam, Idukki, Ernakulam and Thrissur districts, and the Malabar Regional Co-operative Milk Producer's Union (MRCMPU) covering the districts of Palakkad, Malappuram, Kozhikode, Kannur, Wayanad and Kasargod.

1. District level unions of traditional primary milk supply societies which were functioning under Dairy Development Department.

The existing dairy co-operatives in Kerala can be generally divided into three, viz, the three-tier Anand Pattern Societies under KCMMF, the two-tier traditional or conventional societies and those organised under charitable agencies.

Table 2.2 shows the district-wise distribution of traditional and Anand pattern primary dairy co-operatives in Kerala.

Table 2.2

Region-wise Distribution of Primary Dairy Co-operatives
in Kerala (as on 31-5-1994)

Region/District	Traditional societies	Anand pattern societies	Total
(1)	(2)	(3)	(4)
<u>Thiruvananthapuram Region</u>			
1. Thiruvananthapuram	81	228	309
2. Kollam	69	214	283
3. Pathanamthitta	27	124	151
4. Alapuzha	35	169	204
<u>Ernakulam Region</u>			
5. Kottayam	44	130	174
6. Idukki	39	95	134
7. Ernakulam	23	238	261
8. Trissur	85	120	205

(Contd...)

(1)	(2)	(3)	(4)
<u>Malabar Region</u>			
9. Palakkad	86	67	153
10. Malappuram	56	67	123
11. Kozhikode	50	92	142
12. Kannur	79	73	152
13. Wayanad	21	26	47
14. Kasargod	21	39	60
Total	716	1682	2398

Source: Quarterly Statement, Directorate of Dairy Development, Thiruvananthapuram.

Table 2.2 shows that the Thiruvananthapuram district has the highest number of dairy co-operatives. Kollam and Ernakulam occupy the second and the third positions respectively. It can be seen from the table that, while four districts of Thiruvananthapuram Region have 947 primary dairy co-operative societies, there are only 677 societies in the six districts of Malabar Region.

The present trend is to convert more and more traditional societies into APCOS which are under the direct control of KCMMF. Though traditional societies have more freedom in price fixation and give higher price, APCOS provide some additional benefits such as cattle feed and veterinary aid at concessional rate, bonus, etc. It is interesting to note that while the number of traditional societies decreased during the last decade, the number of

APCOS increased during the same period. That is, while the number of traditional societies decreased from 1008 in 1985 to 716 in 1994, the number of APCOS increased from 588 in 1985 to 1682 in 1994.

The increasing level of participation of the farmers in the co-operatives (APCOS) is indicated by the growing membership of farmer-producers from 0.33 lakh in 1983 to 4.10 lakhs in 1994. Based on the growing conviction of the dairy farmers about the assured market offered by dairy co-operatives, the average milk collection at the society level has increased from 90 litres per day in 1983 to 289 litres in 1994. As a result, the total collection by KCMF increased from 0.52 lakh lpd in 1983 to 4.7 lakh lpd in 1994.

2.4. Government Expenditure on Animal Husbandry and Dairying

Government expenditure on Animal husbandry and dairying shows the emphasis given to this sector by the state for increasing the production and productivity. Table 2.3 shows the total plan expenditure, expenditure on animal husbandry and dairying and expenditure exclusively on dairying in Kerala under the plans.

Figures in parenthesis show percentage of the preceding column.
 Source: Draft Seventh Five Year Plan, 1985-90 and Draft Eighth Five Year plan, 1992-97, State Planning Board, Thiruvananthapuram.

Table 2.3

Plan-wise Expenditure on Animal Husbandry and Dairying in Kerala

(Rs. in crores)

Plan period	Total plan expenditure	Expenditure on agriculture and allied activities	Expenditure on animal husbandry & dairying	Expenditure on dairying
(1)	(2)	(3)	(4)	(5)
First Plan (1951-56)	25.90	2.45 (9.46)	0.08 (3.27)	—
Second Plan (1956-61)	80.22	12.72 (15.86)	0.83 (6.53)	—
Third Plan (1961-66)	182.31	34.77 (19.07)	2.69 (7.74)	0.83 (30.86)
Annual Plans (1966-69)	144.37	37.98 (26.31)	2.33 (6.13)	0.79 (33.91)
Fourth Plan (1969-74)	333.35	49.81 (14.92)	3.44 (6.91)	0.75 (21.80)
Fifth Plan (1974-78)	485.62	75.84 (15.62)	4.63 (6.10)	2.10 (45.36)
Annual Plans (1978-80)	428.70	64.67 (15.09)	5.44 (8.41)	2.38 (43.75)
Sixth Plan (1980-85)	1583.20	309.79 (19.57)	24.41 (7.88)	8.10 (33.18)
Seventh Plan (1985-90)	2438.58	306.02 (12.55)	27.49 (8.98)	12.91 (46.96)
Annual Plans (1990-92)	1414.73	230.30 (16.28)	17.44 (7.57)	7.92 (45.41)
Eighth plan (1992-97) (Estimate)	5460.0	751.25 (13.76)	56.00 (7.45)	20.00 (35.71)

Note: Figures in parenthesis show percentage of the preceding column.

Source: Draft Seventh Five Year Plan, 1985-90 and Draft Eighth Five year plan, 1992-97, State Planning Board, Thiruvananthapuram.

Table 2.3 shows that the expenditure on animal husbandry and dairying increased from Rs. 0.08 crore in the First Five Year Plan to Rs.56 crores in the Eighth Five Year Plan and that on dairy sector it increased from Rs.0.83 crore in the Third Plan to Rs.20 crores in the Eighth plan. Though there is a steady increase in the expenditure on animal husbandry and dairying throughout the plans, it constituted only around 1.5 per cent of the total plan expenditure. It is important to note that though livestock sector contributes nearly 25 percent of the agricultural income, expenditure on this sector constitutes only around eight percent of the expenditure on agriculture and allied activities.

2.5. Bovine population in Kerala

According to the 1987 Livestock census², Kerala had a bovine population of 37.53 lakhs of which cattle constituted 34.24 lakhs and buffaloes, 3.29 lakhs. Of the 34.24 lakh cattle, 49.71 per cent was cross-bred and the remaining 50.29 percent was indigenous. The trends in the bovine population of Kerala are given in table 2.4.

2. Bovine population data after 1987 are not available.

Table 2.4Bovine Population in Kerala (in lakhs)

Year	Cattle	Buffaloes	Total bovine population
(1)	(2)	(3)	(4)
1966	28.57 (85.82)	4.72 (14.18)	33.29 (100.00)
1972	28.56 (85.82)	4.72 (14.18)	33.28 (100.00)
1977	30.06 (86.88)	4.54 (13.12)	34.60 (100.00)
1982	30.97 (88.33)	4.09 (11.67)	35.06 (100.00)
1987	34.24 (91.23)	3.29 (8.77)	37.53 (100.00)

Note: Figures in parenthesis show the percentage of the total bovine population.

Source: Livestock Census, 1966, 1972, 1977, 1982 and 1987, Directorate of Animal Husbandry, Thiruvananthapuram.

Table 2.4 reveals that while cattle population increased from 28.57 lakhs in 1966 to 34.24 lakhs in 1987, buffalo population decreased from 4.72 lakhs in 1966 to 3.29^{lakhs} in 1987.

Likewise, while buffaloes constituted 14.18 percent of the bovine population in 1966, it decreased to 8.77 percent in 1987.

Source: Economic Review, Various years, State Planning Board, Thiruvananthapuram.

2.6. Growth of Milk Production in Kerala

There has been considerable increase in the milk production of Kerala during the period of Operation Flood. Milk production in the state has increased from 9.08 lakh tonnes in 1981 to 18.89 lakh tonnes in 1993. The trend in the growth of milk production in Kerala is given in table 2.5.

Table 2.5

Milk Production in Kerala (in lakh tonnes)

Year	Production	Index
1980-81	9.08	100.00
1981-82	9.82	108.15
1982-83	10.78	118.72
1983-84	11.50	126.65
1984-85	12.20	134.36
1985-86	12.82	141.20
1986-87	13.34	146.92
1987-88	14.26	157.05
1988-89	15.07	105.97
1989-90	16.00	176.21
1990-91	16.90	186.12
1991-92	17.85	196.59
1992-93	18.89	208.04

Source: Economic Review, Various years, State Planning Board, Thiruvananthapuram.

Diagram - 2.1

It can be seen from table 2.5 that during the five year period of OF II (1981-85) milk production has increased from 9.08 lakh tonnes in 1980-81 to 12.20 lakh tonnes in 1984-85. During the third phase of OF (1985-94) milk production increased from 12.82 lakh tonnes to 18.89 lakh tonnes. During the entire period of OF, milk production in the state has more than doubled. The growth of milk production in Kerala is illustrated in diagram 2.1

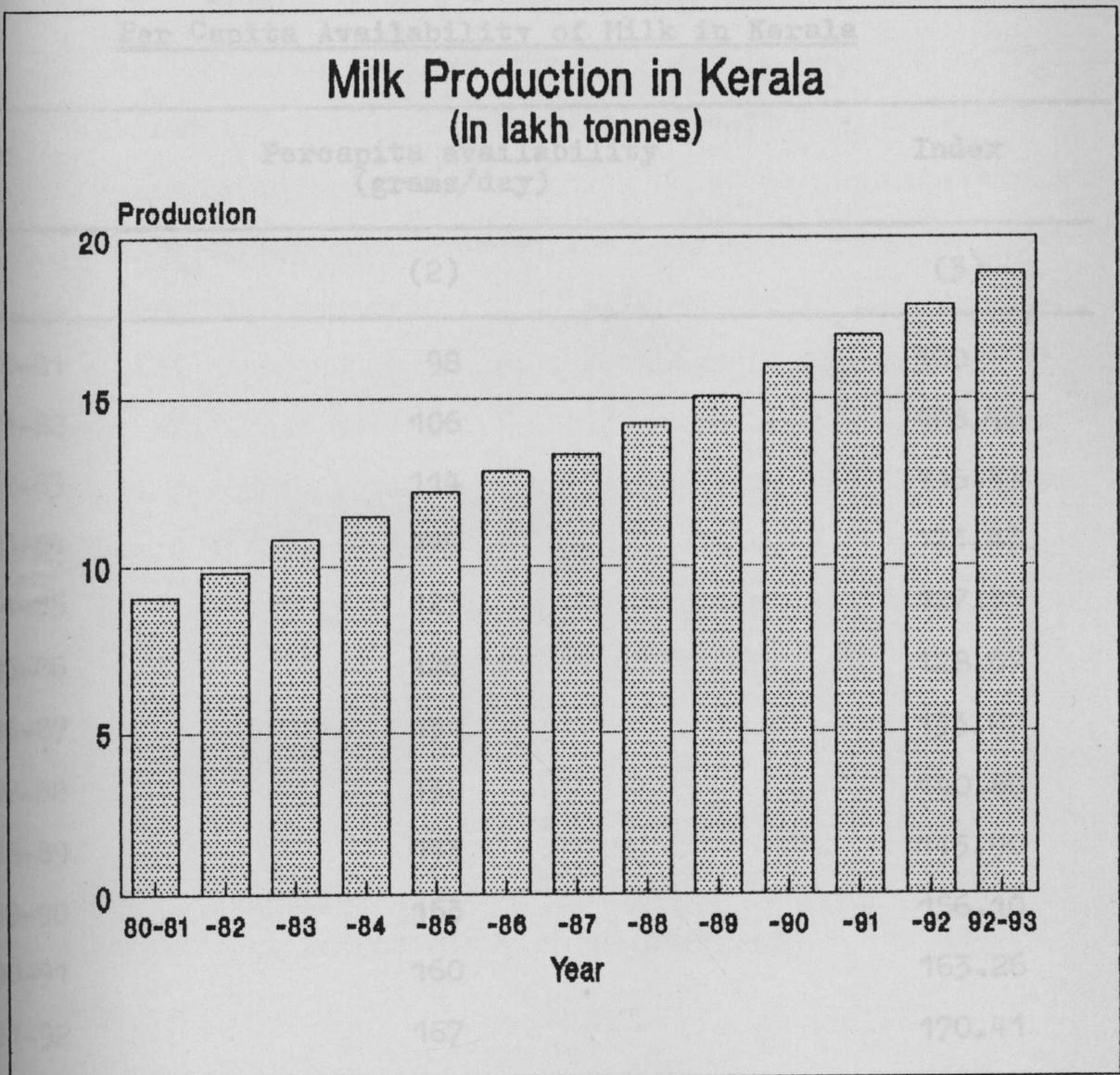
2.7 Per Capita Availability of Milk in Kerala

Per capita availability of milk in Kerala has shown an increasing trend. This is given in table 2.6

80-81 -82 -83 -84 -85 -86 -87 -88 -89 -90 -91 -92 93-94
Year

Diagram - 2.1

Table 2.6



(1) Annual Bulletin, Directorate of Animal Husbandry, Thiruvananthapuram.

(2) Economic Review, Various Years, State Planning Board, Thiruvananthapuram.

Table 2.6Per Capita Availability of Milk in Kerala

Year	Per capita availability (grams/day)	Index
(1)	(2)	(3)
1980-81	98	100
1981-82	106	108.16
1982-83	114	116.33
1983-84	119	121.43
1984-85	125	127.55
1985-86	126	128.57
1986-87	131	133.67
1987-88	138	140.80
1988-89	143	145.90
1989-90	153	156.10
1990-91	160	163.26
1991-92	167	170.41
1992-93	175	178.57

Source: (1) Annual Bulletin, Directorate of Animal Husbandry, Thiruvananthapuram.

(2) Economic Review, Various Years, State Planning Board, Thiruvananthapuram.

Table 2.6 shows that per capita availability of milk in Kerala has increased from 98 grams per day in 1980-81 to 175 grams per day in 1992-93. The overall growth in per capita availability of milk in the state was 78.57 percent whereas the increase in national average was only 48.44 percent.³ Though per capita availability of milk in Kerala is less than the national average, it is growing closer to the national average. While per capita availability of milk in Kerala was only 76.56 percent of the national average in 1980-81, it increased to 92.11 percent in 1992-93. Even then it is much less than the minimum nutritional requirement of 250 grams⁴ per day.

From the above analysis it can be seen that dairy sector has achieved tremendous progress in the state during the plan period. As the present study is confined to Idukki district, dairy development in the district is analysed in the next chapter.

3. At the national level, per capita availability of milk increased from 128 grams per day in 1980-81 to 190 grams per day in 1992-93.

4. Indian Council of Medical Research recommended minimum consumption of 250 grams of milk per day.