

LABOUR AND INDUSTRIALISATION IN KERALA

Indian Journal of Labour Economics, Vol. 46, No.4, pp. 575-92., June-December 2003.

Jayan Jose Thomas*

This paper examines the association between labour and industrialisation in Kerala. Labour absorption by modern industries has been low in Kerala; this has a bearing on the features that emerged in Kerala's labour market after 1950 including low rates of work participation, and high levels of educated unemployment and underemployment. Kerala has had strong worker organisations, and high degree of labour disputes. Worker organisation has made significant improvements in wage rates and living conditions of informal sector workers in Kerala. A few traditional industries like cashew processing migrated out of Kerala to take advantage of lower wage rates in neighbouring States. However, in the factory sector of Kerala, econometric evidence finds that labour disputes and growth performance have been exogenous to each other, wage increases have been commensurate with productivity growth, and wage increases have had little association with labour disputes. All these dispel the general notion that Kerala's industrial backwardness is caused by labour problems.

I. INTRODUCTION

In general discussions within the State and outside, Kerala's labourers have been often portrayed as militant and creating hindrances to industrialisation. Of course, it is also true that intensity of labour disputes (including lockouts and strikes) in Kerala has been higher than the Indian average and the highest of all major Indian States except West Bengal during most of the period between 1959 and 1999 (See Figure 1 that plots intensity of labour disputes (total mandays lost due to labour disputes normalised by total number of factory employees) in Kerala, India and 14 other major Indian States).

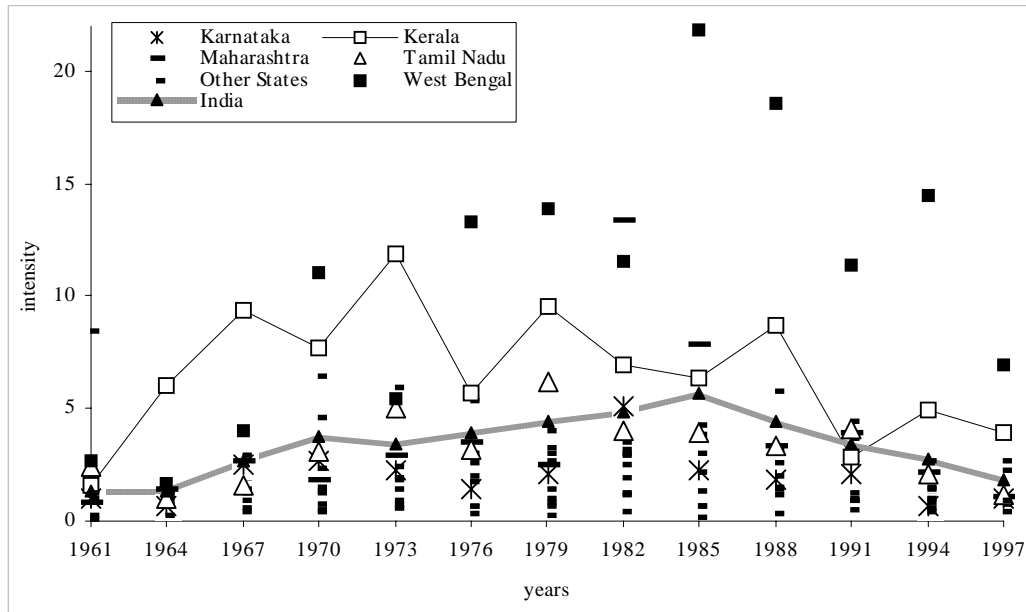
However, there is a serious problem when, based solely on the reportedly high incidence of lockouts and strikes, one jumps to the conclusion that labour unrest is the cause of Kerala's industrial backwardness. Scholarly works on Kerala's industrial sector fall under two major categories – those who put forward the argument that labour demands have slowed down Kerala's industrial growth (Oommen, 1981; Albin, 1990; Thampy, 1990), and those who reject such a hypothesis (Subrahmanian and Pillai, 1986; Subrahmanian, 1990). The chief aim of this chapter is to examine, comprehensively and covering a long time period, whether the strong labour organisation and the higher incidence of labour disputes in Kerala has had any negative impact on the State's industrial progress. The impacts, if any, in informal sector and factory sector are

*The author is a research scholar at Indira Gandhi Institute of Development Research, Santosh Nagar, Goregaon East, Mumbai, PIN – 400065, India; email: jayan@igidr.ac.in, jjoset27@yahoo.co.in The author is grateful to V.K.Ramachandran, C.P.Chandrasekhar, Madhura Swaminathan and K.K.Subrahmanian for detailed comments on earlier versions of this paper.

examined separately in sections 3 and 4 respectively of this paper. Section 2 examines the features of Kerala's labour market and sets the background for the study.

Figure 1

Intensity of labour disputes in Kerala, 14 other major Indian States and India, three-year time periods, 1959-97



Notes: Intensity of labour disputes is total mandays lost due to labour disputes normalised by total number of factory employees. The years shown on the x-axis are the ending year for each three-year time period.

Source: Indian Labour Statistics and Indian Labour Year Book, various issues

II. FEATURES OF KERALA'S LABOUR MARKET

1. Low Generation of Jobs by Modern Industrial Sector

The inability of Indian industrialisation to absorb the large labour reserves in the country is conspicuous, and this has been critically noted in several discussions on India's planning experience (Bhagwati and Chakravarty, 1969; Patnaik, 1994). In 1995, employment in industry as a proportion of the total employment was only 12.9 per cent in India compared to, for example, 33.3 per cent in South Korea and 21.1 per cent in China.¹ Factory workers – 8.2 million in 1999-2000 --were only 0.80 per cent of the total population and 2.03 percent of all workers in India in 2001 (see Table 1). Compared to the whole country, industrial sector in Kerala has been even less successful in generating employment. During the period 1959-98, elasticity of employment with respect to value added in the factory sector of Kerala was only 0.29 -- smaller than the elasticity

computed for the factory sector of the whole country (0.4).² Growth of factory employment in Kerala in each of the four decades starting from the 1960s lagged behind the corresponding growth in the country (see Table 2).

Table 1
Workforce and Population: Kerala and India, 2001

	Kerala		India	
	in million numbers	as per cent of total	in million numbers	as per cent of total
Factory sector workers	0.3	1.0	8.2	0.8
Non-agricultural workers*	7.9	24.8	167.4	16.3
Total workers*	10.3	32.3	402.5	39.3
Adult literates, age 7+	25.6	80.5	567.1	55.3
Total population, all ages	31.8	100	1025.3	100

Notes: * Main and marginal workers together. Non-agricultural workers are total workers minus the sum of cultivators and agricultural labourers. Factory sector workers correspond to the number of “Total Employees” reported by Annual Survey of Industries (ASI) for total factory sector and for the year 1999-2000.

Source: Census of India 2001 (<http://www.censusindia.net>); Annual Survey of Industries 1999-2000 Volume I

Modern industries played a very insignificant role in the generation of factory employment in Kerala in the period after 1950. In 1995-98, 44.4 per cent of Kerala’s total factory employment was accounted for by industry groups 20-21 and 22, which are mostly the traditional cashew processing and beedi making respectively in Kerala (see Table 2). In the 1960s, a total of 39,000 new jobs were created in Kerala’s factory sector: 30,000 of these jobs were in food industry (20-21). In the 1970s, the traditional beedi manufacturing industry (22) was the second largest generator of factory employment in Kerala (the first was the category ‘others’, which is largely electricity industry (40)). Kerala’s food industry (20-21) lost 39,000 jobs in the decade of the 1980s. Only 19,000 new jobs were created in other industries in the State during this decade, of which 9,000 jobs were in the traditional beedi manufacturing industry. In the 1990s, 82,000 new jobs were generated in Kerala’s factory sector, more than half of which was in food industry (20-21) (see Table 2). On the other hand, a significantly large proportion (approximately more than 60 per cent in each decade) of the total number of new jobs created in the factory sector of the whole country during each decade was in modern industries like manufacture of machinery (35-6) and transport equipment (37), metal based industries

(32, 33, 34), industries manufacturing chemicals (30), rubber and petroleum (31) etc. (see Table 2).

Table 2

Factory Sector Employment by Two-Digit Industry Groups, Increase over Decades and Total in 1995-98, Kerala and India, (in actual numbers '000)

	Increase of Employment in:								Total Employment in:	
	1960s		1970s		1980s		1990s		1995-98	
	Kerala	India	Kerala	India	Kerala	India	Kerala	India	Kerala	India
Food (20-21)	30	136	1	581	-39	-198	42	240	118	1297
Tobacco (22)	-12	-46	19	271	9	68	2	97	32	575
Textiles (23 – 26)	-9	74	4	239	-2	-193	7	324	31	1798
Paper, Wood (27-29)	9	222	5	86	-5	26	7	102	27	547
Chemicals (30)	3	108	8	240	3	73	5	211	25	770
Rubber, Petroleum (31)	2	40	3	83	2	59	10	107	20	343
Metals (32-34)	3	288	1	363	4	140	6	175	31	1434
Machinery, etc. (35-37)	8	441	1	156	1	97	3	229	21	1540
Others (38 –97)	0	80	38	736	-5	222	0	392	34	1587
Total Factory Sector	39	1225	80	2735	-31	293	82	1876	338	9892
Growth of employment in Total Factory Sector (in per cent)	3.2	3.9	3.3	4.4	-1.7	0.1*	2.7	4.0	-	-

Notes: Growth of employment calculated using semi logarithmic regression.

*Not statistically significant at 5 per cent level.

Given below are the points in time between which increase for each decade is calculated. 1960s: 1970 and 1960; 1970s: 1979-82 and 1970; 1980s: 1988-91 and 1979-82; 1990s: 1995-98 and 1988-91

Figures in brackets are the two-digits representing the different industry groups, according to National Industrial Classification (NIC) 1987

Source: ASI Results for Factory sector reported in Statistical Abstract of India, various issues and, ASI Summary Results various issues.

2. Nature of Non-Agricultural Employment

Several features of labour market that emerged in Kerala after 1950 have an association with the slow generation of employment in its modern factory sector. First is in the nature of non-agricultural employment in the State. Workers engaged in non-agricultural activities as a proportion of total workers was higher in Kerala compared to the national average even in the period before 1950 (Krishnamoorthy, 1983), and is higher even today (see the proportions from the data presented in Table 1). After 1950, as modern manufacturing jobs arose far too slowly, as traditional industries reeled under stagnant growth, and as labour absorption in agriculture declined with the increasing shift to cultivation of less labour intensive commercial crops like rubber and coconut, workers in

Kerala have been compelled to move to low value-adding occupations in the tertiary sector. Tertiary sector has thus become a residual sector in Kerala, accommodating, as Panickar and Sunny (1973) puts it, the workers pushed out of an “overcrowded primary sector and rudimentary secondary sector”. In the period after the 1970s, growth of consumer demand, which partly accompanied the remittances from workers in Gulf countries, was an important stimulant to the generation of tertiary sector jobs in Kerala (Mridul Eapen, 1994).³

3. Decline in Work Participation Rates

Work participation rates declined sharply in Kerala. Males in the working force as a percentage of the total male population in the State was 57.3 percent in 1901, but declined to 44.9 per cent in 1971. There was a decline in the corresponding percentages for females as well: from 32.7 per cent to 29.2 per cent.⁴ Previous studies attributed stagnation of traditional industries, which forced the withdrawal of females in rural areas from household manufacturing activities and longer periods of time spent in education as reasons for the lower rates of work participation in Kerala (CDS, 1975, pp. 74-78). In 2001, work participation rates (‘main workers’ as a proportion of total population) were, respectively, 41.9 per cent and 10.7 per cent among males and females in Kerala. Work participation rates among males and females in Kerala were lower than the corresponding rates in India, in 1991 as well as in 2001 (see Table 3).

Table 3

Main Workers as a Proportion of Total Population (Work Participation Rates): Kerala and India, 1991 and 2001 (in per cent)

	Kerala		India	
	1991	2001	1991	2001
Males	44.8	41.9	50.9	45.3
Females	12.8	10.7	15.9	14.7
Persons	28.5	25.9	34.1	30.5

Source: Census of India 1991 and 2001 (<http://www.censusindia.net>)

4.High Rates of Unemployment

Kerala has explosively high rates of unemployment. Unemployment rates in Kerala are much higher than the Indian average and are the highest among major Indian States, regardless of the measure used for unemployment. In 1999-2000, usual principal status unemployment rates among economically active population were 10.9 per cent and 8.2 per cent, respectively, in rural and urban areas in Kerala compared to the corresponding

national averages of only 1.9 per cent and 1.5 per cent. Unemployment rates in Kerala were much higher among educated persons and among persons in the age group of 15 to 29 years (see Table 4).

Table 4

Usual Principal Status Unemployment Rates: Kerala and India, 1999-2000 (in per cent)

		Rural			Urban		
		Male	Female	Persons	Male	Female	Persons
General	Kerala	7.6	19.7	10.9	6.9	26.4	12.5
	India	2.1	1.5	1.9	4.8	7.1	5.2
Educated, above 15 years	Kerala	15	49.1	25.3	9.9	41.9	21.2
	India	6.8	20.4	8.2	6.6	16.3	7.9
Age group 15-29	Kerala	17.8	45.1	25.8	18.4	50.8	28.8

Notes: Unemployment rates among the general category, among educated and among youth are given separately

Source: National Sample Survey (2001) Tables 7.3.1, 7.4.1 and 7.5.1.

5.Kerala's Workers: High Educational Levels, Low Levels of Per capita Value Added

At the same time, Kerala has had a much better educated population compared to the whole country: in 2001, for every 100 members of the population, there were 80.5 educated adults in Kerala compared to 55.3 only in the whole country (see Table 1)⁵. Economic opportunities have been fewer for the comparatively better educated workers in Kerala, leaving them no option but to work in less value adding jobs (all comparisons to the Indian average). In 1991, even as 89 per cent of Kerala's main workers were literate compared to 49 per cent only in India as a whole, per-capita value added by Kerala's main workers was lower than the national average. Educational levels of workers in Kerala are above the respective countrywide averages in primary, secondary and tertiary sector activities. However, only in the primary sector was value added by a Kerala worker higher than his counterpart in the rest of the country; it was much lower in the secondary and tertiary sectors (see Table 5).

Table 5

Educational Levels and Per-capita Value Added: Main Workers in Kerala and India, Sector-wise, 1991

	Total population		Total main workers		Main workers, primary sector		Main workers, secondary sector		Main workers, tertiary sector	
	Kerala	India	Kerala	India	Kerala	India	Kerala	India	Kerala	India
Distribution by educational levels (in per cent)										
Illiterate	22.0	57.2	10.7	50.9	16.5	64.1	8.0	33.8	4.3	18.6
Literate	78.0	42.8	89.3	49.0	83.5	35.9	92.0	66.2	95.7	81.4
Primary	24.0	12.3	28.8	13.7	33.7	12.8	31.6	18.3	20.5	13.9
Matriculation/Secondary	10.7	5.7	12.2	8.3	7.9	4.3	11.8	12.5	18.3	18.9
Graduate and above	4.1	2.8	8.1	5.2	1.2	0.8	5.1	6.9	19.4	18.2
Technical degree/diploma	-	-	-	-	-	-	3.0	2.2	9.8	4.7
Total	100	100	100	100	100	100	100	100	100	100
Per capita value added in 1990-91 (in constant 1980-81 Rupees)										
	1808	2268	6339	6653	4818	3247	7995	14845	7517	12742

Notes: The composition of workforce by educational levels is, so far, not available from the latest census for the year 2001; hence I have used the figures for 1991.

Source: Calculations from Census of India 1991 Series I –India, Part III-B Series, Economic Tables Volume –1, Tables B-3 (S), pp. 272-4, 302-4; and Census of India 1991 Series I –India, Part III-B Series, Economic Tables Volume –3, Tables B-3 (F), pp. 258-63, 348-53.

Income figures from National Accounts Statistics.

Given that educated labourers can contribute far more to economic and industrial growth than uneducated labourers, Kerala has always had greater opportunities for moving into higher incomes.⁶ However, the high levels of educated unemployment and under employment in Kerala meant that the State grossly missed such opportunities.⁷

6. Migration of Kerala's Workers to Gulf Countries

After 1973, large opportunities opened up in West Asian countries for construction jobs, and labourers from Kerala made good use of this. Migration of workers to countries in the Gulf region is an important feature of Kerala's labour market that has markedly reduced rates of unemployment in the State (Gulati and Modi, 1983; Isaac, 1997).⁸ Earlier studies point out that the total number of migrant workers from Kerala working in the Gulf countries in the early 1980s may have been something between 0.18 million to 0.32 million⁹. For comparison, the numbers of factory workers and total organized sector workers in the State at that point of time were 0.287 million and 0.993 million respectively. The number of migrant workers from Kerala increased further during the 1980s and 1990s: there were 1.36 million emigrants from Kerala in all foreign countries by the second half of 1998, according to Zachariah et al. (1999).¹⁰ It means that the size of emigrant workforce in Kerala has, by then, turned larger than the size of organized

sector employment in the State (1.22 million). In other words, between the early 1980s and late 1990s, number of emigrant workers in Kerala increased by approximately 1 million whereas the increase in the number of total organized sector workers was only 0.23 million (see Table 6).

Table 6

Numbers of Emigrant Workers, Workers in Factory Sector and Workers in Organized Sector: Kerala, early 1980s and late 1990s

	Actual Number (in thousands)	
	Early 1980s	Late 1990s
Number of emigrant workers	317 ^a	1360 ^b
Number of workers in the State's factory sector	287	358
Number of workers in the State's total organized sector	993.9	1220.5

Notes: ^a only to the countries in the Gulf region ^b to all the foreign countries.

Numbers of factory workers and organized sector workers for early 1980s and late 1990s correspond, respectively, to the years 1980 and 1998 (or 1997-98).

Source: For emigrant workers, estimates by Gulati and Modi (1983) and Zachariah et al. (1999); for factory sector, ASI Summary Results for Factory sector; for employment in total organized sector, Government of Kerala (2001).

III. LABOUR ORGANISATION AND INFORMAL SECTOR IN KERALA

Given the features of labour market described above, this section attempts to study the impact of labour organisation on the informal sector of Kerala and the implications of this impact for industrial growth in the State.

1. The Successes of Labour Organisation

As large as 90 per cent of India's workers in rural and urban areas work in the informal sector, majority of them squeezed in exploitative relations with owners of capital.¹¹ As Breman (1996), notes, class and caste relations shape the identities of these workers; they can be hired and fired according to the needs of their employers; and, in many cases, they are compelled to migrate over long distances in search of employment opportunities. Five decades of state-led development have made only very little improvements in the living conditions of India's informal sector workers. Several factors have prevented any form of collective resistance by workers against the exploitation by capital: these include labour's overwhelming supply far exceeding demand, existence of large social heterogeneity among workers, and lack of skills and even basic literacy among workers that could have given them bargaining power and awareness about rights (Breman, 1996, pp.243-49).

Against this larger Indian perspective, labour movement in Kerala has distinguished itself in several ways. First, it organized such disparate groups from head load workers to agricultural labourers, who remain far outside the fold of formal sector employment relations in other parts of the country. Secondly, real wage rates for several categories of casual workers rose appreciably in Kerala. Daily wages of unskilled female construction workers in rural Kerala as a proportion of daily wages for an average factory employee in the country increased from 26 per cent only in 1963-64 to almost 47 per cent by 1996-97 (see Table 7). Third, disparities in wage rates across different segments of the labour market declined remarkably over the years in Kerala. As Table 7 shows, in construction, wage rates for unskilled workers grew faster than for skilled workers, and wage rates for female workers grew faster than for male workers. Figure 2 plots coefficient of variation of daily wage rates across various groups of workers in Kerala: paddy field workers; skilled construction workers in urban and rural areas; unskilled construction workers, males and females in urban and rural areas; and factory workers. Coefficient of variation declined continuously from 0.42 in 1980-81 to 0.30 in 1996-97.

Forth, labour movement in Kerala succeeded in formalising working conditions of several casual labourers. The best example is that of headload workers, whose labour market had previously been entrenched in patron-client relations. After government regulations in the early 1980s, this sector is today characterised by regular conditions of work including fixed hours and limited work loads (not more than 75 kg. per person at a time); grievance and conciliation machinery of the Labour Department; welfare measures including education grants, accident insurance; and local self-government committees for registering, pooling and compensating workers (Heller, 1999, pp.199-204).

Table 7

Daily Wages of Various Categories of Workers in Kerala: Levels and Rates of Growth, 1963-64 to 1996-97

Categories of Workers		Indices of Nominal Daily Wages (Factory Employee, India =100)					Growth of Real Daily Wages (in per cent)
		1963-64	1969-70	1980-81	1990-91	1996-97	1963-64 to 1996-97
Paddy Field Labourer, Kerala	Male	-	-	39.9	44.2	59.2	-
	Female	-	-	28.4	26.1	38.9	-
Unskilled construction Worker, Kerala	Male, Rural	37.8	51.4	44.1	45.7	56.8	-
	Female, Rural	25.8	33.6	34.5	35.8	47.4	-
	Male, Urban	43.7	51.6	46.8	45.7	58.3	2.3
	Female, Urban	31.2	36.7	36.6	38.3	48.7	2.9
Skilled Construction Worker, Kerala	Rural	68.5	76.0	66.9	70.4	83.2	-
	Urban	67.3	78.3	69.3	69.2	86.6	2.0
Factory Employee	Kerala	52.2	68.2	95.2	88.7	94.3	3.4
	India	100.0	100.0	100.0	100.0	100.0	1.7

Notes: Real wages are obtained by deflation using Consumer Price Index for Industrial Labourers (CPIIL) with base 1982 =100.

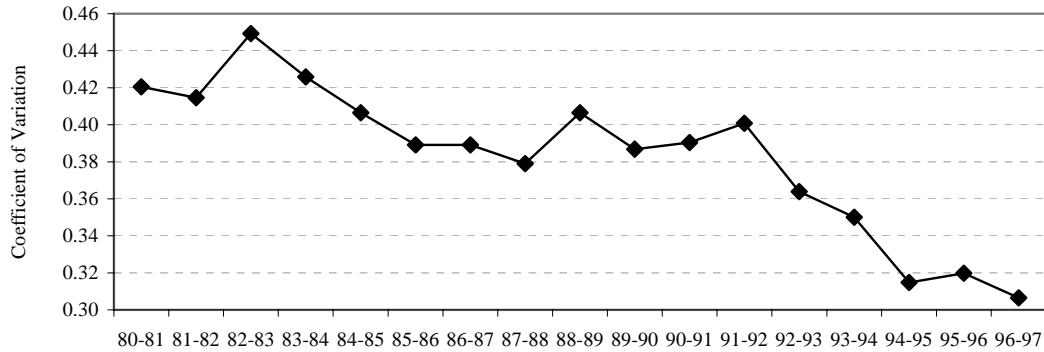
All growth rates are statistically significant at less than 5% levels. They are calculated using semi logarithmic regression.

Data for compiling a full time series for the period from 1963-64 to 1996-97 was not available in the case of paddy field labourers and construction workers in rural areas. Therefore, growth of wage rates for these categories of workers has not been calculated.

Source: Government of Kerala (1977), Government of Kerala (1980), Government of Kerala (1993), Government of Kerala (2001); ASI Results for Factory sector, various issues.

Figure 2

Coefficient of Variation of Daily Nominal Wage Rates across Different Categories of Workers in Kerala, 1980-81 to 1996-97



Notes: Daily nominal wages of the following nine categories of workers have been considered in the calculation of coefficient of variation: 1st class carpenter in rural and urban areas; rural unskilled construction workers, male and female; urban unskilled construction workers, male and female; paddy field labourers, male and female; and factory sector employees.

Source: Government of Kerala (1993), Government of Kerala (2001), and ASI Results for Factory Sector.

2. The Implications of Informal Sector Worker Organisation for Industrial Growth

As a direct outcome of worker organisation, wage rates of informal sector (or casual) labourers in Kerala have come to be much higher than the national average and higher than the corresponding wage rates in States like Tamil Nadu and Maharashtra (see Table 8). It is difficult to say whether wages received by informal sector workers in Kerala are proportionate to the value added by them or not. It is certain, however, that informal sector workers in other parts of the country including in Kerala's neighbouring States survive under exploitative working conditions and are highly underpaid. For example, as Anand's (1986) study showed, migrant construction workers from Kanyakumari district in Tamil Nadu were badly treated even in Kerala, regardless of the general attitude in the State that respects workers' rights. Given such differences in wage rates of casual labourers between Kerala and the rest of India, it is possible that Kerala lost its advantages in industries that are based solely on cheap and unskilled labour and where capital can relocate itself easily. This is very evident in the case of many traditional industries, a good example being cashew processing, a 'foot lose' industry in which Kerala did not enjoy any location specific advantages.

Table 8

Average Daily Wages of Casual Workers: Rural and Urban Areas of Selected Indian States, 1999-2000, in Rupees at Current Prices

	Rural			Urban		
	Male	Female	Persons	Male	Female	Persons
Kerala	100.78	56.65	90.59	102.35	47.19	93.13
Maharashtra	41.32	25.28	34.01	61.7	29.18	54.09
Tamil Nadu	60.2	30.78	48.14	72.27	46.99	66.34
India	44.84	29.01	39.64	62.26	37.71	56.96

Notes: The data corresponds to wages of casual workers of age 5 years and above, engaged in works (in farm or non-farm enterprises) other than public works. The sample size of workers reporting for works other than public works is much higher compared to that of workers engaged in public works. Hence I have presented the data for the former category. Wage rates across States for both the categories of workers show similar trends.

Source: National Sample Survey (2001), Table 6. 11, p.127.

From its beginning in the 1930s, cashew processing has been carried out in factories; therefore, it cannot be said to come under the informal sector. However, workers in this industry, most of them females belonging to oppressed sections of society, have been one of the highly exploited in Kerala society. Labour does not have any critical control over production process in this industry. Kollam, where the industry in Kerala is concentrated, never enjoyed any location specific advantages -- raw nuts for processing have always been imported from Malabar, South Canara and East Africa. As trade union movement began taking roots in this industry and Kerala State government introduced minimum wage legislations, capitalists found it profitable to shift the industry to Kanyakumari district in Tamil Nadu, where wage rates are much cheaper. In Kerala, average yearly days of employment in this industry declined; and workers continued to remain poor (Kannan, 1981; Kannan, 1995). The industry in Kerala has not had a revival in growth even today (Nair, 2002).

As regards the implications of labour organisation for industrial growth, it may also be noted that there have been several instances, at least till the 1980s, when labour agitations turned militant and caused considerable economic losses in Kerala. A State Planning Board report in 1984 points out that the commissioning of the Idamalayar hydro-electric project was delayed by three years and one month because of three long labour strikes, one in the dam construction site and two in the tunnel work, inflicting severe financial losses.¹² Similarly the industrial unit, Fertilisers and Chemicals Travancore Limited (FACT) has reported delays in construction of its plants because of labour problems.¹³ At least until the 1980s, head-load workers in Kerala have been known to adopt militantly aggressive postures in their struggles for better living conditions.¹⁴ For example, a strike by loading and unloading workers in FACT in 1974

lasted for more than 66 days and caused severe disruption of production operations.¹⁵ Were such incidents just sporadic, or a major hurdle in the path of Kerala's industrial progress? The following section attempts to give answers.

IV. LABOUR DISPUTES AND PERFORMANANCE OF FACTORY SECTOR

What has been the impact of labour agitations on the growth of Kerala's factory sector? This question is addressed in this section. But it is important to make some preliminary observations before trying to look for answers.

1. Labour Disputes: What does the Data Say?

First, the major scene of labour agitations in Kerala was its unorganised sector, not the modern factory sector. The data on man days lost due to labour disputes in Kerala and other Indian States shown in Figure 1 relate to work stoppages involving 10 or more workers in all sectors of economy including plantations, manufacturing, mines, construction, services, etc., and also involving workers in both the private and public sector. Bureau of Economics and Statistics in Kerala publish sector-wise data on mandays lost due to labour disputes; in the data published by the Bureau, man-days lost in plantations, textiles, saw mills, tiles and cashew processing – all belonging to the relatively traditional sector of the economy – are given separately, but mandays lost in the rest of the economy are clubbed together under the category 'others'. As results in Table 9 show, the traditional sector accounted for a considerable proportion of the total work stoppages in Kerala in all the decades except in the 1970s: 78.6 per cent in the 1960s, 62.7 per cent in the 1980s and 55.7 per cent in the 1990s.¹⁶ Although the inter-industry distribution within the category 'others' is not known, we can safely say that a large proportion of labour disputes in Kerala in all the decades except the 1970s occurred outside the modern industrial sector (see Table 9).

Also, Ramachandran's (1973) study of industrial relations in Kerala of the 1960s pointed out that labour problems in Kerala were not as severe as the data on mandays lost shows. Ramachandran (1973) noted that only 1.4 – 7.7 per cent of labour disputes led to work stoppages, and that average duration of a strike was relatively small in Kerala. Irrespective of this, mandays lost due to disputes was high because of two reasons: one, concentration of work stoppages in a few industries employing bulk of the labour force; and two, participation of entire workforce (in the striking industry) in strike activities because of strong worker solidarity.

Table 9

**Industry-wise distribution of man-days lost due to labour disputes:
Kerala, 1959 to 1999 (in percent)**

Time Periods	Traditional sector						Rest of the economy		Total
	Plantations	Textiles	Coir	Saw Mills	Tiles	Cashew	Total traditional	Others	
1959-70	30.1	4.7	1.7	0.9	6.7	34.5	78.6	21.4	100
1971-80	14.6	7.8	0.5	0.0	1.0	6.7	30.7	69.3	100
1981-90	13.8	36.0	4.3	1.0	6.8	0.7	62.7	37.3	100
1991-99	3.5	45.4	4.8	0.5	1.5	0.0	55.7	44.3	100

Notes: All are averages for the corresponding time periods

Source: Government of Kerala (1977), Government of Kerala (1980), Government of Kerala (1993), and Government of Kerala (2001).

Secondly, as the State government itself pointed out in 1962, labour troubles in Kerala (in the early 1960s) were not more acute than in the more industrialized States like West Bengal, Bombay and Madras¹⁷ Even in later years, as figure 1 shows, intensity of labour disputes in Maharashtra and Tamil Nadu, although lower than in Kerala and West Bengal, is higher than the intensity of labour disputes in several Indian States. If labour problems have been an important decelerator of industrial growth, why has industrial growth slowed down only in Kerala and West Bengal, and not in Maharashtra and Tamil Nadu?

Third, there has been a notable improvement in labour relations in Kerala during the 1980s and 1990s – evident in the steady decline in intensity of labour disputes in the State and in the decreasing differences in intensity of disputes between the State and the national average during these two recent decades (see Figure 1). Numbers of industrial disputes and of workers affected due to industrial disputes in Kerala have been increasing continuously in each successive five-year period until the mid-1970s, but declining progressively in the years after that; number of industrial disputes reduced from 1255 in the five-year period ending in 1964, to 579 in the period ending in 1979, and to 104 only in the period ending in 1999 (see Table 10).

Table 10

Number of and Workers Affected by Industrial Disputes that Resulted in Work Stoppages: Kerala, Five-year Periods between 1960 and 1999

	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99
Number of Disputes	1255	1302	1322	579	452	378	195	104
Workers affected ('000)	474	785	924	400	472	322	109	322

Source: Government of Kerala (1977), Government of Kerala (1980), Government of Kerala (1993), and Government of Kerala (2001).

If labour disputes were indeed a determining factor in Kerala's industrial growth, a puzzling question arises: why has industrial growth performance in Kerala slowed down during the 1980s and 1990s when labour relations in the State improved? Certainly, the association between labour disputes and growth of Kerala's industrial sector requires a more rigorous analysis; this is done below using a Granger-causality analysis.

2. Association Between Labour Disputes and Industrial Growth: A Granger Causality Analysis

Has the higher incidence of labour disputes in Kerala been associated with slow down in performance of the State's industrial sector? Mostly no, suggests the results from a Granger causality analysis. This analysis tests whether information about any time series 1 helps improve the predictability about another time series 2. If it does, time series 1 is said to have a Granger causality relation with time series 2. Note that 'Granger causality' is different from the ordinary notion of 'causality'. X Granger causes Y only means that X is associated with Y or X helps predict Y, not that X causes Y. It is important to remember this distinction throughout the following discussion.

Granger causality relation has been tested for time series observations for the period 1959-60 to 1997-98 on yearly rate of change in intensity of labour disputes on the one hand, and yearly growth of labour productivity, employment and fixed capital stock on the other.

(i) Labour Disputes: No association with growth of productivity, employment and earnings

Summarised results of the analysis given in Table 11 show that intensity of labour disputes and yearly growth of labour productivity in Kerala's factory sector have moved independently of each other; one series has not Granger caused the other (see Thomas, 2003 for detailed results). Similarly, intensity of labour disputes is found to have no association with yearly growth of employment (see Table 11). In short, labour disputes have had little association with growth performance of factory sector in Kerala. Modern

industries like chemicals constitute the bulk of the total value added by Kerala's factory sector (as shown in Thomas, 2003), whereas labour agitations in Kerala have been more a phenomenon of traditional, unorganised sector industries. Therefore, although intensity of labour disputes has been high in Kerala, it has produced little impact on growth of value added or productivity in the State's factory sector.

(ii) Labour Disputes: Long term negative association with investment

There is, however, weak evidence that points to a long-term association between increase in intensity of labour disputes and slowing down of investment to the State's factory sector. Bilateral Granger causality exists between intensity of labour disputes and yearly growth of fixed capital stock at a lag of 5 years, but only at 10 per cent significance level (see Table 11). Higher incidence of labour disputes this year helps predict the lower size of investment 5 years later, just as the lower size of investment this year helps predict the higher incidence of labour disputes 5 years later.

Apparently, this result supports an often repeated argument that Kerala has suffered from an 'image' problem, that entrepreneurs, rightly or wrongly, believed that labour relations in Kerala are problematic (Thampy, 1990). Going by this line of argument, an escalation of labour tensions at any point in time would accentuate the fears of an entrepreneur and discourage him from making investments in Kerala. The lag length of 5 years between disputes and investment does appear unconvincingly long. But it must be remembered here that the time lag between investment decision and actual investment in India is high – or at least it used to be very much so during the stricter years of licensing. Sharp rise in labour disputes this year can affect investment decisions this year itself, but actual investments (that appear in data) only a few years later.

Table 11

Granger causal relation between labour disputes and growth performance of factory sector, Kerala, 1959-60 to 1997-98: A Summary of Results

Direction of Granger Causation	Does Granger Causality exist?	At Lag Length:	Direction of Granger Causation	Does Granger Causality exist?	At Lag Length:
DISP→LP	No	-	LP→DISP	No	-
DISP→EMP	No	-	EMP→DISP	No	-
DISP→FC	Yes*	5	FC→DISP	Yes*	5

Notes: * significant only at 10 per cent level.

For detailed results and methodology employed, see Thomas (2003)

DISP is intensity of labour disputes (mandays lost due to labour disputes normalised by total number of factory employees). LP, EMP and FC are respectively rates of change (over the previous year) of Labour Productivity, Total Employment and Fixed Capital stock.

Source: ASI Summary Results, various issues; Indian Labour Statistics and Indian Labour Year Book, various issues

3. Productivity and Labour Costs, and their Association with Labour Disputes

Occurrence of labour disputes has not directly slowed down industrial growth much, as the above analysis showed. But has it slowed down indirectly - by causing labour costs to rise faster than productivity? We test this below.

Growth of *real wages per day* – which is emoluments per employee man-day deflated by Consumer Price Index for Industrial Labourers (CPIIL) - indicates actual improvement in living conditions of workers or the success of labourer's demands for wage increases. Growth of *employee earnings* – which is total emoluments earned by an employee in a year deflated by Whole Sale Price Index (WPI) of manufacturing – on the other hand, represents increase in labour cost to the employer due to each factory employee. Growth of labour productivity (value added per employee) in Indian manufacturing is determined by factors exogenous to labour such as growth of output and growth of capital intensity (see Thomas, 2003). If growth of employee earnings exceeds the exogenously determined growth of labour productivity, it indicates that labour costs are rising faster than productivity and that the factory sector will not be profitable in the long run.

It is very important to note that in the factory sector, real wages per day in Kerala have been lower than the countrywide average for most of the period 1959-60 to 1996-97. This is different from our earlier finding in regard to the informal sector, where wages for workers in Kerala are higher than the national average. From their low initial levels, real wages grew faster in Kerala than in the whole country during the period 1959-97: however, at the end of the period in 1994-97, real wages of Rs. 40 only in Kerala was still lower than the average Indian level of Rs. 45 (at constant 1982 prices) (see Figure 3).¹⁸

(i) A Comparison of Growth Rates

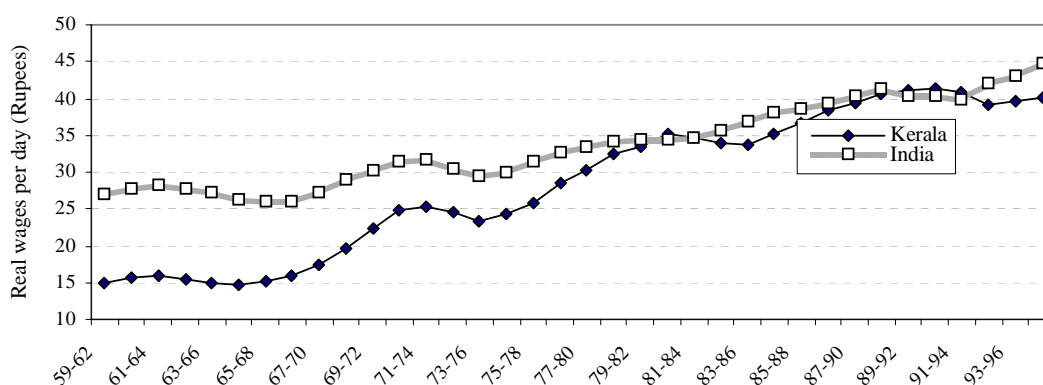
During the whole period 1959-60 to 1997-98, growth of labour productivity (LP) has been faster than growth of employee earnings (ERS) in Kerala as well as in the whole country (see Table 12): value added by a factory employee grew at rates that were compensating enough compared to the growth of labour costs due to him. However, if growth comparisons are made separately for the two sub-periods 1959-60 to 1978-79 (the 1960s and 1970s) and 1979-80 to 1997-98 (the 1980s and 1990s), the following important observations are obtained.

In Kerala's total factory sector, real wages grew faster than the countrywide average and labour costs grew faster than productivity during the 1960s and 1970s; alternatively, real wages grew slower than in the country and labour costs grew slower than

productivity during the 1980s and 1990s (see Table 12). Thus profitability in Kerala's factory sector has suffered from rising labour costs during the 1960s and 1970s, but not during the 1980s and 1990s. Interestingly, the 1960s and 1970s, periods of rising wage costs, were also periods of higher intensity of labour disputes in Kerala. Have wage rises in Kerala had any association with labour disputes? The next section attempts to explain the mechanism of growth of labour cost in the factory sectors of Kerala and other Indian States.

Figure 3

Real Wages per Day at Constant (1982) Prices, Factory Sectors of Kerala and India, 1959-60 to 1996-97 (Three- year Averages in Rupees)



Notes: Real wages per day is emoluments per employee man-day deflated by Consumer Price Index for Industrial Labourers (CPIIL). Data on mandays employed was not available for 1997-98.

Source: ASI Summary Results, various issues

Table 12

Rates of Growth of Real Wages per Day, Employee Earnings (ERS) and Labour Productivity (LP): Factory Sectors of Kerala and India, 1959-98

Period	Kerala	India	Kerala	Kerala	India	India
	Real Wages per day		ERS	LP	ERS	LP
1959-98	3.3	1.5	3.59	4.2	2.29	3.7
1959-79	4.26	1.07	3.76	3.11	1.42	1.77
1979-98	1.5	1.7	3.3	3.7	3.4	6.7

Notes: All growth rates are significant at less than 5% level. They are calculated using semi logarithmic regression.

Real wages per day is emoluments per employee man-day deflated by Consumer Price Index for Industrial Labourers (CPIIL). Employee earnings is total emoluments earned by an employee in a year deflated by Wholesale Price Index (WPI) of manufacturing)

Source: ASI Summary Results, various issues

(ii) Association of Labour Costs with Labour Productivity and Labour Disputes: Kerala in a Comparative Perspective

Yearly rate of change in labour costs (employee earnings) in Kerala and 14 other major Indian States during the period 1959-60 to 1997-98 are regressed on yearly rate of change in labour productivity and yearly rate of change in intensity of labour disputes. Results for Kerala and 4 other Indian States, which are/were major industrial regions, are shown in Table 13. The 4 States are Tamil Nadu and Karnataka, which are Kerala's neighbouring States, and Maharashtra and West Bengal, the two States which other than Kerala have the highest intensity of labour disputes in the country.

We expect changes in employee earnings to be positively related to changes in labour productivity. Employee earnings is the product of wages per day and number of days of employment in a year. As intensity of labour disputes increases, number of days of employment will decrease and wages per day will increase (or even decrease), the extent of increase depending on the success of labour disputes in causing wage increases. A negative relation between changes in employee earnings and changes in the intensity of labour disputes suggests that employee earnings decline as intensity of labour disputes increases, or that the rise in wage rates that occurred along with an increase in intensity of disputes has not been high enough to compensate for the loss of earnings due to the lesser number of days worked. On the other hand, a positive relation suggests that rise in wage rates is so high that an employee earned higher even though he has been out of work, due to labour disputes, for a larger number of days.

Table 13

Selected Results from Regression for Indian States: Earnings = f (Labour Productivity (PROD), Labour Disputes (DISP)), 1959-98

	1959-79		1979-98		1959-98	
	PROD	DISP	PROD	DISP	PROD	DISP
Kerala	0.317*** (11.22)	-1.0E-03 (-1.35)	0.392*** (9.52)	-0.008 (-1.04)	0.361*** (7.43)	-1.0E-04 (-0.10)
Tamil Nadu	0.465*** (8.29)	-0.01** (-2.2)	0.011 (-0.17)	-0.03*** (-3.46)	0.316*** (4.41)	-0.007 (-0.99)
Karnataka	0.258*** (11.37)	0.011*** (3.37)	0.551*** (11.38)	-0.028*** (-5.57)	0.306*** (7.71)	-0.007 (-1.26)
Maharashtra	0.446*** (6.38)	-1.0E-03 (0.24)	0.249*** (7.82)	0.004*** (3.65)	0.293*** (7.45)	0.004** (2.43)
West Bengal	0.319*** (3.89)	-0.012 (-1.36)	0.094*** (3.08)	0.011** (2.65)	0.095** (2.35)	-0.006 (-0.89)

Notes: t-ratio is given in parenthesis. ***significant at less than 1% level; **significant at less than 5% level; *significant at less than 10% level

Rates of change over the previous year of earnings per employee are regressed on rates of change of labour productivity and rates of change of intensity of labour disputes for the period 1959-60 to 1997-98 for 15 major Indian States. Equations for the different Indian States are estimated together in a Seemingly unrelated regression (SUR) framework. System Weighed R-Square = 0.8167 and Degrees of Freedom (DOF) = 225 for the period 1959-60 to 1978-79; System Weighed R-Square = 0.7902 and DOF = 225 for 1979-80 to 1997-98; System Weighed R-Square = 0.3364 and DOF = 491 for 1959-60 to 1997-98.

Source: Calculations from ASI Summary Results, various issues; Indian Labour Statistics and Indian Labour Year Book, various issues.

(a) Growth of Employee Earnings and Growth of Labour Productivity -- High Degree of Positive Association in Kerala's Factory Sector: Results show that growth of employee earnings in Kerala has been proportionate to increases in labour productivity -- much more than it has been in other major Indian States. In Kerala, a 1 per cent increase in labour productivity is associated with a 0.317 per cent increase in employee earnings during the period 1959-60 to 1978-79 and an even higher 0.392 per cent increase during the period 1979-80 to 1997-98. During the whole period 1959-60 to 1997-98, the association between earnings and productivity is the highest in Kerala among the 5 States compared: a 1 per cent increase in labour productivity is associated with a 0.36 per cent increase in earnings in Kerala compared to 0.29 per cent only in Maharashtra or 0.09 per cent only in West Bengal (see Table 13).

(b) Increase in Intensity of Labour disputes -- Not Associated with Fast Growth of Wage Rates in Kerala's Factory Sector: Increase in man-days lost due labour disputes in Maharashtra and West Bengal during the period 1979-80 to 1997-98 has been associated with rise in wage rates high enough so that employee earnings did not decline in these

States even when employees worked for lesser number of days due to labour disputes. The coefficient of disputes is positive and significant in Maharashtra and West Bengal for the period 1979-80 to 1997-98. A similar situation did not happen in Kerala in any of the time periods under study. In the regression equations for Kerala for all the time-periods, the coefficients of disputes have a negative sign, although the coefficients are not statistically significant. (The coefficients are negative and significant in Tamil Nadu for the time periods 1959-60 to 1978-79 and 1979-80 to 1997-98. Increase in incidence of labour disputes in this State has been associated with a decline in employee earnings)(see Table 13).

Therefore, in Kerala's factory sector, growth of employee earnings has moved in accordance with increases in labour productivity, particularly during the 1980s and 1990s; and occurrences of labour disputes have had little negative association with industrial growth and productivity. This finding is very important given the general belief that industrial slowdown in Kerala is "caused by" what are vaguely called "labour disputes".

V. CONCLUDING REMARKS

Intensity of labour disputes in Kerala is one of the highest in the country, and labour in Kerala has been frequently criticised for the industrial backwardness of the State. The chief aim of this paper has been to examine whether the strong labour organisation and the frequent incidence of labour disputes in Kerala have slowed down industrial progress of the State.

This paper shows that they have not -- with a few qualifications, though. Econometric analysis in this paper showed that, in Kerala's factory sector, occurrence of labour disputes and growth performance have been exogenous to each other, that wage increases have been commensurate with productivity growth, and that wage increases have had little association with labour disputes. All these results flies in the face of the popular view on Kerala that its industrial slowdown is caused by labour problems. However, the possibility of a negative association between labour disputes and investment to the State cannot be ruled out. Traditional industries suffered a major decline in Kerala, even as labourers in Kerala fought for decent working conditions and fair wages.

As modern industries were slow to emerge and generated only too few jobs, Kerala's labour market faced a crisis: work participation rates declined; educated unemployment is the highest of all States in the country; and the relatively better educated workers in

Kerala had little option but to work in relatively (all relative to India) less value adding economic activities.

Can workers in Kerala be held responsible for the decline of traditional industries in and a possible slow down of investment (as the analysis hinted at) to the State? In the light of the findings from this paper we may argue that they cannot be. Because the real reason behind the above mentioned features in Kerala's labour market is not the struggles against exploitation by worker organisation in Kerala, but the sheer absence of worker organisation in other parts of India. Vast numbers of India's labourers in rural and urban areas are far from organised, work under highly exploitative conditions, and are paid extremely low wage rates. Against this Indian context, the experience of labour movement in Kerala has been a singular one, in that it could bring in all sections of labour force including those in the informal sector into its fold. Wage rates of casual as well as agricultural workers in Kerala have risen, and are higher than the Indian average. But for the same reason, capital, which is highly mobile within India, may have found Kerala a less attractive place to invest in, particularly in those industries which intensively use unskilled labour, and also in those traditional industries, in which Kerala do not have any location-specific advantages.

The glitter of achievements by worker organisation in Kerala has been significantly diminished, as industries in Kerala never moved from the traditional to the more advanced technologies – due to problems that have their origins in inadequate state intervention (as I have argued in Thomas, 2003). With raising levels of literacy and worker organisation, industries based on traditional technologies, labour exploitation and cheap wages could no longer sustain in Kerala. But that was definitely not the end of the road. As Alice Amsden noted, none of the late industrialisations proceeded on the basis of stagnant wages; wages rose in all late industrializing countries from their low initial levels, quite impressively so in Japan and Korea. In Korea, such rapidly rising wages were an inducement to workers to learn the imported technologies (Amsden, 1989, ch.8). For all the wage increases in the informal sector, wage levels in the factory sector of Kerala even today are not higher than the Indian average (see Figure 3), and definitely much lower than the levels in East Asian countries. This implies that great possibilities existed in Kerala during all the previous decades (and exist even today) for industrialisation based on intensive use of skilled labour. That such a possibilities have not been explored much or even discussed adequately is the major failure in Kerala's industrialisation so far.

Notes

- ¹ Data obtained from *World Development Indicators*, 2002, The World Bank, Washington, CD-ROM.
- ² Calculated from the regression equation $\log y = a + b \log x$, where y is number of employees and x is total gross value added. Elasticity of employment is the estimate of b. *Source*: ASI Results for Factory sector, various issues.
- ³ See Eapen (1994) on the trends and their explanations regarding rural non-agricultural employment in Kerala during the 1970s and 1980s.
- ⁴ See CDS (1975) Table 31, p.75.
- ⁵ See Ramachandran, 1996, pp. 255-274 for a review of Kerala's achievements in education.
- ⁶ See the discussion in Meier and Rauch, 2000, pp. 216-7.
- ⁷ As elsewhere, educated unemployment in Kerala resulted in frustration among educated labour and to substitution of qualified people by people who are overqualified. See Sen, 1980, pp.140-4 for a discussion on educated unemployment.
- ⁸ See Isaac (1997) for further details.
- ⁹ See the estimates of emigrant workers from Kerala from surveys conducted by the Directorate of Economics and Statistics (DES) in 1982 and 1987, cited in Isaac (1997). See also the estimates by Gulati and Modi (1983).
- ¹⁰ According to estimates by Zachariah et al (1999), based on a sample survey of 10,000 households.
- ¹¹ In 1991, of the total 278.9 million main workers in the country, 252.1 million (90.4 per cent) worked in the unorganised sector and only 26.8 million worked in the organised sector. See Breman (1996) Table 1.1
- ¹² See State Planning Board, 1984, ch.5, pp. 56-61.
- ¹³ See *FACT Annual report 1973-74*, FACT Registered Office, Udyogamandal, Kochi.
- ¹⁴ See Vijayasankar, 1986, for more details on these struggles by head load workers.
- ¹⁵ See *FACT Annual report 1973-74*, pp.4-9 FACT Registered Office, Udyogamandal, Kochi.
- ¹⁶ Table 9 shows that only a very low proportion of the total mandays lost due to disputes occurs in coir industry in all the decades and particularly during the 1960s and 1970s. This may not be true. There may have been under reporting of the labour disputes in coir industry.
- ¹⁷ See Kerala State Industries Department, Government Order (G.O.) No.Ms. 552/62/ID Dated 28-07-1962
- ¹⁸ It may be noted here that one reason for the low average level of real wages in Kerala is the predominance in the State's factory employment of cashew industry workers, who survive under extremely low wage rates. I have done a comparison of real wages between Kerala and India for all two-digit industries that constitute the factory sector. Real wage levels in Kerala are not higher than the Indian average for most of the two-digit industries (see Thomas, 2003).

References

- Albin, Alice (1990), "Manufacturing Sector in Kerala - Comparative Study of Its Growth and Structure", *Economic and Political Weekly*, Vol. 25, No 37, September 15, pp. 2059-70.
- Amsden, Alice H. (1989), *Asia's Next Giant - South Korea and Late Industrialisation*, Oxford University Press, New York.
- Anand, S. (1986), *Migrant Construction Workers: A Case Study of Tamil Workers in Kerala*, Dissertation submitted to Jawaharlal Nehru University for the award of Master of Philosophy degree in Applied Economics, Centre for Development Studies, Thiruvananthapuram.
- Bhagwati, Jagdish N. and Chakravarty, Sukhamoy (1969), "Contributions to Indian Economic Analysis: A Survey", *The American Economic Review*, Vol. 59, No. 4, Part 2 (Supplement), September.
- Breman, Jan (1996), *Footloose Labour: Working in India's Informal Economy*, Cambridge University Press, Cambridge.
- Centre for Development Studies (CDS) (1975), *Poverty, Unemployment and Development Policy: A Case Study of Selected Issues with Reference to Kerala*, United Nations, New York.

-
- Eapen Mridul, (1994), "Rural Non-Agricultural Employment in Kerala – Some Emerging Tendencies", *Economic and Political Weekly*, Vol.29, No.21, May 21, pp.1285 – 96.
- Government of Kerala (1977), *Statistics for Planning 1977*, Directorate of Economics and Statistics, Thiruvananthapuram.
- (1980), *Statistics for Planning 1980*, Directorate of Economics and Statistics, Thiruvananthapuram.
- (1984), *Report of the High Level Committee on Industry, Trade and Power, Volume III, Report on Power Development*, State Planning Board, Thiruvananthapuram.
- (1993), *Statistics for Planning 1993*, Department of Economics and Statistics, Thiruvananthapuram.
- (2001), *Statistics for Planning 2000*, Department of Economics and Statistics, Thiruvananthapuram.
- Gulati, I.S. and Modi, Ashoka (1983), "Remittances of Indian Migrants to the Middle East: An Assessment with special reference to Migration from Kerala State", Working Paper No. 182, Centre For Development Studies, Thiruvananthapuram.
- Heller, Patrick (1999), *The Labour of Development – Workers and the Transformation of Capitalism in Kerala, India*, Cornell University Press, Ithaca.
- Isaac, Thomas, T. M. (1997), "Economic Consequences of Gulf Migration" in Zachariah, K.C. and Rajan, S.I. (eds.) (1997), *Kerala's Demographic Transition: Its Determinants and Consequences*, Sage Publishers, New Delhi.
- Kannan, K.P. (1981), "Evolution of Unionisation and Changes in Labour Process under Lower Forms of Capitalist Production – A Study of the Cashew Industry of Kerala" Working Paper No.128, Centre For Development Studies, Thiruvananthapuram.
- (1988), *Of Rural Proletarian Struggles – Mobilization and Organization of Rural Workers in South –West India*, Oxford University Press, New Delhi.
- (1995), "State and Union Intervention in Rural Labour: A Study of Kerala", *The Indian Journal of Labour Economics*, Vol.38, No.3.
- Krishnamurthy, J. (1983), "The Occupational Structure" in Kumar, Dharma (ed.) (1983), *The Cambridge Economic History of India Vol.2: c.1757 – c.1970*, Cambridge University Press, Cambridge, pp.533-50.
- Meier, Gerald M. and Rauch, James E. (2000), *Leading Issues in Economic Development*, Seventh edition, Oxford University Press, New York.
- Nair, G.K. (2002), "Cashew companies sneaking out", *Business Line*, March 23.
- Nair, Ramachandran, K. (1973), *Industrial Relations in Kerala*, Sterling Publishers Private Limited, New Delhi.
- National Sample Survey (2001), *Employment and Unemployment Situation in India 1999-2000*, (Part – I), NSS 55th Round: July 1999-June 2000, No. 458, Ministry of Statistics and Programme Implementation, Government of India.
- Oommen, M.A. (1981), "Mobility of Small Scale Entrepreneurs: A Kerala Experience", *Indian Journal of Industrial Relations*, Vol. 17, No.1, June.
- Panikkar, P.G.K. and Sunny, Grace (1973), "Industrial Distribution of Workforce in Kerala", Working Paper No. 11, Centre For Development Studies, Thiruvananthapuram.
- Patnaik, Prabhat (1994), "Critical Reflections on Some Aspects of Structural Change in the Indian Economy" in Byres, Terence J (ed.) (1994), *The State and Development Planning in India*, Oxford University Press, New Delhi, pp.109 – 31.
- Ramachandran, V. K. (1996), "On Kerala's Development Achievements" in Dreze, Jean and Sen, Amartya (eds.) (1996), *Indian Development – Selected Regional Perspectives*, Oxford University Press, New Delhi, pp.205 – 356.
- Subrahmanian, K. K. (1990), "Development Paradox in India-Analysis of Industrial Stagnation" *Economic and Political Weekly*, Vol. 25, No 37, September 15, pp.2053 – 58.
- and Pillai, Mohanan. P. (1986), "Kerala's Industrial Backwardness – Exploration of Alternate Hypotheses" *Economic and Political Weekly*, Vol. 21, No 14, April 5.
- Thampy, M.M. (1990), "Wage Costs and Kerala's Industrial Stagnation: Study of Organized Small-scale Sector", *Economic and Political Weekly*, Vol.25, No.37, September 15, pp.2077-82.

-
- Thomas, Jayan Jose (2003), *Industrial Structure and Industrial Backwardness: A Case Study of Kerala*, Ph.D thesis submitted to Indira Gandhi Institute of Development Research (IGIDR), Mumbai.
- Vijayasankar, P.S. (1986), *The Urban Casual Market in Kerala: A Study of the Head load Workers of Trichur*, Dissertation submitted to Jawaharlal Nehru University for the award of Master of Philosophy degree in Applied Economics, Centre for Development Studies, Thiruvananthapuram.
- Zachariah, K.C.; Mathew, E.T. and Irudaya Rajan, S. (1999), "Impact of Migration on Kerala's Economy and Society", Working Paper No. 297, Centre For Development Studies, Thiruvananthapuram.

Serial Publications

- Central Statistical Organisation, *Annual Survey of Industries*, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- National Accounts Statistics*, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- Statistical Abstract India*, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- Government of India, *Indian Labour Statistics*, Ministry of Labour, Labour Bureau, Shimla/Chandigarh.
- Indian Labour Year Book*, Ministry of Labour, Labour Bureau, Shimla/Chandigarh.