

CDS M.PHIL THESES

(1990/91 - 1993/94) : A REVIEW

VOLUME 2

T.T. SREEKUMAR

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2. T. Albin
“Diffusion of Computer Numerically Controlled Machine Tools”, 1992.
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3. T.G. Arun
“Growth and Structural Change in the Manufacturing Industries in Kerala 1976-87: A Comparative Study of Kerala vis-a-vis South Indian States”, 1992.
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4. R. Bindu
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Thesis Supervisors : P.K. Michael Tharakan and Chinnappan Gasper
5. Lopamudra Patnaik
“Conservation of Wetlands : An Economic Assessment of Lake Chilika (Orissa)”, 1992.
Thesis Supervisors: K.P. Kannan and John Kurien
6. S. Madhavi Reddy
“Agricultural Wages in Andhra Pradesh: A District wise Analysis”, 1992.
Thesis Supervisors: G.N. Rao and T.M. Thomas Isaac
7. S. Mohanan Pillai
“Social Security Schemes for Workers in the Unorganised Sector : A Case Study of Headload Workers Welfare Scheme in Kerala”, 1992.
Thesis Supervisors: P. Nandakumar and Mridul Eapen

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8. S. Preetha Nair
“Role of Kerala Temple in Socio-economic Articulation: A Structural-Functional Analysis”, 1992.
Thesis Supervisors: P.K. Michael Tharakan and G.N. Rao
9. Rachel Mini Simon
“Women, Work and Development : Female Labour force Participation in Kerala”, 1992.
Thesis Supervisors: B.G. Kumar and Irudaya Rajan
10. Rose Miranda Fabiola Joseph
“Impact of Land Use Dynamics on the Resource Base: A Micro Level Study”, 1992.
Thesis Supervisors: K.P. Kannan and K. Pushpangadan
11. N.N. Umadevi
“Working of Holding Companies in Kerala: The Case of Kerala State Industrial Enterprises Limited”, 1992.
Thesis Supervisors: P. Mohanan Pillai and N. Shanta
12. M. Vijaya Bhaskar M.
“Concentration in Indian Manufacturing Industry, 1970-1990”, 1992.
Thesis Supervisors: Sunil Mani and K.K. Subrahmanian

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13. Srijit Mishra
“Exchange Relations in an Agrarian Set-up: Case Study of a Tribal Village from Orissa”, 1993.
Thesis Supervisors: G.N. Rao and Sakti Padhi
14. L. Bhanumathy
“Some Economic Aspects of Drug Utilisation: A Study based on In-patient Case Records at the Medical College Hospital, Thiruvananthapuram”, 1993.
Thesis Supervisors: C.R. Soman and K.P. Kannan
15. Meena Abraham
“Foreign Portfolio Investment in India, 1948-89”, 1993.
Thesis Supervisors: Sunil Mani and K.K. Subrahmanian

16. Mariamma Sanu George
“Performance of the Public Road Transport System: A Case Study of KSRTC”, 1993.
Thesis Supervisors: Mridul Eapen and P. Mohanan Pillai
17. P. Shaheena
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18. J. Dennis Raja Kumar
“Role of Commercial Banks in Financing the Private Corporate Sector in India: 1970-71 to 1989-90”, 1993.
Thesis Supervisors: N. Shanta and K. Pushpangadan
19. Lini R. Nair
“Grain Supply in a Chronically Food Deficit State: The Case of Kerala”, 1993.
Thesis Supervisors: D. Narayana and T.M. Thomas Isaac
20. G. Murugan
“Pricing Public Utilities: A Study of Drinking Water”, 1993.
Thesis Supervisor : K. Pushpangadan
21. K. Asha
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Thesis Supervisors: K. Pushpangadan and Sunil Mani
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Thesis Supervisors: Pulapre Balakrishnan and I.S.Gulati

24. K.N. Lelithabhai
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Thesis Supervisors: T.M. Thomas Isaac and K.N. Nair
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“Performance and Prospects of Rice Production in Orissa”, 1993.
Thesis Supervisors: K.N.Nair and Chandan Mukherjee
 26. A. Karunakaran
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27. Antonyto Paul
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 28. Babu P. Ramesh
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 29. G.L. Deepa
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 30. K.K. Hari Kurup
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Thesis Supervisor: K.Pushpangadan
 31. Jom Jacob
“Staggered Replanting and Income Stabilisation: A Case Study of Small Rubber Holdings in Kerala”, 1994.
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32. N.C. Narayanan
“Sustainable Landuse for Agriculture: A Local Level Approach with Reference to Paddy Cultivation in Kerala”, 1994.
Thesis Supervisors: K.P. Kannan and John Kurien
33. N. Neetha
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34. Sabu M. George
“A Study of the Informal Jewel Loan Market in Kerala”, 1994.
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36. A. Subramanian
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37. L. Sudhakar Reddy
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38. M. Suresh Babu
“Industrial Pricing and Inflation: The Case of India 1960 to 1988”, 1994.
Thesis Supervisors: Pulapre Balakrishnan and K. Pushpangadan
39. M. Thomas Mathew
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1993-94

40. Sara Abraham
“Diffusion of Medical Technology: The Case of Diagnostic Imaging in Kerala” 1995.
Thesis Supervisor: K.P. Kannan
41. Pius Antony
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45. Rajib Nandi
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46. Ramakrishna Panigrahi
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47. G. Rambabu
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48. S. Raghavendra
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50. Chandrika Sharma
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51. L. Unnikrishnan
"Public Distribution System in India in the Context of Structural Adjustment Programme", 1995.
 Thesis Supervisors: P.S. George and P.R. Gopinathan Nair
52. Sobha Varghese
"Agricultural Technology: A Study of Innovation and Diffusion in Kerala", 1995.
 Thesis Supervisor: K.P. Kannan
53. P.S. Venkitesh
"India's Software Exports: A Study with Special Reference to Technology Parks", 1995.
 Thesis Supervisor: K.J. Joseph
54. P. Vinod Kumar
"India's Trade in Services: An Analysis of Structure, Growth and Competitiveness", 1995.
 Thesis Supervisor: K.J. Joseph
55. Tomy Joseph
"Some Recent Trends in Small Scale Industries: A Case Study of Diamond Industry in Kerala", 1995.
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INTRODUCTION

The M.Phil Programme in Applied Economics at the Centre for Development Studies, Thiruvananthapuram, affiliated to the Jawaharlal Nehru University, New Delhi was started in 1975. The curriculum of the programme includes a structured course work in quantitative analysis, research methods, application of economic theory to selected economic problems, discussion of selected issues relating to Indian economy and submission of a dissertation involving empirical work on a selected topic pertaining to any aspect of regional or national economy.

The dissertations submitted through the M.Phil Programme at the Centre show a wide spectrum of themes, methods and analytics. As is the case, the intake of students at the Centre is not limited to those having strict disciplinary background in economics. Students with varied backgrounds in both social and natural sciences including professionals from engineering, law and medicine have participated in the Centre's M.Phil programme spanning over the last 19 batches.

It is fairly clear that the admission policy of the Centre, recruiting students from varied disciplines has a significant impact on the range of topics that are chosen for thesis writing every year. Even though the main focus of any thesis has to be on a problem with an economic dimension, students are encouraged to integrate ideas and perspectives from any knowledge field that has got relevance to the theme under study. Even a cursory glance reveal the inter-disciplinary character of research themes which stand out prominently in the M.Phil dissertations of the Centre.

Some of the dissertations are already published in the form of articles and books. The Centre, under the Publication Programme has published a few of these as occasional papers. Some theses have been brought out by commercial publishers also. However, it is felt in many quarters that these themes merit a wider reach and attention. Since the publication of all theses could not be considered viable given the constraints of time and resources, it was decided that their abstracts may be compiled and published. The first volume compiled and reviewed by G.N. Rao presents the abstracts of 119 dissertations submitted during the first 15 years of the M.Phil programme i.e. from 1975/76 to 1989/90. The present volume is conceived as a supplement to the previous one and contains abstracts of all M.Phil dissertations submitted by subsequent batches till 1993-94.

1. Research Themes : A Comparison

In order to provide a broad overview of the shifts and continuities in the research themes pursued by M.Phil scholars we shall attempt a comparison of the quantitative dimensions with the pre-1990 phase compiled in the first volume. At the outset itself one can see that output per year has become larger. Only 119 dissertations were submitted by the first 15 batches averaging about 8 per year whereas 55 dissertations are completed by the following 4 batches with an average turn over of 14 per year (see Table 1.)

Table 1 : Frequency of Research Themes

Themes	No. of theses completed	
	1975/76 - 1989/90	1990/91 - 1993/94
Macro Economic Issues	6	3
Economic Policy	2	-
Banking and Finance	6	6
Industry	17	7
Agriculture	26	10
Dairy Farming	2	1
Sericulture	-	1
Fisheries	5	-
Forestry	4	1
Infrastructure	4	1
Energy	3	1
Environmental Issues	-	3
Gender Issues	-	4
Social Sector	6	7
Population and Labour	12	3
Economic Legislation	2	-
Consumption Studies	2	-
Regional Planning	2	-
Poverty Alleviations	2	-
Programmes		
Tribal Economy	1	2
Economic History	10	1
External Sector	6	4
Total	119	55

It can be discerned that themes related to agriculture figure prominently in both phases. During 1990/91 - 1993/94, 10 out of a total of 55 were on agriculture. The percentage also would be roughly the same as in the previous phase. This observation holds true for industry also where 7 theses have been completed. Students' interest in issues relating to macro economy has also remained stable with 3 dissertations submitted under this theme; in the latter period

It can be suggested that the students' interest in certain themes has increased in a relative sense and in some cases even in absolute terms. Studies falling in areas like social sector (7), tribal economy (2), external sector (4) and Banking and finance (6) are illuminating examples of such reinforced academic interest. Moreover, it may be noted that the initial enthusiasm to study issues pertaining to Banking and Finance was essentially induced by an official sponsorship awarded to officers from Reserve Bank of India to participate in the CDS M.Phil programme from 1986 onwards. As noted by G.N. Rao in the introduction to Vol.I, most of the studies under this generic theme were carried out by RBI candidates. But surprisingly, in the post 1990 phase, all dissertations in this area except one are written by non-RBI students. Moreover, students' interest in this theme is sustained even after the sponsorship programme is practically discontinued from 1992-93 onwards.

Certain themes, on the other hand have ceased to be popular with the students. Population and Labour (3), Economic History (1), Energy (1), Forestry (1), Infrastructure (1) and Dairy Farming (1) are the areas where students' interest show an apparent decline. In addition, certain themes have gone out of appeal totally. They are Economic Policy, Fisheries, Economic Legislation, Consumption Studies, Regional Planning and Poverty Alleviation Programmes. The reason for the disappearance of these themes may partly be the changing structure of the faculty and the shift in the disciplinary background of students. The increased thrust on quantitative analysis of contemporary issues in the post 1990s could be one reason why economic history became unfashionable. The rescheduling of the duration of the M.Phil programme whereby the students are required to submit the dissertation within a limited time span after the completion of course work would also work against the writing of historical theses which might require collection and processing of primary information, including archival material.

However, some new themes have emerged in the second phase. They are: Sericulture (1), Environmental issues (3) and Gender issues (4). The growing interest in the last two areas reflect the students' keenness to pursue discussions on themes and areas of contemporary significance.

2. Regional Vs Macro Economic Dimensions

The ratio of studies with a focus on macro issues to regional studies can be estimated as 3:7. We may obtain roughly the same figure for the previous period also. In all, about 18 theses are with macro economic focus in 1990/91 - 1993/94 period. Table 2 shows a break up of themes with macro economic dimensions.

Table 2 : Break-up of Themes with Macro Focus

Themes	No. of theses	
	1975/76 - 1989/90	1990/91 - 1993/94
Macro Economic Issues	6	3
Economic Policy	2	-
Banking and Finance	6	4
Industry	5	4
Agriculture	6	1
Population and Labour	3	-
Energy	1	1
Social Sector	-	1
Economic History	1	-
External Sector	6	4
Total	36	18

Macro Economic Issues (3), Banking and Finance (4), Industry (4) and External Sector (4) are the areas where one finds a sustained interest in the case of studies at the all-India level.

At the regional level the spread has apparently shrunk. In the second phase there are no studies on Maharashtra, Karnataka and Punjab (See Table 3). There is only one study on Tamilnadu compared to 11 in the previous phase. However, Gujarat appears in the list for the first time in the second phase. Kerala and Orissa are two states which received more or less consistent attention.

Table 3 : State wise break up of Regional Studies

State	No. of theses completed		Total
	1975/76 - 1989/90	1990/91 - 1993/94	
Andhra Pradesh	6	2	8
Gujarat	-	1	1
Karnataka	3	-	3
Kerala	53	27	80
Maharashtra	1	-	1
Orissa	4	4	8
Punjab	1	-	1
Tamil Nadu	11	1	12
Uttar Pradesh	1	1	2
West Bengal	3	1	4
Total	83	37	120

As has been rightly pointed out by G.N. Rao in the introduction to Vol.1, the high incidence of studies on these two states is due to the fact that Kerala and Eastern India have over time become the most important catchment areas for admissions into the CDS M.Phil programme. Apparently, Andhra Pradesh and Tamil Nadu have ceased to occupy the limited prominence they enjoyed in terms of number of dissertations. As Table 3 shows, of the 120 studies with a regional focus completed during the period 1975/76 - 1993/94, as many as 80 or 68 per cent were on Kerala.

3. Kerala Studies

About 64 per cent of the total regional studies in the first phase and 73 per cent in the second phase were on Kerala. This being the case, it would be appropriate to look further into the theme wise spread of Kerala studies (Table 4). Agriculture (12), Population and Labour (7), Industry (6), Fisheries (5), Social Sector (3) are some of the prominent areas which received students' attention in the first phase. In the second phase social sector (6), Agriculture (5), Industry (3) and Gender Issues (3) figure prominently. Fisheries, Forestry, Energy, Economic Legislation, Consumption Studies, Regional Planning and Poverty Alleviation Programmes are themes in which no study was done during the second phase. Environmental issues

(2) and Sericulture (1) are two new areas where an emerging interest is discernible. There are 2 studies on Banking and Finance and 1 study each on Dairy farming, sericulture, infrastructure, population and labour, tribal economy and economic history.

Table 4: Research Themes in Studies on Kerala

Themes	No. of theses completed	
	1975/76 - 1989/90	1990/91 - 1993/94
Banking and Finance	-	2
Industry	6	3
Agriculture	12	5
Dairy Farming	1	1
Sericulture	-	1
Fisheries	5	-
Forestry	3	-
Infrastructure	3	1
Energy	2	-
Environmental Issues	-	2
Gender Issues	-	3
Social Sector	3	6
Population and Labour	7	1
Economic Legislation	2	-
Consumption Studies	2	-
Regional Planning	1	-
Poverty Alleviations Programmes	1	-
Tribal Economy	1	1
Economic History	4	1
Total	53	27

4. Research Themes : A Closer Look

M.Phil students at the Centre have attempted to explore diverse topics under each generic theme, whether at the regional or at the all-India level. Broadly speaking, each thesis attempts to review the existing literature on the topic, improvise on the methods or innovate new ones, test old and/or new hypotheses, tap new data sources or process the existing data base more rigorously and strive

to enrich the level and status of knowledge in the relevant field. It would be of interest to look at the recognisable issues taken up under each theme during the period 1990/91 - 1993/94.

With respect to macro economic problems, the behaviour of inter-sectoral terms of trade, industrial pricing and inflation and a short-run equilibrium analysis of total factor productivity growth are the issues that are examined. It is hardly surprising that these perennial problems in economics inspired a few dissertations.

Banking and Finance is one area where a growing interest is recorded. Role of commercial banks in financing private corporate sector, performance differentials of foreign and domestic banks in India, commercial banks and growth of regional disparities, public debt of states and the working of informal credit market are some of the issues analysed under this theme.

In the case of Industry studies the focus is either on macro dimensions or aspects of industrial sector in Kerala. Studies with a macro dimension focus on diffusion of computer numerically controlled machine tools, industrial concentration, response of textile mill industry to change in demand and trends and determinants of private corporate investment in India. Studies on Kerala are related to the working of holding companies, growth and structural change in manufacturing, and trends in small scale industries.

There is only one single study with a focus on macro dimensions of agriculture. It looks at the state-wise differentials in the pattern of agricultural growth. The lone study on Andhra Pradesh analyses district wise data on agricultural wages and that on West Bengal examines the rural markets and agrarian change. There are 5 studies on Kerala which analyse the constraints of productivity growth in agriculture, marketing of coconuts, grain supply to Kerala, replanting of rubber and income stabilisation and innovation and diffusion of agricultural technology. The two studies on Orissa probe into the performance and prospects of rice production in the state and changing agrarian relations respectively.

Diffusion of cross-breeding technology is analysed in the only study on dairy farming. Diffusion of technology is the major concern of the study on sericulture also. Both the studies are on Kerala. The only study on forestry analyses community initiatives in Forest management in the Panchamahals district, Gujarat.

The sole study in the area of infrastructure studies concerns itself with the performance of public transport system in Kerala. Subject matter of the single study falling in the area of energy is energy management in the manufacturing sector.

The central concern of studies with an environmental dimension is the changing patterns of land use dynamics. The two studies on Kerala analyse the impact of land use dynamics on resource use and problems of sustainable land use for agriculture respectively. The sole study on Orissa provides an economic assessment of Lake Chilka to emphasise the need for conservation of wet lands.

Among the gender issues discussed, those on Kerala analyse issues in female labour force participation, transition of matrilineal system and survival strategies of female industrial workers. The singular study on Tamil Nadu looks at the contribution of women to the household economy of the poor.

Studies on social sector are split between India and Kerala. But of the 7 studies on social sector only one takes up a macro level problem. It analyses the operations and financial performance of the Food Corporation of India. Among the rest which focus on Kerala, Education (1), Healthcare (4) and Drinking Water (1) are the major areas explored.

There are three theses on Population and Labour. The patterns of urbanisation (Andhra Pradesh), Social Security Schemes for Workers (Kerala) and Rural non-farm Employment (Uttar Pradesh) are the issues examined in these studies.

Of the two studies on tribal economy, one is on Kerala and the other on Orissa. The former discusses the comparative dimensions of food economy of tribals and the latter, nature of exchange relations in a tribal village. The lone study in the area of economic history explores the changing role of the Kerala temple in socio-economic articulation.

Theses on external sector analyse the growth of foreign portfolio investment, competitiveness of agricultural exports, India's trade in services and performance of software exports.

5. Summing Up

A review of the M.Phil dissertations reveal some broad trends with respect to themes and issues explored by young researchers at the Centre. Across the thematic schema proposed either in the previous volume or the present one, one can see overlapping of ideas and concerns. For example, technology diffusion is one such prominent area of study, which falls across varying themes. It is spread over industry, agriculture, dairy farming, sericulture and health care studies. Similarly environmental aspects figure in some studies on agriculture and forestry. Gender issues are also taken up in studies which focus on forest management, social security, health care and education. This, however is not surprising given the broad inter-disciplinary canvas against which M.Phil dissertations at the Centre are conceived and articulated.

The prominence of regional studies in the overall thematic structure deserves a special mention. 69 per cent of the total M.Phil dissertations completed at the Centre during the first 19 years of the M.Phil programme, are on states/regions. Within this, 86 per cent of the studies are on south Indian states and 66 per cent specifically on Kerala. During the period under review in this volume, 1990/91 to 1993/94, also, 81 per cent of regional studies focus on south Indian states/regions and 73 per cent on Kerala in particular.

It is also clear that the major thematic attractions are agriculture, industry, banking and finance, external sector and social sector during both the sub periods. Over all, they contribute to 55 per cent of the total dissertations. Within this agriculture (36) and industry (24) stand out prominently. This clearly brings out the importance accorded to the domain of pure economic issues among the various thematic categories that attracted the scholars' attention. This is understandable and purely logical since the programme is envisaged to equip young researchers to apply economic tools on problems of social and economic development.

M.PHIL ABSTRACTS

1

MACRO ECONOMIC ISSUES

1. A. Subramanian : The Behaviour of the Inter-sectoral Terms of Trade in the Indian Economy: 1965 to 1990, 1994, pp. 89
- Thesis Supervisors : Pulapre Balakrishnan and Chandan Mukherjee

It is widely held that the behaviour of the inter-sectoral terms of trade in the Indian economy is a political parameter determined by class forces. Based on this, two contrasting views are held. One view reflects on the question of rural bias arguing that inter-sectoral terms of trade have favoured agricultural sector, thus revealing a shift to rural interests. The other view with a new methodology observed that inter-sectoral prices shifted in favour of industrial sector evidencing urban bias.

This study questions the existing model of determination of inter-sectoral terms of trade and arrives at a two sectoral model with the structuralist characterisation of the economy. The series for net barter terms of trade is arrived at with a different methodology. The change in the methodology which is employed to arrive at the series was with regard to the (1) nature of commodities to be included: it is argued that the commodities to be included are the ones which are subject to government intervention (2) use of price series: Farm harvest prices are used (3) use of National Accounts Statistics for consumption weights.

The study, shows that the shift has favoured industrial sector over the years. This corresponded with changing agricultural supply. The increasing trend in agricultural production is reflected in the downward trend in the inter-sectoral prices.

2. M. Suresh Babu : Industrial Pricing and Inflation: The Case of India 1960 to 1988, 1994, pp. 81.

Thesis Supervisors : Pulapre Balakrishnan and K. Pushpangadan

This study analyses the nature of price/cost/activity relation over the cycle in Indian industry. It examines the role of industrial sector in the inflationary process. The study assumes significance in view of its attempt to test a mark-up pricing model for Indian industry and the behaviour of mark-up over the cycle.

A characterisation of industrial sector revealed that it is oligopolistic in nature and follows cost plus pricing. The findings suggest that prices and costs in the industrial sector, both at the aggregate and disaggregate levels, are co-integrated, moving together in the long run. It is also observed that industrial prices in India are cost-determined. The findings also suggest that the influence of activity over the mark-up is insignificant, leading to the inference that the mark-up is constant over the cycle. Hence, it may be said that, the role of industrial sector in Indian inflation is that of a transmission belt of price increases originating outside this sector.

The insignificant influence of activity on the mark-up suggests the negligible role of demand factors on the mark-up of Indian industry. An enquiry into the role of non-demand factors such as the investment decision of firms, though the present study failed to explore, is therefore called for to understand better the role of industrial sector in inflationary process in the Indian economy.

3. S. Raghavendra : Total Factor Productivity Growth: A Short-Run Equilibrium Analysis, 1995, pp.69.

Thesis Supervisor : K. Pushpangadan

Over the last two decades, a large number of studies on productivity change in the Indian manufacturing sector have been undertaken. More recently an intense discussion about the nature of Total Factor Productivity (TFP) growth during seventies and eighties has been going on. Yet, there is no clear solution for the 'Productivity Puzzle'. In this exercise an attempt is made to trace a part of

measured decline to the fact that traditional methods of productivity measurement assumes that producers are in long-run equilibrium when in fact they may be in short-run or temporary equilibrium. All the important studies, about productivity growth are based on the conceptual framework of long-run equilibrium. Not a single study tries to take into account the short-run or temporary equilibrium issues even though its importance has long been recognised in the productivity literature. This exercise tries to account for the temporary equilibrium issues when capital is assumed to be quasi-fixed. Both parametric and non-parametric methods employed adjust for the bias due to quasi-fixity of capital input. Marshallian framework of a short-run cost function with one input quasi-fixed is used in parametric approach. In both the approaches it was found that the traditional TFP growth measures with the assumptions of long-run equilibrium understates the real TFP growth to the extent that there are variations in the utilization of fixed inputs. Theoretical basis for accounting for temporary equilibrium effects in TFP growth measure has been discussed in detail in this study.

An analysis of investment made by banks in the securities of joint stock companies, a proxy for the private corporate sector, shows that the proportion of investment in this form of securities to total investment has declined from the time of nationalisation till the mid 80s followed by a rise back to its original position in the early 90s.

The observed trends in bank credit is essentially explained by the various credit control measures since nationalisation. It also shows that the investment in inventory has significantly influenced the demand for bank credit. The use of internal funds is another factor that contributes to the reduced role of banks.

As regards the cost factor, neither rate of interest of banks nor the relative rate of interest of alternative sources of borrowing exert any influence on the role of banks. It could be the availability of funds rather than the cost associated with it, that affects the role of banks in financing private corporate sector. Thus, the declining role of banks in financing private corporate sector is attributed to supply constraints rather than demand factors.

2. A. Karunakaran : Performance of Differentials of Foreign and Domestic Banks in India, 1993, pp. vii+137

Thesis Supervisors : Sunil Mani and P. Mohanan Pillai

This study concerns itself with the issue of measuring and analysing the performance differential between the foreign and domestic banks for the period 1969-1988. The performance is examined in terms of financial profitability.

Historically foreign bank group has been performing better than the domestic bank groups. Among the domestic bank group, the Indian public sector bank group is performing better than the Indian private sector bank group.

The financial profitability indicators such as return on assets (ROA), net return on assets (NROA), return on working funds (RWF), per branch profit, output input ratio and spread ratio exhibit higher difference between foreign and domestic bank groups. Foreign banks have relatively a higher margin on their operating earnings. Elasticity measure of output to input shows only a marginal difference compared to other indicators.

2

BANKING AND FINANCE

(a) INDIA

1. J. Dennis Raja Kumar : Role of Commercial Banks in Financing the Private Corporate Sector in India: 1970-71 to 1989-90, 1993, pp. 110.

Thesis Supervisors : N. Shanta and K. Pushpangadan

The study examines the role of commercial banks in financing an important deficit sector, namely, the private corporate sector.

A sector-wise analysis of financial balances shows that private corporate sector is a large deficit sector, second only to government. Its link with the largest surplus sector in the economy, the household sector, is very weak. Hence, a link is postulated between private corporate sector and banks, the largest mobiliser of savings.

The share of industry, particularly medium and large industries, in total bank credit has been declining since nationalisation until the mid 80s, when a marginal increase is recorded. The share of small scale industries in the overall bank credit to industry increased till mid 80s and remained constant afterwards.

A break-up of bank credit to the manufacturing sector by types of organisation shows that the share of privately owned companies, representing private corporate sector, has moved in line with that of industry.

Between the domestic public and private sector banks the differences in the sources of earning and expenditure are not very conspicuous, given their similarities in strategies, styles and nature of operations.

Income from investment is relatively lower for foreign banks compared to domestic banks. This finding goes against the conventional wisdom which assumes the opposite. Foreign banks earn a higher proportion of their total operating income from the bills and transactions relating to foreign business.

The proportion of the operating expenditure is relatively lower than foreign banks, reflecting their superior efficiency in asset and liability managed in general and interest cost minimisation in particular.

Differences in priority sector lending, branch expansion policy, interest rate policy, policy compulsion on credit-deposit ratio, policy relating to recruitment and remuneration policy permitting the banks to take active participation in the securities investment etc. give the foreign banks a definite advantage over domestic banks. Apart from these external factors, internal factors such as efficient cost management, efficient asset and liability management, efficient investment management also help them make best use of the available resources. Further, the quick and large scale adoption of automation of latest technology and timely introduction of innovative products and services are also important factors which give foreign banks their perceived edge.

3. Antonyto Paul : Commercial Banks and Agricultural Credit : An Analysis of Growth and Regional Disparities in Nineteen Eighties, 1994, pp.120.

Thesis Supervisors : K. Narayanan Nair and N. Shanta

The main objectives of the study are to (1) assess the inter-regional disparities in the commercial banks' agricultural credit, (2) trace the determinants of regional disparity in the distribution of agricultural credit and (3) suggest certain policy measures to bring about a more balanced system of credit distribution.

The publications of RBI, NABARD, CSO, Ministry of Agriculture and All India Census Reports form the major sources of information used in the study.

It is found that there is an accelerating trend in agricultural credit in the eighties. At the same time regional disparity is also quite high in terms of per hectare credit. Major determinants of this disparity are certain banking productivity and institutional variables. While variables such as per capita credit, per capita area under non-food crops, intensity of cultivation and the fertilizer consumption per hectare of irrigated area show positive influence on per hectare agricultural credit, others like population per bank office, cooperative agricultural credit per hectare, per capita deposit and degree of urbanisation show a negative impact on per hectare credit.

The findings call for careful policy measures to be taken to reduce the regional disparities in agricultural credit because a balanced credit supply is essential for balanced agricultural development. Recent financial reform package in agricultural sector raises much concern since its components like phasing out of directed credit programme, raising of interest on agricultural loans and abolition of bank licensing etc. may aggravate the inter-regional disparities that already exist across the states.

4. Pinaki Chakraborty : Public Debt of Selected States: A Comparative Analysis 1995, pp. 157

Thesis Supervisors : T.M. Thomas Isaac and I.S. Gulati

The study analyses the indebtedness of the states of Kerala, Maharashtra, Tamil Nadu and West Bengal.

The composition of state debt (all states) shows that the share of 'Loans and Advances from the Central Government', and the share of 'Internal Debt', and its major component 'Market' Loans and Bonds declined during the 1980s. However, the position regarding the composition of debt differs between the states. In Kerala and West Bengal, the share of 'Internal debt' and its major component, 'Market loans and Bonds', had increased. In Tamil Nadu also, market borrowing is quite high. However, in Maharashtra, the share of market loans is comparatively lower than those of the other three states. Trends in net central loans (after allowing for repayment and interest) to the states showed that barring Maharashtra with the exception of one year, the other three states experienced negative loan transfers during the 1980s.

Expenditure pattern of states showed that increasing share of non-plan expenditure in total reduced the revenue resources for plan expenditure and increasing share of non-developmental expenditure in total reduced the revenue resources for developmental expenditure which had to be financed by borrowing. Budgetary trend showed that persistent revenue account gap is the major reason behind the rapid increase in debt. Among the four states, West Bengal had a continuous gap in the revenue account during the 1980s, followed by Kerala, Maharashtra and Tamil Nadu.

The burden of debt, compared in respect to the state level macro indicators shows that among the four states studied, the situation is more severe in Kerala and West Bengal than Maharashtra and Tamil Nadu. Due to the increasing burden of debts of the states, the sustainability of state debt has been judged by deriving the future time profile of debt-SDP ratio, interest payment SDP ratio and interest payment revenue receipts ratio under certain assumptions. Future time profile of all these indicators shows that except Kerala where debt-SDP ratio would rise to 67.44 per cent by 2010-2011, the other three states will experience only a moderate increase.

The broad conclusion the study reaches is that the problem of rising debt burden at the state level has to be viewed as a problem of an expansion of state revenues, which in turn, are closely related to GDP. Higher GDP growth should always reduce the burden of growing public debt at the state level in terms of the additional revenue effort required to cover debt servicing. Sustainability of public debt depends ultimately on the growth of GDP and states' revenue effort.

(b) KERALA

1. Sabu M. George : A Study of the Informal Jewel Loan Market in Kerala, 1994, pp. 93

Thesis Supervisors : P.K. Michael Tharakan and D. Narayana

All India Debt and Investment Survey and data on advances made by Commercial Banks and Co-operative banks against security reveal that the loans against gold (jewel loan) are wide spread in South India and Kerala in particular. Primary data on the credit

markets in Kerala shows that jewel loans are prominent in both formal and informal credit markets. However, certain operational differences can be observed. In the formal sector, the rate of interest and loan amount are regulated. While in the informal sector, the rate of interest remain the same over long years and the loan amount is determined by the interplay that defaults are negligible in movements. It is also observed that defaults are negligible in both jewel loan markets. Therefore, this study attempts an alternative theoretical formulation of the duration of loan, rate of interest and loan amount in the informal jewel loan market.

Since Professional Money Lender (PML) does not have any mechanism to undervalue the collateral, his/her only objective is to maximise the income by advancing 'maximum' loan amount for a given price of gold. This 'maximum' loan amount is called theoretical L/P (the loan amount as a proportion of gold price), which is around half of the gold price. Hence, the rate of interest in the informal jewel loan market is crucially dependent upon the time horizon that the lender has in mind. In nutshell, the duration of loan and rate of interest can be seen as inversely related.

The primary data was collected from PMLs and tested for theoretical values. A comparison of the observed rate of interest with the average duration of loans (default cases reveal the time horizon the lender has in mind) reveal an inverse relationship between them. The regression result of the observed loan amount as a proportion of gold (L/P) exhibits no significant difference between the theoretical and observed L/P. Therefore, this study substantiates that in the informal jewel loan market PML offers half of the gold price as the loan amount and the loan amount moves along with the market price of gold.

2. G. Rambabu : Banking and Regional Development: A Study of Inter-regional Disparities in Banking Development with Special Reference to Kerala, 1995, pp. ix + 136

Thesis Supervisors : T.M. Thomas Isaac and I.S. Gulati

The study examines the interregional disparities in the development of commercial banking in Kerala. A strong positive relationship is observed between the level of economic development and banking development in all the states except Kerala.

While the rapid expansion of bank deposits from the mid seventies has been largely due to exogenous factors, namely, large scale migration to the Gulf countries, the slow rate of growth of advances was due to a low level of bank credit to the primary and secondary sectors. Although the share was the highest, not enough investment has been taking place in crucial segments of the tertiary sector, like infrastructure. Advances for productive activities were found lacking in this sector.

The interregional disparities in banking development in Kerala show that Kerala from the beginning of the present century has been characterised by a widening of the differences between the northern and southern districts. The linkage of the above disparities in the development of banking in the northern and southern parts of Kerala to the differences in the levels of economic development and structural features has been explored. In terms of commercialisation of agriculture, land tenure systems, infrastructure development and urbanisation, South has made more advances than North.

The differences between North and South have tended to widen in the recent decades. While Ernakulam, Quilon, Trivandrum and Kottayam come out as the most advanced in terms of banking development. Idukki (in South Kerala) and the Northern districts show a relatively poorer performance.

The district disparity of per capita deposit is influenced most by most differences in banking density, followed by density of small scale industries and the incidence of migration. The size of agricultural holding is inversely related to the per capita deposits. Similarly, the per capita SDP and density of small scale industries were significantly related to the per capita advances. The cross sectional analysis of inter district disparities in banking development in Kerala underlines the vital relationship that exists between economic growth and banking development.

INDUSTRY

(a) INDIA

1. T. Albin : Diffusion of Computer Numerically Controlled Machine Tools, 1992, pp. 110.

Thesis Supervisors : Sunil Mani and P. Mohanan Pillai

The objective of this study is to analyse the rate of diffusion observed in All India Computer Numerically Controlled Machine Tools (CNCMT) production during the 1980s. The discussion is placed against the back drop of major structural changes in the Machine Tool Industry.

The major dimensions of the industry analysed in this study are (i) the changes in product structure; (ii) changes in the market structure defined in terms of number of size distribution of firms; (iii) the growth performance of machine tool production over the last three decades; and (iv) the extent of import substitution measured in terms of the rate of self sufficiency in the industry.

The entry of sophisticated CNCMTs caused major changes in the production profile, accompanied by an increase in the overall share of the metal cutting machine tools. Despite fresh entry, around 30 per cent of the output share is accounted for by one single public sector limited company, the HMT. In terms of performance, the industry has shown commendable variations in the last three decades. In the first phase the average annual growth rate was about 39 per cent. In the second phase (1965-75) it fell to 7 per cent and in the third state (1975-95) further declined to 4 per cent. The high rate of growth registered in the initial phase narrowed the supply-demand

gap bridged by imports till then. Consequently, the self sufficiency rate, an index of import substitution has been very high in the first two phases, showing signs of stagnation and decline in the last decade.

The study employs two different approaches to measure the rate of diffusion. The first one is for the period 1965 to 1985 where the relative stock of CNCMTs at different time points in quantitative terms are considered and the second one for the period 1984 to 1990 where the relative share of CNCMTs is taken into account. In both cases the diffusion is observed to be steadily increasing. But the trend is low as per the first method during 1965 to 1985. In the second method when the share of CNCMTs is taken, the rate of diffusion shows a remarkable increase. Applying Ray's method it was found that the rate of diffusion is much higher in India than the developed countries of the UK and Germany. This is achieved despite the hurdles created by the government policies.

2. Vijaya Bhaskar M. : Concentration in Indian Manufacturing Industry 1970-1990, 1992, pp. 121

Thesis Supervisors : Sunil Mani and K.K. Subrahmaniam

The study traces the changes in industrial concentration levels for the period 1978-79 to 1990-91 at a disaggregate level for about 10 industries. Further it also examines the impact of the policy changes on the growth of aggregate concentration i.e. the growth of big business houses. Finally the association between market structure and innovativeness during this period of liberalisation is also examined.

The top twenty large business houses had increased their share in the total private corporate sector assets in the 80's after having remained stable throughout the previous decade. Again, the two houses, the Tata and Birlas have maintained their share till the late eighties.

It has been generally assumed that the reduction of barriers to entry would foster greater competition as new firms would enter into market more easily. But the result of this analysis shows otherwise. In fact, concentration has declined marginally and has again increased to a level slightly greater than the initial level of

concentration. A steady decline is seen only in the chemical industries. Other important groups like industrial machinery/machine tools, electrical machinery and transport industries, which had rapid growth in the eighties show a substantial increase in concentration levels. In addition, a study of the nature of firms (by ownership) holding the top 3 ranks reveals that firms belonging to the large business houses are replacing the private firms, while the share of government and private foreign firms remained steady.

Next, the impact of these concentration trends on productivity and innovativeness has been analysed. First, a strong positive correlation between growth and concentration level is observed. Subsequent analysis suggests that this growth has not been due to better factor use, but is a result of use of more factor inputs.

No significant relationship between concentration and R&D intensity is obtained. However, segregation of industry into high and low intensity industries results in a negative association between concentration change and R&D intensity change in the high intensity industries. But a weak positive relationship has been evidenced between concentration on levels and intensity levels in low intensity, industries. These results tend to suggest that high correlation is highly conducive for technical progress.

3. N. Neetha : The Composite Textile Mill Industry: Responses to the Changed Environment, 1994, pp. 118+vii+8

Thesis Supervisors : D. Narayana and Mridul Eapen

After a period of sickness and decay during the sixties and seventies the composite textile mill industry has shown signs of improvement in the 1980's. The focus of the study is on analyzing the changes in the environment which led the mills to respond and the mills' responses to the changed environment. The study of the environment is attempted through an analysis of the trends in demand both domestic and export. The industry responded to this changed environment in terms of changed output, product mix, market and modernisation. Responses of the mills to the changed environment are examined through an analysis of the financial performance of a sample of 59 mills selected from the Bombay Stock Exchange

Directory for the period 1980-1990. The analysis of the trends in demand showed that there were a number of favourable trends in domestic demand and exports during the period under study. While aggregate demand has shown an increasing trend for late 1970s, per capita demand for textiles shows an increase from 1981 onwards. There is a marked shift towards consumption of mixed and blended textiles for cotton textiles, observable across various income categories both in rural as well as urban areas. There is also a sectoral shift in the purchase of textiles in favour of mill made clothes from powerlooms and handlooms. The industry as a whole responded to the changes. The responses of the mills to these changes are identified in terms of changed output composition, product mix, entry into new markets, modernisation and sub contracting. However, the analysis of sample mills showed that the responses were limited to a small section of the industry while the other section was still under the grip of sickness. The characteristic features of these successful mills were identified as production of cotton as well as blends and non cotton clothes, provision to the export market, large scale modernisation and the use of brand names and collaboration with foreign companies and stores.

4. M.R. Anand : Private Corporate Investment in India: Trends, Patterns and Determinants, 1995, pp. iv+127.

Thesis Supervisors : P. Mohanan Pillai and N. Shanta

This study brings out the trends in aggregate investment by the private corporate sector. It focuses on the changes in the pattern and the composition of investment by the private corporate sector during the period 1975 to 1990. In the light of the observed trends and patterns, the study analyzes the determinants of fixed investment.

Though the private corporate sector grew at a higher rate during the post-1975 period, during the eighties there were important compositional changes in its investment pattern. In particular, it is revealed that from around the mid-eighties, the private corporate sector started increasingly to invest in financial assets. One of the important reasons for the relative shift in favour of financial assets could have been the increase in the differential between the returns on financial investments as compared to the returns on fixed investment. In fact, it is revealed that corporate profits as measured

through various profitability ratios declined through the eighties. The increase in the financial investment activity during the eighties also got reflected through an increase in financial incomes and capital gains on sale of assets as opposed to income from sales. This apart, the study notes that the relative increase in the financial investment activity by the private corporate sector could have distributional implications which should be taken note of in policy formulation. The study also shows that the trend in favour of financial assets was not just a passing phase of the late eighties, but has reappeared in the nineties as well.

Given the foregoing pattern and composition of investment, the study briefly examines the determinants of fixed investments and the relationship between fixed investment, financial investments and stock price movements. It is seen that the level of profits was an important determinant of fixed investment by the private corporate sector. However, changes in investment were more responsive to changes in demand side variables such as sales as compared to changes in profits.

The study concludes by highlighting the importance of taking into account the composition of investment while analysing the relationship between different sectors, in particular the public and the private sector. The study also notes that the fact that non financial companies in the private corporate sector not only started to actively invest in financial assets but also derived a large part of their profits from financial investments rather than through sales.

(b) KERALA

1. N.N. Umadevi : Working of Holding Companies in Kerala: The Case of Kerala State Industrial Enterprises Limited, 1992, pp. 151.

Thesis Supervisors : P. Mohanan Pillai and N. Shanta

This study examines the major elements of the strategy of Kerala State Industrial Enterprises (KSIE), the first major experiment towards restructuring the state sector enterprises in Kerala. It also attempts to assess the impact of the strategy on the performance of the subsidiaries, for the period 1973-1990.

In the absence of any scope for mobilisation of resources among subsidiaries, the survival of the group totally depended on support by government and financial institutions. An analysis of physical and financial performance presented a dismal picture. The financing pattern of the enterprises tilted towards debt. It is revealed that the projects for modernisation and technology upgradation are subjected to time and cost overruns.

The acts of omission and commission on the part of labour, management, government and holding company have also contributed to the vulnerability. Consequently, economics of the subsidiary has been largely determined by internal pressure and forces, dynamics of which was supposed to be mediated by the holding company did not succeed.

The holding company did not develop specialisation and expertise in fields like finance, industrial relations, marketing, personnel, trouble shooting and technology upgrading. The company found it difficult to cater to the various needs of a heterogeneous group of subsidiaries manufacturing a broad spectrum of products ranging from electrical goods to pharmaceuticals.

If effective management was the aim of autonomy, that has also failed because the importance of the holding company as the interface between government and subsidiaries got eroded over time and subsidiary companies continued their dependence on the government directly as well as through KSIE.

2. T.G. Arun : Growth and Structural Change in the Manufacturing Industries in Kerala 1976-87: A Comparative Study of Kerala vis-a-vis South Indian States, 1992, pp.157+6

Thesis Supervisor : K.J. Joseph

The focus of this study is on the growth performance and structural changes in the manufacturing industries of Kerala against a comparative background of trends in the other south Indian states.

Analysis of growth rates in value added during the year 1976-77 shows that the manufacturing sectors at all-India level were more dynamic in terms of growth, the recorded growth rates in the south Indian states being lower than that of all-India. During the eighties

the south Indian states recorded a decline in growth rates in contrast to the all-India picture. This trend was more striking in the case of Kerala.

An attempt to analyse the trends in productivity growth revealed the following: (a) Kerala recorded a higher growth rate in terms of all indices of productivity as compared to south India and all India during the study period taken as a whole; (b) labour productivity growth in south Indian states in general and particularly in Kerala showed an improvement during the sub period 1981-87; (c) Capital productivity growth registered a decline in the growth rate during the second sub-period in the case of Kerala as in other south Indian states and all-India; and (d) While the trend in partial productivity growth remained the same across different regions during the period of analysis, total factor productivity growth showed a different pattern.

The analysis of the changes in industrial structure carried out both in terms of the share of different industrial branches in the total value added and economic base study concepts suggested that the degree of diversification achieved was below the historical average in all southern Indian states. Tamilnadu has achieved the highest degree of diversification and Kerala the lowest.

In Kerala the overall industrial structure remained highly concentrated with an industrial mix marked by low shares of engineering and foot loose industries and disproportionately high shares of traditional agro-based and chemical based industries.

The examination of the correlate between growth performance and structural change with the help of shift-share analysis showed that in relatively diversified states regional factors are more important in explaining the growth variations whereas in Kerala, structural factors appear to be more important.

3. Tomy Joseph : Some Recent Trends in Small Scale Industries: A Case Study of Diamond Industry in Kerala, 1995, pp.123

Thesis Supervisors : P. Mohanan Pillai and Raman Mahadevan

The study attempts to explore the growing diamond polishing industry under the facade of the unorganised sector in the state of

Kerala which is often characterised as high-wage cost and labour militant region. It focuses on four main objectives: (1) to examine the locational advantages of the region, (2) to comprehend the nature of entrepreneurship involved, (3) to trace the organisational arrangement, and (4) to understand the labour conditions in the industry.

This industry is found to be concentrated in Trichur district of Kerala. The analysis of the clustering of the units revealed that the industry is informally organised on the basis of social and community ties. It is observed that the entrepreneurship involved therein has been mostly of the diamond 'worker-turned-entrepreneurs'. The enquiry into the organisation of the industry exposed that these units, encompassed by the subcontracting network, facilitated them to remain in the unorganised sector without the support of the state.

The analysis of the structure of the sample firms reveals that there are marked differences between firms with regard to size, productivity and profitability. The vulnerable situation of the smaller firms especially for acquiring raw materials was highlighted. The change in technology increased employment and also led to greater female substitution.

The examination of the workers in the industry and the wage rates in the industry suggest the need for taking caution in applying the high wage cost and labour militancy hypothesis in every industry. A marked difference with regard to unionisation and implementation on the part of union leaders and the government is observed in this case study.

The study also raises some questions regarding industrialisation of a region based on agglomeration and economies of clustering. While autonomous clustering of units based on pooling of skills and local resources utilisation is not ruled out, the growth of such industries in the unprotected, unorganised sector with a foot-loose nature as in the diamond industry is questioned. The government can be a facilitator for the development of such industries but not at the cost of ignoring the need for a healthy workforce.

AGRICULTURE

(a) INDIA

1. Ramakrishna Panigrahi: Patterns of Agricultural Growth in India: A Statewise Analysis, 1995, pp. 91.

Thesis Supervisors : K. Pushpangadan and K.P. Kannan

The study focuses on the issues concerning productivity growth and productivity variations in Indian agriculture.

It updates the earlier studies and at the theoretical level incorporates the Boserupian argument that population growth fosters agricultural growth via technological change, in the estimation of productivity growth. The factors responsible for productivity growth are analysed using the multiple regression analysis. Apart from that the reasons behind the productivity variations across the states are traced out. It also analyses the role of technology diffusion in determining productivity growth.

The major findings of the study are as follows:

1. Growth in productivity is not consistent between 70s and 80s for all the states. There are large scale variations in level and growth of productivity across the states. However, the extent of variation is reduced in the 80s with the diffusion of technology.
2. Growth and fluctuations in agricultural production over the years are explained by the growth and fluctuations in the yield.

This is more pronounced in the 80s. Certain states could not sustain their growth and productivity in the 80s which were the leading states in 70s.

3. Fertiliser was the major determinant of the productivity growth during 60s and 70s. However, its impact on productivity has declined to a large extent in 80s.
4. The role of input package comprising of fertiliser, HYVs and irrigation (FHI), credit and rainfall is significant in determining the productivity growth across the states.
5. Population growth and its density determine the productivity growth significantly and positively.
6. New technology plays a crucial role in determining the level of productivity. However, diffusion of technology explains the productivity growth in the 80s.

(b) **ANDHRA PRADESH**

1. Madhavi S. Reddy : Agricultural Wages in Andhra Pradesh: A District-wise Analysis (1964/65 to 1985/86), 1992, pp. 72+4

Thesis Supervisors : G.N. Rao and T.M. Thomas Isaac

The main objective of this study is to make a detailed investigation into the temporal and regional variations in money and rural wages across the districts of Andhra Pradesh. It portrays an empirical picture of wage structures. Attention is focused on the issue of response of money wages to changes in prices. The study favours the use and prices for analytical purposes since individuals are mostly guided by the price of the commodity that dominates their consumption basket.

The analysis of money and real wages clearly indicates that wages both in real as well as nominal terms, stagnated in the period 1964/65 to 1975/76, with the exception of the increases for a short period around 1965/66. Data being non-available for the years 1976/77 and 1977/78, it is found that in the year 1978/79 wages in both real and money turns have increased across the board for all categories and in all districts.

There were significant differences in the nature of this increase in wages. Districts like West Godavari and Nellore in coastal Andhra Pradesh and Karim Nagar and Nalgonda in Telangana experienced a steep and sustained increase in wages which was in sharp contrast to the experience of the other districts of the same regions.

Differences in wage rates among the various categories also widened, with the hierarchies becoming more extended in the period after 1978/79.

The findings from the study of the time-trends about the inter-regional variations, as well as those differences based on activity and gender, were strengthened by the results of the estimation of wage-price relationship. The results show that the extent to which agricultural labourers are compensated for the increases in price of rice is likely to be influenced by a range of factors, since the strength of the relationship estimated does not seem to conform strictly to expectations based on the levels of agrarian development.

(c) **KERALA**

1. K.N. Leithabhai : Constraints to Productivity Growth in Kerala Agriculture: A Micro Level Study, 1993, pp. 9+135.

Thesis Supervisors : T.M. Thomas Isaac and K. Narayanan Nair

The objectives of this study are to carry out: (i) an appraisal of the overall agricultural performance in Kerala; and (ii) a micro level enquiry into the constraints of agricultural growth. Kalliasseri panchayat in Kannur district is chosen for the case study.

Increase in the total agricultural output in the state is found to be a low annual rate of 2.11 per cent during the period 1962/63 to 1990/91. The level of productivity of individual crops are also relatively low. The micro level study also confirms these trends.

The average yield of paddy and coconut in the study area was lower than the state averages. Productivity of the crops are positively correlated with the size of holding. Yield is seen to be declining with density and density is seen to be higher in small holdings.

The major environmental problems identified in the study area are (i) the drainage (ii) salinity and (iii) siltation. The extension work in improving the cultivation practices should be accompanied by community interventions to solve these problems.

Another constraint is the high level of fragmentation of holdings. Shift away from agriculture making it a subsidiary occupation also acts as a constraint for agricultural growth in the region.

2. Lini R. Nair : Grain Supply in a Chronically Food Deficit State: The Case of Kerala, 1993, pp. v+100.

Thesis Supervisors : D. Narayana and T.M. Thomas
Isaac

The problems of foodgrain supplies to Kerala is probed in this study. It shows that food dependency of the state had worsened during the colonial period and continued unabated in the post-independence period also. The share of domestic rice production in the cereal consumption of the state tended to decline for 48 to 40 per cent during 1969-81 period.

Kerala has adopted a strategy of bridging this gap through guaranteed supplies from the rest of India through state sponsored public distribution system or through free flow of private trade channels.

Changes in the aggregate annual off take from the public distribution system are determined by supply conditions. The monthly allotments to the state are determined by Central and Civil Supplies Department and lifted from the Food Corporation of India Depots by the wholesalers.

Non-availability of data on regional trade flows is a major constraint in analysing the trends in supplies through private trade. Therefore a primary survey is intended in this dissertation, taking Chalai Rice Bazaar in Trivandrum City as a case. From the survey it is understood that the mode of transportation is an important factor determining price.

Difficulties in getting the wagons at the right time push up the price in the market.

The study concludes by examining the long-term trends and the seasonality in the movement of rice prices in Kerala. The open market prices in Trivandrum is found to be moving along with the wholesale prices of other states. Wholesale prices and retail prices also appear to move in random. Seasonality of the wholesale prices is observed to be stronger for the second period (1983-90) compared to the first (1976-82). The standard deviation of retail prices for both periods showed the absence of seasonality. The seasonality of PDS off take is found to be weaker in the second period.

3. M. Thomas Mathew : Economics of Marketing of Coconut in Kerala, 1994, pp. 124

Thesis Supervisor : D. Narayana

This study is undertaken to analyse the market of coconut and its products in different markets of the state to examine (1) the relationship between market arrivals and price of coconut and its products. (2) The degree of concentration.

Trend in the arrivals of coconut indicates that while there is an overall growth in Calicut market, Badagara market recorded a downward trend. A similar trend could also be observed in case of copra in these centres. A decline in the trend in arrivals of copra in Alleppey is also noticed. It is an increasing trend in the case of coconut oil in Cochin market.

Seasonal indices calculated for the arrivals of coconut indicated that the arrivals of coconut both in Calicut and Badagara markets are increasing from January onwards upto April and there after declining steadily. The behaviour of market arrivals of copra is showing a similar trend in both Calicut and Alleppey. The seasonal indices for arrivals of coconut oil indicates that arrivals of coconut oil began to increase from January and continue to increase till April when it reaches a maximum. The seasonal indices for the wholesale prices of coconut in both Calicut and Badagara market shows that the prices are increasing from September and continued to increase till February. The seasonal indices for the whole-sale prices of copra in Calicut, Badagara and Alleppey and that of coconut oil in Cochin are showing a similar pattern of variation.

The prices of coconut oil and other coconut products in different markets of the state are moving in tandem. The long run

relationship between prices of coconut oil and its products in different markets of the states were tested by using co-integration technique. The test suggested that there is a long term equilibrium relationship between the prices of coconut and its products in different markets.

4. Jom Jacob : Staggered Replanting and Income Stabilisation: A Case Study of Small Rubber Holdings in Kerala, 1994, pp. 65 + iv

Thesis Supervisors : D. Narayana and K. Narayanan Nair

For a given long time behaviour of price, there are two responses towards the problem. Adjusting output stream in relation to the cyclicity of price is one response. Another response is staggered replanting in which replanting of the total rubber area under each holding is carried out in parts. In actuality both these responses may overlap. The objective of the study is to examine whether these responses take place among small holdings of rubber in Kerala and if so, to study the behaviour of the corresponding income stream.

In the initial phase, the study examines the macro-level trends in new planting and replanting against the movement of the real price of rubber. It was observed that new planting is positively related to the real price of rubber, but replanting is negatively related to the real price. The empirical analysis led to the conclusion that the practice of postponement of replanting from upward phase of price to downward phase prevail among rubber growers.

The micro-level study is carried out using data from Poonjar South Village, having 547 holdings. The analysis provides very strong support to the macro-level observation regarding the practice of adjusting of replanting in relation to the price movement of rubber. The micro-level study showed that staggered replanting is constrained by the size of holding. Almost all holdings having an area of 1.50 hect. and above had executed staggered replanting and they have a continuous output stream. For these growers, over a thirty year period, the income instability measured in terms of coefficient of variation is only 36 per cent. For holdings having an area below 1.50 hect., since staggered replanting is practically difficult, they have got only one age group of trees. Once replanting is carried out, these growers are deprived of any income from rubber

for a number of years. For a representative holding chosen from this group the income variability in terms of coefficient of variation is 91 per cent, which is a very high value. Variability arising out of output alone is 86 per cent. The study very clearly brought out that price stabilisation alone cannot ensure income stabilisation. For holdings of very small size, income instability was mostly contributed by output variations and the role of price changes was almost negligible.

5. Sobha Varghese : Agricultural Technology: A Study of Innovations and Diffusion in Kerala, 1995, pp.142

Thesis Supervisor : K.P. Kannan

The study attempts to examine the process of generation and diffusion of agricultural innovations and relate it with the performance of agriculture in the State of Kerala. The need for integrating research and extension activities with agricultural policy in a decentralised framework are suggested.

The study shows that sustained agricultural development requires much more than just provision of physical inputs like seeds, fertilisers, and modern implements. An effective explanation of the agricultural development of any region, Kerala in particular, is in terms of inputs and technology as endogenous to the process of development itself. This clearly shows why the same technology or inputs meet with differential successes in different regions. Further, the generation and adoption of technological change should be consistent with the physical endowment of the State. From the discussion, it transpires that depending on the resource endowments, an appropriate technical, organisational, and institutional strategy should be designed for specific regions of the State.

In the diffusion analysis, it is observed that a number of varieties have been released from international, national and zonal research stations. The diffusion model following Hayami, is fitted in the case of Kerala to test the diffusion rate. The results show that the yield of High Yielding Variety (proxy for technology) is getting stabilised in most of the districts. However, the decreasing rate of growth in yields show that the technological potential is getting exhausted in the State.

Looking at the spread effect in terms of area coverage the results are contrasting. More area is allotted to the local varieties which are less yielding than the HYV. This is acute specially in the mundakan (winter) season. A block level analysis reiterates that adoption of HYV does not depend on yield but other factors. In this respect, the risk factor plays a major role as the HYV's are highly prone to vagaries of weather, and hence not location specific and more susceptible to pests and diseases. It is highly dependent on complementary inputs like water and fertilisers.

(d) ORISSA

1. Sudip Kumar Mahapatra: Performance and Prospects of Rice Production in Orissa, 1993, pp. 84.

Thesis Supervisors : K.N. Nair and Chandan Mukherjee

The purpose of the study is to bring out the performance of rice production in Orissa and to assess its prospects of future growth.

Rice output has moved to higher levels from the mid seventies, especially in the late eighties. However, this movement to higher levels has also been accompanied by yield fluctuations. The output fluctuation has been largely contributed by fluctuations in yield. These fluctuations in turn are shaped to a large extent by fluctuations in rainfall. It is also noted that expansion of irrigated area has not contributed much to the stability of output. In the group of districts with higher coverage of irrigated rice, yield rates fluctuations were only marginally lower than the other districts, indicating that high irrigation coverage has played a relatively insignificant role in easing out fluctuations.

However, even with relatively unstable irrigation and higher dependence on rainfall, there has been fairly rapid growth in the spread of high yielding varieties in the recent past. The movement of output and yield to a higher level in years with reasonable weather conditions appears to have been contributed by the diffusion of high yielding varieties. Though the spread of high yielding varieties was more in the irrigated districts initially, some of the rainfed districts are also catching up.

The recent spread of high yielding varieties in the state is mainly due to the release of varieties which are more suitable to the various agro-climatic zones.

The potential for expanding quality of rice production depends on the rate of adoption of high yielding varieties and better realisation of its potential productivity at the farm level. This in turn requires expansion of the irrigation coverage.

2. Mihir Kumar Mahapatra : Changing Agrarian Relations in a Semi-Subsistence Economy: A Case Study of a Village from Orissa, 1995, pp.143

Thesis Supervisors : G.N. Rao and K. Navaneetham

The present study seeks to examine the role of institutional and technical factors in a changing agrarian scenario of an unirrigated village from coastal Orissa. From mid 80s there has been a decline in self cultivation and emergence of land lease market in this village. The lease is essentially sharecropping. This is primarily due to the utilisation of the non-marketable resource (a decline in cost of production) and to assure a steady stream of output over time.

Absence of irrigation due to saline intrusion precludes cultivation in the Rabi season and hence, this compels the farmers of the village to outmigrate in search of employment in non-farm activities. Although their earnings are determined by various factors, yet around 60 to 65% (42% of gross earnings in a year) of their total earnings are saved. This acts as an economic cushioning for them to lease-in land from the rentiers.

The decline in self cultivation is accentuated by a rise in cost of production, particularly, the wage rate dependence on informal credit institutions and rise in other factors of production also increased the cost of production.

In contrast, the tenants and owner tenants try to reduce the cost of production by putting in more efforts, employing family labour and thus, utilising their non-marketable resources. Moreover, absence of alternative employment opportunities in the Kharif season compels them to lease in land despite a rise in cost of production.

The absence of irrigation not only under-utilizes the fixed factors, but also reduces the productivity of factors of production and therefore, the profit margin. Besides, prevalence of low market price of paddy reduces the profit of the small and marginal farmers who cannot wait till the prices rise to reasonable levels.

There is no change in agrarian relations in the irrigated village even though distribution of land is found to be skewed. There are some rentiers and owner-rentiers who have decided to stop self cultivation. But this is due to the employment of family members in non-agricultural activities. Introduction of irrigation also reduced outmigration from the village. Moreover, the dependence on formal credit institutions is comparatively higher in the irrigated village.

(c) WEST BENGAL

1. Rajib Nandi : Some Aspects of Agrarian Change in North Bengal: A Case Study of Two Villages from Naxalbari, 1995, pp.146

Thesis Supervisors : G.N. Rao and Raman Mahadevan

To understand the evolving tenancy arrangement and land holding structure in two villages in the frontier region of Terai, against the backdrop of large scale peasant mobilization and revolts, is one of the major concerns of this study.

The incidence of peasant uprising in the late sixties were high in the villages. Because of the difference in other socio-economic variables, the micro level impact of peasant movement and institutional reforms differ markedly in some respects. But both the villages experienced a shift from sharecropping to self cultivation during the last fifteen years.

In the first village a few cases of fixed rent tenancy are recorded, where the small plots of lands are being leased out. The lessors are basically petty traders. No case of sharecropping is recorded in the whole village. All the cases of sharecropping, recorded in the second village, are the mere continuation of old contracts.

All the major agrarian markets in these two villages are found to be inadequately developed. Since the majority of the landholding communities are of small and middle size category, there is a tendency to cultivate with family labour. Hence the demand for wage labour is rather slack. The non-institutional credit with high interest rate, has come up to fulfil the demand of poor people with high interest rate. The study reveals that the output market is also

inadequately developed. Only the people from the upper class have a better bargaining power in the market.

The markets are not interlinked except in a few cases. The entire agrarian economy in this region is running at a low equilibrium level, where the markets did not develop well for want of an adequate infrastructure.

The residual problems of the rural poor in this area are of conglomerate nature and not of distinct categories like the sharecroppers, small peasants or hired agricultural labourers. The categories are overlapping and inter-penetrating. The study also observes an upward movement among the rural poor during the last fifteen years. However, one does not find a significant success either in terms of redistribution of vested land or recording of bargadari rights.

in milk production are more in the large size group of holdings, (5) analysis of the factors governing the technological change in milk production in Kerala has found that the institutional interventions and investment in infrastructure by breeding policy and strategy, changes in agriculture, economic viability of cattle keeping, increased level of commercialisation are the major factors governing the diffusion and adoption of the technology. (6) It is seen from the micro level study that the enthusiasm towards milk production among farmers has been slowly coming down in recent years.

DIARY FARMING IN KERALA

1. Babu P. Ramesh : Technological Change in Milk Production: An Analysis of Cross-Breeding in Kerala, 1994, pp.xiii+98

Thesis Supervisors : K. Narayanan Nair and K.J. Joseph

The objectives of this study are: (a) to examine the diffusion and adoption of cross-breeding technology and its impact on productivity of milch animals and production of milk (b) to bring out the factors governing this technological change (c) to analyse the distribution of gains from milk production and (d) to investigate the farm level responses to the changes in the economic, technological and institutional environment in which farmers are involved in the production of milk through the utilisation of improved cattle breeding technology.

The approach adopted for the study is one which is eclectic; it incorporates elements contained in the different approaches to the analysis of the diffusion and adoption of agricultural technology.

The main findings of the study are as follows: (1) the diffusion and aggregate adoption of technology has reached a stage of equilibrium by the 1980's (2) the level of adoption was higher in the higher size group of holdings, (3) though the spread of cross breeding technology has contributed to a significant increase in the productivity of milch animals and rapid increase in milk production, in recent years, the trend in the rate of growth in milk production has shown a deceleration, (4) the gains from technological change

of early adopters is relatively smaller and are more dependent on sericulture.

The rate of adoption does not show any definite relation to socio-economic background of adopters. Scientific, cultural and rearing practices adopted are not satisfactory. The fertilizer use is inadequate, the rearing sheds are not maintained and handling of cocoons is totally defective. Thus, the quality of Kerala cocoons is seen to be lower.

Marketing is the major problem faced by sericulturists. Price realised is lower due to the absence of sufficient reeling and marketing. Fluctuations in the prices of cocoons act as an inhibiting factor in the rapid expansion of sericulture.

Significant number of farmers point out crop failure as a major reason for abandoning sericulture. The level of capacity utilisation is very low making sericulture economically unviable.



SERICULTURE

KERALA

1. Shaheena P. : Constraints to diffusion of sericulture technology in Kerala: A Case Study of Palakkad District, 1993, pp. 7+139

Thesis Supervisors : T.M. Thomas Isaac and G.N. Rao

This exercise aims at identifying the major obstacles in the diffusion of sericulture technology in Kerala. The analysis is centred around the characteristics of adopters and their influence on adoption behaviour, a comparison of the projected and actual returns from sericulture and the efficiency of the services of the retention agencies. As such, the emphasis is on cost of cultivation and rearing.

A caste based classification shows that 59 per cent of the adopters belong to backward castes who constitute numerically the largest social group in the district. Majority of adopters are medium farmers with more than 2.50 acres of land. Proportion of paddy lands possessed by farm adoption increases as the land size goes up. Mulberry has replaced paddy and pulses in 48 per cent of the cases. Only 20 per cent of the farmers used waste lands for mulberry cultivation. However, sericulture is a subsidiary activity for most of the farmers; only 17 per cent stated it to be their primary source of income.

The adopters are classified into two groups, namely, early adopters (those who had entered sericulture before active government intervention in 1987-88) and late adopters. The average size of land

Factors of class are related to forest dependence in complex, and highly situation-specific ways. While the poor in this area have a greater dependence on forest resources for domestic use, it was observed that dependence on forest produce as a source of income did not vary across wealth based categories in any significant manner. The patterns of forest usage, and consequently forest management priorities, differed significantly by gender. Income from common pool resources, such as forests, had a special significance for the resource poor.

The presence of inequities in such community based initiatives is indicated. Forest management priorities and practices are determined by the most powerful section in the social hierarchy, whereas the costs of the decision to begin protection are borne primarily by other subgroups, especially by women and other marginalised sections. Issues of equity are closely linked to those of the efficiency and the sustainability of the forest management system.

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FORESTRY

GUJARAT

1. Chandrika Sharma : Community Initiatives in Forest Management: Issues of Class and Gender--A Case Study of Panchmahals District, Gujarat, 1995, pp.135 + xiii

Thesis Supervisor : John Kurien

The study focuses on the spontaneous emergence of individual and community based efforts towards forest protection and management in the Santrampur taluk of Panchmahals district, Gujarat. It attempts to understand the dynamics behind the emergence of community based initiatives in forest management, as well as the reasons behind the different forms taken by these initiatives. It explores the manner in which factors of class and gender mould the relationship of users with forest resources. The equity implications of the forest management systems that have been evolved, are discussed. The links between issues of equity and the sustainability and efficiency of the institutional arrangements evolved, are also examined.

The study suggests that certain pre-existing features of the local community structure, as well as its interface with the forest resource base, have facilitated environmental action at the collective level. It also indicates that the nature and characteristics of the resource, and the manner in which traditional user rights have evolved over time, play an important role in determining the form taken by these initiatives.



INFRASTRUCTURE

KERALA

1. Mariamma Sanu George : Performance of the Public Road Transport System: A Case Study of KSRTC, 1993, pp.176.

Thesis Supervisors : Mridul Eapen and P. Mohanan Pillai

An attempt is made in this study to examine the economic performance of the Kerala State Road Transport Corporation (KSRTC) during the period 1970-71 to 1986-87. The major objective of the study is to evaluate the performance in terms of partial and total factor productivity. Other physical and financial indicators are also used. The regional or zonal variations are studied. The analysis is based on secondary sources of data.

The Corporation could run on profit only during the first two years of its formation (1965-66 and 1966-67). Since then KSRTC has been making losses. The accumulated loss indicates unsatisfactory performance. Total factor productivity growth is estimated using three commonly used measures, namely Kendrick, Solow and Translog. All these measures demonstrate discouraging trends for the period under study.

The data on average number of break-downs per 10,000 effective kilometres and accidents per 1,00,000 effective kilometres show a figure higher than the all-India average. An analysis of the staff-bus ratio shows an increasing trend overtime.

On the financial side, the data show a gap between revenue and cost. Higher cost and low revenue have resulted in a declining

trend in profitability. The principal factors responsible for increase in cost are personnel, fuel, lubricant and material costs. The increase in staff cost is much higher than that for other inputs.

The reasons for the poor performance of KSRTC are decline in fleet utilisation, and low quality of service. The poor quality of service is reflected in the frequency of break-downs and accidents. Without achieving a reasonable level in terms of physical performance, the Corporation cannot attain financial viability. This could be done by increasing fleet utilisation replacing overaged buses thereby lowering operating costs and rate of breakdowns. Staffing pattern should also be rationalised.

affirmation. Regarding the factor and fuel substitution elasticities the major findings are that capital-energy and energy-materials are substitutes for one another. However, the substitution elasticities are lower in the eighties than the seventies. This implies that the energy demand in the sector is becoming less flexible over time.

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The inter-fuel substitution elasticities within the energy sub-sector were found to be high, implying that energy types in the sector were strong substitutes to one another. The technological change in the sub-sector was also found to be in the right direction, that is, expensive fuel saving.

ENERGY

1. Supriya Sathyanarayana : Energy Management in the Indian Manufacturing Sector: 1970-1990, 1995, pp. 136

Thesis Supervisors : K. Pushpangadan and N. Shanta

This study aims at providing an energy profile of the issues regarding energy management in the Indian manufacturing sector over the time period 1970-90. It was seen that the output-energy ratio in the Indian manufacturing sector was falling after 1982. The study set out to examine the causes behind this phenomenon. Specifically three hypotheses were empirically tested, namely:

- (1) Whether the manufacturing sector has undergone a structural shift in favour of more energy utilising industries?
- (2) What was the nature of technological change in the sector?
- (3) Were the factor and fuel substitution elasticities in the sector low?

The empirical testing revealed that the sector underwent no structural change towards more energy utilising industries, although the more energy utilising industries were found to be mainly responsible for the fall in the output-energy ratio in the sector as a whole after 1982.

Technological change was found to be energy using, implying that over time the technological change causes a hike in the energy demand by the sector. This confirmed the second hypothesis in

It is found that the land use pattern of the region has shifted towards non-agricultural activities. Reclamation of wet lands continues unabated for new settlements as well as crop shifts. The element of conflicts amongst different institutional interventions at all levels of resource base/use appear to further aggravate the resource base depletion.

2. Narayanan, N.C. : Sustainable Landuse for Agriculture: A Local Level Approach with Reference to Paddy Cultivation in Kerala, 1994, pp. 151

Thesis Supervisors : K.P. Kannan and John Kurien

The study investigated the problem of conversion of paddy lands to other uses in the valleys of the midland and highland terrains in Kerala from an ecological point of view. In the midland and moderate highland terrains, paddy is traditionally being cultivated in the wetland ecosystem of valley landforms which are the lower most geomorphic units in such an undulating topography. In recent times, due to a host of reasons - economic and institutional - these valleys are being filled up and the ground raised for a variety of other uses both agricultural and non-agricultural. These conversions make the valleys into drylands. The larger concern of environmental sustainability of the system demands the conservation of the essential nature of these valleys as wetland eco-system.

The approach is interdisciplinary and the focus is on the local level. The two aspects of landuse are the physical and socio-economic realities.

The socio-economic and institutional factors responsible for the changes at the local level are enquired into with the help of a field survey. Farmer-respondents were selected using a purposive sampling methodology from the particular physiographic units identified earlier. The macro picture of problems identified from the literature and the specificities of the problems of paddy cultivation in the study area were compared and discussed in an illustrative fashion. The earlier programmes to boost paddy production are reviewed to evaluate their performance and look for a new strategy of intervention.

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ENVIRONMENTAL ISSUES

(a) KERALA

1. Rose Miranda Fabiola Joseph: Impact of Land Use Dynamics on the Resource Base: A Micro Level Study, 1992, pp. iii+140

Thesis Supervisors : K.P. Kannan and K. Pushpangadan

This study aims to understand the composition and pattern of changes in resource base/use of a region taking Attupra panchayat in Kerala as the unit of analysis.

The study examines the resource base/use in terms of its rate and changes and its effects on water resources of the study area. It looked into the spatial distribution of degraded lands and identifies the underlying causes of degradation, examines the structural reasons for resource depletion, assesses the mode and extent of institutional interventions in the resource use and explores the ways in which the emerging cartographic technique of Resource Mapping can successfully be employed for evolving a sustainable strategy.

The study uses Resource Mapping as a method for analysing changes in the resource base. Selection of the study area itself was primarily based on the availability of resource maps prepared by the PRMP of Centre for Earth Science Studies, Thiruvananthapuram. Informal interviews with the local people conducted to collect qualitative information on impact of people's participation and institutional interventions in the dynamics of resource base/use forms another source of data.

(b) ORISSA

1. Lopamudra Patnaik : Conservation of Wetlands : An Economic Assessment of Lake Chilka (Orissa), 1992, pp. iv+158

Thesis Supervisors : K.P. Kannan and John Kurien

The study focuses on an economic assessment of the benefits from conservation of Chilka lake. It attempts an indirect assessment of the consequences of degradation of the lake on socio-economic development of the region. To the extent that the lake is looked at in its totality as an eco-system, the ecological dimension is integrated into the approach.

It is found that the Lake provides a wide range of benefits. These benefits were assessed as functions, uses and attributes particular to the method, emphasising the importance of recognising the ecological basis of the benefits that are derived from natural ecosystems. The Lake's function as an outlet for the flood waters of Mahanadi, its use as a source of brackish water fisheries and its attributes making it a tourist spot seem to have significant implications from the macro economic perspectives. The study makes an effort to incorporate non-economic factors such as biomass export function, groundwater recharge/discharge, nutrient retention etc. into the economic assessment of the benefits from the Lake.

Given the multi-functional nature of the Lake and its location in a structurally backward economy, conservation for a sustained flow of benefits is seen to be extremely significant. The degradation of the Lake is likely to have an adverse impact on income, output, employment, consumption and health of people.

The attempt to commercialise the Lake for intense short term exploitation through prawn fishing appear to be detrimental to a sustained flow of benefits from the Lake. The state has been adopting a myopic approach towards appropriation of the Lake's resources while not caring to develop an integrated resource management strategy for sustaining the intrinsic benefits of this eco-system.

GENDER ISSUES

(a) KERALA

1. Rachel Mini Simon : Women, Work and Development: Issues in Female Labour force Participation in Kerala, 1992, pp. 140.

Thesis Supervisors : B.G. Kumar and Irudaya Rajan

This study examines the incidents of falling rates of labour force participation in Kerala during 1961-81.

With growing recognition in recent years of the broader implications of direct participation in productive processes outside the boundaries of home, particularly in developing countries, the trends seen would be cause for concern. This has special significance in the case of a society like Kerala whose unique historical background (with its emphasis on progressive attitude to women) has contributed to exemplary historical and contemporary achievements.

The study, on one hand focused on changes in the three key variables that determine the level of labour force participation: workers, unemployed and total population on a deeper level. It explores the various underlying demographic, economic and social processes that were responsible for the observed levels of participation. At the conceptual level the study probes into the dynamics of female labour force activity in a rapidly developing society like Kerala.

Secondary estimates of labour force participation, especially the decennial census forms the most important source of information for the study.

From the results that emerge in the course of the analysis, it is shown that the dramatic increase in population in the age group 15-59 was primarily responsible for the depression of the participation rates in the period of study.

The understanding of socio-cultural and economic interactions provides insight into the impact of the development process on female labour force activity. It is found that while a wide range of socio-economic changes have encouraged the entry of women into the workforce, structural factors brought about by the nature of growth have imposed severe limits on the continued participation of women at a high level.

2. Saritha Varma : A Lineage System in Transition: Patterns, Processes and Systemic Adjustments - Case Studies from Kshatriya Matriliney. 1993, pp. 165.

Thesis Supervisors : P.K. Michael Tharakan and P. Mohanan Pillai

Understanding structural and functional patterns of matrilineal processes and their responses to changes in the broader socio-economic realm of the society is one of the major objectives of the study. Specific emphasis is given to an understanding of the imprints of transition from the female line of devolution to a bilateral one on the gender status.

In the Kshatriya community on which the study is made, the response to reforms in the matrilineal system in general appear to be lagging behind. In the community, a pressure group pleading for matrilineal legislations was practically absent in contrast to other castes such as Nairs.

A diachronic analysis of the class dynamics in three cases observed, namely, Poonjar, Perumpadappu and Venganad reveals that Marumakkathayam among Kshatriyas of Kerala is not a unifeatural lineage system, but a cluster of distinguishable features. While some of these different features are in various ways related to resource

control, production distribution and consumption, others are a function of rituals, filiations and social identities with minimal economic ramifications.

It is found that the Poonjar Koyikkal Clan partially united in production, and consumption and totally so in rituals and affiliations. In the case of Perumpadappu clan, the economic structure of the Tharavad is retained mainly as a distribution system. Here the clan unity is least in production. With regard to Venganad clan the transition seems to have occurred not in the recent past and the very kinship seems to have been reduced to a cultural map of identities.

In all the three clans, Marumakkathayam could not be totally ignored because it continues to provide the matrix within which material, social and ritual resources are preserved and multiplied. Moreover, the concentration inherent or implied in impartibility concept of marumakkathayam is found useful provided that the strategy of common production is accepted.

Another noteworthy feature is the gender status of female member of the clans. They are in a comparatively better position due to their proportionate accessibility to the clans resources. However, an equal or superior gender status for women on which is theorised an ideal matriliney does not exit, perhaps as in the past.

3. G.L. Deepa : Industrial Crisis and Women Workers: A Study of Cashew Processing Industry in Kerala, 1993, pp. 89

Thesis Supervisor : K.J. Joseph

The 'female marginalisation' thesis argues that women are increasingly confined either to the household or to inferior jobs. This is manifested in various forms like exclusion of women from productive employment and concentration of female employment in lower segments of the labour market, in low status and low paid jobs in the occupational hierarchy. Women workers are largely agricultural labourers, workers in traditional and household industries, social and personal services workers.

Though women are engaged in traditional and low-skilled jobs, marked by considerable wage discrimination and unsatisfactory

work conditions, our understanding of the ways in which women workers adapt to these crisis conditions and the survival strategies they adopt still remain rudimentary. It is precisely this question that the present study seeks to understand by analysing the responses of women workers in the cashew processing industry in Kerala.

Kerala's industrial sector is characterised by traditional industries like cashew and coir processing, most of which are in crisis. A large proportion of women are employed in these traditional agro-based industries, their jobs falling almost entirely in the unorganised sector and rarely protected by labour legislations. The cashew industry, though by definition falls within the organised sector, is no better than an unorganised industry, given the nature of work and working conditions.

This industry, which is export oriented and labour intensive has since the last decade, reported a drastic fall in the employment of workers despite marked increases in output and exports following the crisis of seventies. Women workers adapt to this change by using survival strategies such as (i) engaging in other kinds of manual labour; (ii) adjusting consumption; (iii) borrowings; and (iv) depending on other family members' income. The alternative opportunities available are brick making, construction work, petty trade or agriculture. Some of them find employment as household servants. Cutting down expenditure on food is done by changing the items of consumption to cheaper cereals and other substitutes and by reducing the number of meals.

(b) TAMIL NADU

1. A.M. Ameer Batcha : Women's Contribution to the Household Economy of the Poor : A Case Study of Vadakarai Village, Tamilnadu. 1992, pp.viii+139

Thesis Supervisors : G.N. Rao and T.K. Sundari

The study attempts to assess the significance of women's economic contribution to the household economy across different income levels, by testing the hypothesis that the significance of women's economic contribution is inversely related to the economic status of the household.

Assuming that it is the household economic status which principally determined women's contribution to the household economy, the study examined how this was qualified by factors such as caste status and household responsibilities including child bearing and rearing. For this purpose households were divided into three strata denoting the bottom (survival), the middle (security) and the upper (growth) layers of the poor households.

A clear inverse relationship was found to exist between the significance of female income (measured in terms of the proportion of female to male income) and the family income. This indicated that the importance of female's contribution increases as the household becomes progressively poor. The female workers of the poorest households generated higher income vis-a-vis male members. The significance of female income was found to be extremely crucial in the purchase of foodgrains.

The verification of health status among the workers indicated that the workers in the survival category of poorer households suffer far more severely than the growth category.

The first measure of significance (significance in terms of to make income) shows a curve which converses to the origin indicating that the significance of female income is inversely related to the male income. The second measure (number of hours of work devoted to income generating activities) shows a U shaped curve when plotted against increasing male income.

Analysis on the basis of access to land indicated that the female workers who do not own land had to work for longer hours. Analysis on the basis of marital status showed that women workers who are divorced/separated had to work for longer hours for survival.

costs, handling and handling costs, interest charges, cost of carrying buffer stocks and personnel and administrative overheads have also been examined. Consumer subsidy for rice and wheat for different schemes, and for different regions forms another aspect of the study.

The study looks into the behaviour of indicators of financial performance of FCI using ratio of trend analyses. The financial analysis indicate poor performance of FCI, on the whole. It is observed that the operational performance is also not quite satisfactory. Under these circumstances, it could be surmised that the present operational practices and financial management are thoroughly inadequate to equip FCI to efficiently and effectively undertake the major tasks the organisation is conceived to perform. This is particularly true of the financial aspect since both the procurement price as well as issue price continue to be administered. Coming to the operational performance of the FCI, improvements are necessary and possible within the existing framework.

(b) KERALA

1. Bindu R. : Educational Characteristics of Emigrants : A Study on Investment in Human Resources Development, 1992, pp. ii+116

Thesis Supervisors : P. K. Michael Tharakan and Chinnappan Gasper

The thrust of the study is on the changing characteristics of migrant workers in Kerala with a special reference to their educational profile and skill composition. The study is based on a primary survey conducted in Koipram Panchayat in Pathanamthitta District and Elakamon Panchayat in Thiruvananthapuram District.

The main objective of the study are: (i) to understand the changing emigration pattern; (ii) to examine whether the skill composition and the educational qualification of the emigrants had undergone any specific qualitative change; and (iii) to observe whether the opening of international labour markets and the job experience of the emigrants outside India had influenced the pattern of private investment in education.

It is found that the pattern of emigration in these two panchayats has not undergone any significant change when compared

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SOCIAL SECTOR

(a) INDIA

1. L. Unnikrishnan : Food Corporation of India : A Critical Appraisal of Operations and Financial Performance, 1995, pp. 166

Thesis Supervisors : P.S. George and P.R. Gopinathan Nair

The major objectives of the study are, to understand the nature and costs of various operations of the Food Corporation of India, to aggregate the operational costs and other items included in the computation of food subsidy and to analyse region-wise, commodity-wise and scheme-wise subsidy and enquire into the financial performance of FCI, based on ratios and trends. This study apart from relying on available published secondary materials, bases itself on a set of disaggregated unpublished information, collected from FCI.

The purchase operation of FCI and the operating cost of purchase or purchase incidentals, for wheat, rice and paddy are analysed. Comparison of the performance of FCI and State Procurement agencies is made as a means to evaluate the performance of FCI over the period from 1988-89 to 1993-94.

The study discusses distribution and distribution costs in detail. Sales of commodities, regionwise, scheme-wise etc. has been analysed. Transport and transport cost for rail and road modes of transport in particular, commoditywise stock, storage and storage

to an early study during 1979. The educational characteristics and skill composition also did not show any considerable deviation from earlier patterns. This would mean that the emigrants from Koipram panchayat are educated and qualified persons whereas those from Elakamon continue to be relatively less educated as well as unskilled.

The educational expenditure of the emigrants is found to be higher than that of non-emigrants in both panchayats, despite the fact that within the panchayats, the educational characteristics of the dependents of emigrants and non-emigrants were just the same.

2. Rajeev Sadanandan : The Role of Government in the Development of the Health Care System in Kerala, 1993, pp.146

Thesis Supervisors : Pulapre Balakrishnan and I.S.Gulati

The study attempts to analyse the influence of government expenditure on the development of the health care system in Kerala.

Upto late seventies, Kerala spent a larger share of its budget on health compared to other states. Per capita expenditure on health in Kerala is also higher. These differences, however, have declined in the eighties.

Against the backdrop of this declining trend, the study looks into the disaggregation of budget allocations. The share of pay and allowances in the total expenditure has been increasing steadily while the trends in all other expenditure categories have been either stagnant or downwards.

The composition of personnel shows that the maximum growth has occurred in the segment of teachers followed by officers. Although the number of officers has grown, the number of persons supervised by them has come down, indicating overmanning.

Although the share of expenditure on personnel in the total budget has increased, there is no corresponding increase in productivity reflecting an absence of any increase in the efficiency of the health care system.

Analysis of the opportunity of revenue expenditure between various allopathic institutions shows that the share of medical establishment has tended to come down and that of hospitals and

dispensaries remained steady. However, a larger share is being spent to keep up the medical education system to provide highly specialised medical care in the largest cities of the state. The desirability of this subsidy is open to question.

Though it is difficult to ascertain the benefits the poor get from different expenditure categories, the decline in the provision of medicine and diet, diagnostic services and inpatient care suggests that the poor had not been favoured.

3. Bhanumathy L. : Some Economic Aspects of Drug Utilisation: A Study based on In-patient Case Records at the Medical College Hospital, Thiruvananthapuram, 1993, pp.169

Thesis Supervisors : C.R. Soman and K.P. Kannan

This study aims to carry out a descriptive, retrospective illustration of the processes of prescription, procurement and distribution of drugs at the Medical College Hospital, Thiruvananthapuram. Some major diseases treated by institutionalisation at the hospital were selected for the study.

Twenty drugs that are most commonly used in the hospital in the treatment for the selected diseases are identified and tentative estimates for the annual requirement of these drugs prepared based on a review of in-patient case records.

The system of procurement of drugs is reviewed from case records. The method used to detect inappropriateness, if any, in the procurement and distribution of drugs is to review the pharmacy purchases, pharmacy issues and drug distribution to the in-patient department. Pharmacy purchases are determined from the invoice/delivery registers and stock registers. This information although a necessary document for general financial control is found to be incomplete.

The purchase data are manually recorded in terms of number of units of drugs purchased and amount is paid for such purchases at a specific rate per unit. Pharmacy issues to designated areas such as out-patient dispensary, wards, operating theatres, causality department, blood bank and laboratories are recorded in distribution registers and the indent books of respective ward/department.

Incompleteness of information, lack of specified documentation system, especially with respect to purchases, and the absence of a prospective data-recording system are some of the perceived limitations. The applicability of these methods is partially hindered by lack of computerisation of medical records and pharmacy files.

Available data on purchases and clinical medication charts are used in the study to develop significant information on drug use patterns. It is suggested to form the basis for planning drug purchasing decisions for the efficient use of limited resources.

4. G. Murugan : Pricing Public Utilities: A Study of Drinking Water, 1993, pp. 112.

Thesis Supervisor : K. Pushpangadan

The major objective of this study is to evolve a methodology for determining the rate structure with cross subsidy for water utilities based on an analysis of the Trivandrum Water Supply Systems (TWSS).

Separate cost functions for two plants installed at different periods show that the oldest plant established in 1933 is cheaper if produced at capacity output for calculation of prices and break even if the aggregate cost function is used. While plant wise cost functions are linear, the aggregate function turns out to be an exponential function.

The effects of socio-economic factors and the household composition on water demand is examined using sample data collected. The effect of household size on consumption is studied by constructing an adult equivalent scale. The results show that the equivalent scale has unity for adult female, 0.47 for adult male, 0.11 for children between the age group 5-15 and 0.06 for the age group below 5.

Regression exercises to assess the socio-economic factors affecting the water demand after eliminating household effect shows that education, floor area, number of taps per floor area, frequency of house cleaning consumer durables and number of flush for bath room influence the per capita consumption of water.

The study develops a specific model for pricing for water supply system, suitable to Kerala. The price structure is based on the two part tariff system which satisfy the condition that

price = average cost of production = average fixed cost component + its variable cost.

In the first part, a dynamic model of recoupment of fixed cost during the life span of the project is attempted, so that there is no loss for government or consumers. In the second part, the pricing of the variable cost and break even is examined with two alternative models. The second model incorporates cross subsidy which is easy to operationalism.

The success of any pricing policy depends on the accountability of water consumed at regular intervals. It is also discovered that the efficiency of TWSS can be improved in several ways. Part I should be operated at the optimum capacity level. The leakages in plant II should be rectified for maximum capacity use.

5. K.K. Hari Kurup : Pricing of Health Services: A Case Study of Sree Chitra Thirunal Hospital, 1994, pp. vi + 74

Thesis Supervisor : K. Pushpangadan

Taking Sree Chitra Tirunal Hospital, Trivandrum as a case for study, this dissertation looks at the possibility of arriving at a pricing solution so as to overcome resource constraints.

The demand for health services could not be estimated in the case discussed. Hence, the study attempted a cost based approach to pricing. Emphasis was laid on formulating a pricing rule which compensates for the costs involved in the provision of service rather than estimate the willingness to pay by the consumers. The study therefore sought to estimate a cost function for the provision of hospital services. Since hospitals are multiproduct institutions, the cost analysis was carried out in a multi-product framework. The steps involved in the estimation of the cost function are:

1. The specification of a theoretical model based on a translog cost function.
2. An empirical examination based on the theoretical model.

The multi product framework helped investigate short-run hospital characteristics like economies of scope, economies of scale and pay scale economies. The empirical estimation showed the presence of economies of scope, indicating cost reductions from the joint provision of services. The theoretical assumption of constant

returns to scale was found to be empirically valid. The estimates of multiproduct cost measures were found useful in the selection of an appropriate pricing strategy.

The pricing solution obtained with the estimated cost function is dependent on the assumption of multi product hospital services. The optimal multi-product pricing procedure is used for the pricing solution. The estimated prices, when compared with the existing tariffs, revealed that the present system was not based on considerations of economic efficiency. The current prices in the medical department were higher than efficient prices estimated. In the surgical department the existing rates were below the efficient prices estimated. The question of equity was accommodated by incorporating a scaling mechanism to allow for cross subsidisation.

6. Sara Abraham : Diffusion of Medical Technology:
The Case of Diagnostic Imaging in
Kerala 1995, pp. 123

Thesis Supervisor : K.P. Kannan

The study examines the diffusion of medical technology in Kerala with special reference to diagnostic imaging. It seeks to analyse Kerala's health services in the context of its social development; to examine the pattern of diffusion of diagnostic services; to reason out the socio-economic factors that influence the diffusion process; and to suggest policy measures, if any. The diffusion of diagnostic imaging is analysed under two broad heads, namely, the supply of and the demand for these services.

Though the factors influencing diffusion can be divided into supply and demand factors for analytical convenience, diffusion of medical technology is a complex and dynamic process. Certain broad conclusions can however, be reached regarding diffusion of diagnostic imaging in Kerala. One, the medical professional plays a significant role in the diffusion of diagnostic imaging, influencing both the supply of and demand for medical technology. Two, given the peculiar nature of demand for health services, supply factors exert a greater influence on the diffusion process. Three, unlike other goods and services, demand for health services is income-inelastic. Four, non-economic factors like awareness, availability of services, disease profile, exert a greater influence on the demand for health services. Gender was also found to be an important factor influencing the demand for expensive diagnostic techniques.

POPULATION AND LABOUR

(a) ANDHRA PRADESH

1. L. Sudhakar Reddy : Patterns of Urbanisation in Andhra Pradesh 1961-91, 1994, pp. 153.

Thesis Supervisors : G.N. Rao and S. Irudaya Rajan

This study examines the patterns of urbanisation in Andhra Pradesh at the regional, sub-regional and district levels.

Urbanisation in Andhra Pradesh has been increasing since 1930s. During the sixties a large number of towns were declassified and new towns emerged in most parts of the state. The seventies also experienced a rapid urban growth in all size classes of town. This trend continued in the 1980s but with a slackening tempo.

Natural growth rate of population was the major source of urban growth. Net migration contributed only 40 per cent of urban growth and the rest was contributed by the net of new and declassified towns.

However, at the regional levels different patterns are observed. These include the stable but slow urban growth or urbanisation in Central Coastal Andhra; stable and rapid growth of urbanisation in Telangana-II and South Coastal Andhra; heavy concentration in a single city with rapid urbanisation in North Coastal Andhra and Telangana-I sub regions. During the 60s except the Central Coastal Andhra all other sub-regions had unstable patterns and during seventies and eighties these unstable patterns have disappeared giving place to stable-cum-rapid growth of urbanisation.

The presence of a dual process in rural areas whereby the surplus gets concentrated in the hands of a few and agricultural labourers are flushed out to non-agricultural activities has been the main factor behind the rapid urbanisation in the state. Concentration of agricultural and industrial development in a few regions leading to population concentration is another contributory factor.

(b) KERALA

1. S. Mohanan Pillai : Social Security Schemes for Workers in the Unorganised Sector: A Case Study of Headload Workers Welfare Scheme in Kerala, 1992, pp. iii+168

Thesis Supervisors : P. Nandakumar and Mridul Eapen

Kerala government has initiated certain measures to provide social security and welfare to the workers in the unorganised sectors through constituting welfare funds administered by tripartite Welfare Boards. This study analyses the effectiveness and impact of these institutions through a case study of Headload Workers Welfare Scheme.

The Scheme was instituted in 1983 to serve the objectives of regulating employment and providing social security to the unattached segment of head load workers. The source of funds for financing various provisions under the scheme is the levies imposed on the workers (10 per cent of the wages) and on employers (25 per cent) with no contribution to the state government.

The Board's intervention in the labour market brought in a drastic qualitative improvement in the employment, wages and working conditions. The process of regulation of employment created a permanent employment for the unattached headload workers, namely the local committee. The scheme also brought in regularity in employment and stability in the wage earning to the workers.

An attempt was made to analyse the overall economic impact of the scheme focusing on employment, saving and re-distributive effects. On the employment front, the impact appeared to be more

in the nature of re-allocation of employment between workers under the scheme and non-scheme workers due to the employers' response to additional 'adjustment cost' following the introduction of the scheme. On the saving front, the scheme had a direct positive impact on the average, the proportion of saving which includes the monthly levy contribution by the worker and his other personal savings account for about 14 per cent of the monthly wages. The scheme also provides enough scope for re-distribution of resources when levies collected from the employers is distributed to workers in the form of non-wage financial assistance which, on average comes to 30 per cent of the annual wages.

The operation of the welfare scheme had thus been fairly successful without involving heavy Government financing. The Government essentially acted as a catalyst by financing social security through private means and workers' contribution.

(c) UTTAR PRADESH

1. Sharad Ranjan : Rural Non-farm Employment in Uttar Pradesh, 1971-1991: A Regional Analysis, 1994, pp.91

Thesis Supervisors : Mridul Eapen and Chandan Mukherjee

This study attempts to analyse the trends in non-agricultural employment and its correlates in Uttar Pradesh focusing on two regions, East and West.

It is noted that the proportion of rural male non-agricultural workers was lower in East UP in 1971 but due to consistent rise in its proportion, it exceeded the level in Western UP by 1991: 16.9 per cent of male rural workers in Eastern UP were engaged in non-agricultural activities in 1991. On the other hand, in the Western region the proportion has remained more or less stable between 1971 and 1991, at 15.3 per cent in 1971 and 16.3 per cent in 1991. In terms of the sectoral composition, the proportion of employment has declined in the secondary sector (however within this sector non-household industry has gained importance) with a corresponding increase in tertiary sector employment, specifically trade and commerce and other services. Most of the districts were found to follow the regional pattern both in East and West UP.

In the analysis on determinants of the shift, all the variables employed that characterised “prosperity”, “distress” and “urbanization” explained diversification at the regional level. These variables did not appear always significant at the district level despite an increase in their levels. This could have happened because of narrowing of inter-district variations. On the other hand, in Eastern UP despite a low level of irrigated area in 1991 (although its level had increased since the seventies), the association with non-agricultural employment is significant since the coefficient of variation between districts had increased.

While in West UP non-agricultural employment is largely generated out of progress in development of agriculture and more recently urbanisation, the case of East UP seemed to be a mixed one - distress factors such as land man ratio, and development factors such as irrigation, urbanization are significantly associated with non-agricultural employment.

TRIBAL ECONOMY

(a) KERALA

1. Piush Antony : The Food Economy of Tribals in Kerala: A Comparative Study of Kurichiyar and Paniyar, 1995, pp.139

Thesis Supervisors : P.K.Michael Tharakan and P.S.George

This study, taking food economy as the cardinal referent, attempts to understand the existence of inter-group and intra-group differences among two tribal communities in Kerala namely, Kurichiyar and Paniyar and its implications in terms of their entitlements, capabilities and responsiveness to state policies.

It is found that in terms of initial endowments like income, occupation, education and literacy levels, habitation, housing, land-ownership etc. there is a sharp divergence between Kurichiyar and Paniyar with the latter showing a relatively dismal picture when compared to the former. These inter-group differences are so prominent as to warrant our attention. The same holds true for intra-group differences also. Decreasing dependency on and increasing market subjection have worsened the condition of the more marginalised segments within these vulnerable communities. One telling example is the case of feminisation of poverty. This study shows that the burden of poverty in most cases is shifted on to the women folk.

Statistical estimation made to assess the implications of inter group and intra-group differences with respect to their responsiveness to state initiatives, by clubbing together the indicators like land holding, income, occupational status, level of education etc. and regressed against the aggregate state benefits, show that all these indicators have a singularly significant influence in moulding their responsiveness. This supports the argument that initial endowment of a community largely determines its responsiveness to state initiatives.

Most of the state programmes are designed in such a way as to benefit landed households who are very few among vulnerable communities. This bias in state policy adversely affects the opportunities of a more marginalised group like Paniyar who are mostly agricultural labourers than Kurichiyar who are essentially a land holding community. The policy implication of this observation is that the state should plan welfare programmes by keeping in view the specific needs of a particular community. In the case of specific groups within a particular community also this principle is to be followed. This fine targeting, focusing on the specific needs of group is required in the case of tribal women also.

(b) **ORISSA**

1. Srijit Mishra : Exchange Relations in an Agrarian Set-up: Case Study of a Tribal Village from Orissa, 1993, pp. 9+131.

Thesis Supervisors : G.N. Rao and Sakti Padhi

The study attempts to explain the emergence and persistence of particular kinds of exchange relationships in a tribal village in Koraput district of Orissa. It also evaluates the impact of these relationships on the nature and distribution of production. Moreover, it attempts to assess if social and economic hierarchies have been maintained or altered within and across the two time frames, that is, historical and contemporary periods.

An analytical framework is developed which put forth the various possible ways in which social and economic hierarchy can be redefined.

Colonial policies led to the immigration of non-tribals to the region on a large scale, and in turn intensified the tribal-non tribal interaction. The socio-economic behaviour of the non-tribals coupled with anti-tribal government policies turned to be disadvantageous for the tribals. Credit market got interlocked with land and labour markets leading not only to loss of land from tribals but they ended up as bonded labourers also.

The analysis of the contemporary experience based on the field survey revealed the iniquitous distribution of land within castes. This is more so in the case of tribals, a corollary of which is that the distribution in the village is more iniquitous than within any particular caste.

The households with small holdings and low family labour entered into exchange labour contracts. Large size holdings depended mainly on hired labour. Among labourers a new system called *guta* (group labour) has emerged. This has led to an increase in the real wages and their quality of life.

In the interlocking markets, the trader-lenders have developed a new fertilizer loan which increases production but make the cultivator more dependent. A larger share of the increase in production goes to traders while the benefits to cultivators are uneven.

Various legislations and governmental interventions brought about changes in the nature of interactions. But the exchange relationships have evolved to the greater advantage of the non-tribals.

The analysis of the paddy and money redistributive charts provides a structural-functional view of the process of re-distribution. This represented an organised demonstration of rights and obligations reflecting the integrative role the temples play in the village economy.

With the enactment of land reforms (1969-70) the temple lost its land and was compensated only by a paltry sum of money by the state. For understanding the response of the temple to land reforms, the post land reform period is also studied.

In an agrarian society land is the most important means of production, the hold over which determines the hierarchy of power. Following the Land Reforms, the Kerala temple as a social institution lost its importance and also as a major integrating force in the village economy.

Although this particular role of the Kerala temple ceased to exist, its ritualistic and ideological significance continues to give it a prominent position as a socio-religious institution in the contemporary village society. But its survival is based on the donations from the public and not on its own agrarian surplus. The redistributive role of the temple merely remains symbolic.

ECONOMIC HISTORY

(a) KERALA

1. S. Preetha Nair : Role of Kerala Temple in Socio-economic Articulation: A Structural-Functional Analysis, 1992, pp. ii+173

Thesis Supervisors : P.K. Michael Tharakan and G.N. Rao

Physical centres like temples could relate and integrate several villages into some kind of socio-economic domain, resulting in the formation of a community which extends far beyond the geographical limits of the village. This study attempted to analyse a temple domain created by the Kidangoor Subramania Swami Temple, Kerala by integrating several **Desavalis** through the processes of reciprocity, redistribution and exchange. Apart from secondary sources on the history of Kerala, the study relies on the information available from hitherto unused sources like the Devaswom Settlement Register, Devaswom Land Register, Jenmikaram Register, Nalvalis Thiruutsavam Adiyanthira Register etc.

The temple helped integrate the landed classes, tenants, sub-tenants and the tillers into the production-distribution system based on rights and obligations from the base to the top. The lands re-distributed by the temple to different sections of the society on specific conditions of lease received in return fixed share of produce in terms of tributes. The produce gets pooled in the temple granary and is re-distributed to the members of the leisure class and artisans.

show slightly higher returns on capital and on network. They are also more capital intensive. The retention ratio and gearing ratio indicate soundness of financial policy.

2. K. Asha : Competitiveness of India's Agricultural Exports: A Case of Tea Exports, 1993, pp. 106

Thesis Supervisors : K. Pushpangadan and Sunil Mani

The study looks into the trends in India's agricultural exports taking tea as a case. It examines the potential competitiveness of India's tea exports and attempts to identify the factors influencing it.

The study period (1950-51 to 1989-90) is divided into four phases: The first phase (1950-68) is of decreasing trend, the second phase (1969-77) is of increasing trend, the third phase (1978-82) is once again declining trend and the fourth phase (1982-90) is of recovery trend. The last phase is further sub-divided into two: 1983-87 and 1988-90.

The analysis of changing production conditions that underline the Indian tea shows that cyclical movements are largely shaped by the crop cycle. This implies that tea production trends are influenced by supply conditions.

India's tea exports are seen to be increasingly facing the threat of competition from the growing domestic market as well as competing countries. This competitive trend is increasingly seen in the rising domestic prices.

Auction price and reference price show a declining trend upto 1971 and then onwards, cyclical trends. At the same time, India changed its exchange rate policy for fixed to flexible exchange rate during this period. Hence, it is hypothesised that both the prices could possibly have been influenced by the change in exchange rate policy. The analysis of trends in both the prices and exchange rate has shown that the flexible exchange rate has destabilised the producers' price and hence their income, despite the fact that they received higher prices during the study period.

The analysis of nominal production rate (NPR) shows that Indian tea is potentially competitive, although there is some reduction in the degree of disprotection during the latter half of the 1980s.

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EXTERNAL SECTOR

1. Meena Abraham : Foreign Portfolio Investment in India (1948-89), 1993. pp. 100.

Thesis Supervisors : Sunil Mani and K.K. Subramanian

This study looks into the growth of foreign portfolio investment and its components within the Indian corporate sector for the period 1948-49.

The share of corporate sector liability in total foreign liability declined since independence. By the end of 1970s it was only 12 per cent of the total foreign liabilities of the economy. In the 1980s the share of the corporate liabilities increased to 24 per cent due to a decline in grant-in-aid concessional loans to the official sector and the growth of external commercial borrowings to the corporate sector.

There is a reversal of the proportion of direct investment to portfolio investment from 1950s to the 1980s. The rapid growth of portfolio investment was due to the restrictive government policy towards foreign collaboration. In the 1980s, due to liberalisation, an even more rapid increase in portfolio investment is noticed.

The element which accounts for the increase is creditor capital, particularly loans and the suppliers credit. In the late 80s equity forms of investment also increased.

In the pharmaceutical industry, the portfolio firms performed better than Foreign Collaboration Enterprises (FCEs) in terms of profitability, sound financial policy and management. In terms of size the FCEs stand out as compared to portfolio firms. But they

Contrary to the theoretical expectation, NPR and export move in tandem. NPR, production and export have exhibited the same trend indicating that increase in export price would boost India's tea export.

3. P. Vinod Kumar : India's Trade in Services: An Analysis of Structure, Growth and Competitiveness, 1995, pp.125.

Thesis Supervisors : K.J. Joseph and Thomas Isaac

An empirical analysis of India's service trade is attempted in this study. The study is based on the RBI data, a new data base which no other study has hitherto used. The study also uses a modified conceptual framework with an alternate classification for tradable services.

The analysis at the aggregate level suggests that the trade surplus in services has been declining in the 1980s. The deceleration in the report growth coupled with an upward movement of imports contributed to this phenomenon. This diverging trends in exports and imports further substantiated by the trend break analysis. Analysis at the disaggregated level also confirmed this trend.

One major factor influencing the perceived trend in service trade is exchange rate depreciation, which leads to an acceleration in the dollar value of imports and deceleration in the dollar values of exports. Increased degree of concentration is observed in the combined share of the top four items of export in the 1980s and the decline in the trend growth of exports could be associated with this report structure. Yet another factor is the increasing degree of concentration in the export destinations, causing a possible mismatch between India's export structure and import requirements of the countries concerned. Declining competitiveness is also contributing to the down turn in service trade.

India, however, enjoys a dynamic comparative advantage in the export of labour related services. But since this sector lies outside the ambit of GAT Treaty, it may act as a constraint on the specialisation and exploitation of the factor endowment that India enjoys. Further, the treaty facilitates free entry and exit of foreign service firms into the country. The study suggests that considering the adverse factors, an across the board liberalisation of trade in services may not be desirable for India.

4. P.S. Venkitesh : India's Software Exports: A Study with Special Reference to Technology Parks, 1995, pp.103

Thesis Supervisor : K.J. Joseph

The study is undertaken with the intention of discussing two major objectives: (1) to analyse the industrial structure and the export performance of Indian software industry against the background of the liberalised policy regime and (2) to examine the extent to which Software Technology Parks could act as a catalyst to growth of Indian software exports.

It is found that the Indian software industry is dominated by a large number of small firms specializing in the area of services and are relatively more efficient than the large ones in terms of export realisation per unit of investment. At the same time the industry is characterised by a higher level of market concentration wherein a few firms accounted for the bulk of exports. The major component of software exports is on-site services which is relatively of low value added and this is explained to a greater extent by the lack of access to hardware and infrastructure.

The setting up of Software Technology Parks (STPs) was an organizational innovation to rectify the above problem. But inspite of having the same hardware and infrastructure facilities there were significant variations in their performance in terms of exports and net foreign exchange earnings. The STPs of Bangalore, Noida, and Hyderabad accounted for about 80 per cent of the total investment and dominated the other STPs in terms of exports and net foreign exchange earnings. To explore the reasons behind this a comparative analysis of the firms in STP Bangalore and STP Trivandrum was done. It is found that the skill availability, the most crucial factor determining the growth of the firms and highly skilled labour is not available in Trivandrum. Moreover, the software industry was well established in Bangalore before the setting up of the STP. Bangalore was also advantaged by its superior industrial base when compared to Kerala and there was a professional understanding of the industry among the officials and there was lesser bureaucratic hurdles for the Bangalore firms when compared to the firms in Trivandrum.

The study shows that STPs offer significant potentials for the development of the software industry. Nevertheless, the establishment of STPs in industrially backward regions is attendant with many difficulties.

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