Working Paper 384

OF MIGRATION IN KERALA, 1999-2004 ANALYSIS OF PANEL DATA

K. C. Zachariah S. Irudaya Rajan

Working Papers published since August 1997 (WP 279 onwards) can be downloaded from the Centre's website (www.cds.edu)

ECONOMIC AND SOCIAL DYNAMICS OF MIGRATION IN KERALA, 1999-2004 ANALYSIS OF PANEL DATA

K. C. Zachariah S. Irudaya Rajan

May 2007

Original version of this paper was presented at the Indo-French workshop on Indian Migration held at Laboratoire d'Anthropologie Urbane, Paris, during 14-15 November 2006. This workshop was organised by S. Irudaya Rajan and Marie Percot, CNRS, Paris. The authors are grateful for the comments received during the seminar.

ABSTRACT

Panel studies based on the same set of sample households or individuals at two points of time 5 or 10 years apart are time consuming and are relatively rare in social science research. Such a method, however, was used in the South Asia Migration study (SMS) conducted by the Centre for Development Studies in 2004. About 125 of the 200 Panchayats surveyed in SMS were the same as those surveyed in Kerala Migration Study (KMS) in 1999. About 5 thousand of the 10 thousand households of SMS in 2004 were the same as those selected in KMS in 1999. About 14 thousand individuals in the 2004 sample households were the same as those enumerated in 1999. Thus, SMS provides comparable panel data for about 125 Panchayats, about 5 thousand households and about 14 thousand individuals at an interval of 5 years. Analysis of these panel data is the objective of this paper.

The analysis of the panel data validated the trend in migration, remittances, employment and unemployment patterns, consumption habits, etc shown by the KMS and SMS (using the full set of 10,000 households). The trends shown by the full set of data were more or less the same as shown by the panel data using the same set of households. Thus, the panel analysis showed that sampling errors were within acceptable limits in both these studies.

A special feature of the panel analysis was that it could provide quantitative measures of shifts in employment pattern of the labour force during 1999-2004. An equally important result of the panel analysis is the information it provided on process of employment of those unemployed in 1999 and the background information on the economic activity of the unemployed in 2004. Thus, the panel analysis provides valuable information on the transition of the unemployed before becoming unemployed and the transition after becoming unemployed. A one time survey cannot give such information. This is a unique feature of this panel study described in this Working Paper.

Key Words: International Migration, Remittances, Unemployment, Replacement Migration, Kerala

JEL Classification: J21, J23

Introduction

This Working Paper is on dynamics of the socio-economic characteristics of external and internal migration in Kerala during 1999-2004. It is based on panel data collected in the South Asia Migration Study conducted by the Centre for Development Studies in 2003/04. Conclusions on the changes in the socio-economic characteristics of migrants based on panel data are unaffected by sampling errors as the same sample of households are used in both. That is one unique feature of the analysis provided in this paper. Secondly, question such as what had happened to the persons identified as unemployed in 1999 during 1999-2004 is answered with the help of a set of panel data. This paper gives follow up of the activity status of those enumerated in the earlier study. Only panel data can provide such analyses

The paper is organized into three parts. It starts with the analysis of about 14 thousand individuals enumerated in 1999 as well as 2004. This analysis is followed by the analysis of the 5 thousand common households. Third, the 125 common Panchayats are analyzed. In each of these cases, only special areas that are appropriate for the data are selected for the detailed analysis*

^{*} Not all the 5000 households from the 125 selected Panchayats could be traced in the 2004 survey. Some of the households had moved out during 1999-2004. Only 4795 households were included in this panel analysis. Not all members enumerated in 1999 in these 4795 households could be traced based on name, date of birth etc in 2004. The panel study includes only 14,114 individuals.

I Migration and Remittances

Panel data provide a means to estimate emigration and return emigration for 2004 and 1999 from the same set of 4795 households. These estimates can be used to measure increases in the number of emigrants and return emigrants by districts and for the state as whole. Such comparison is not vitiated by sampling errors. According to these estimates the number of emigrants in Kerala in 2004 was 19.3 lakh compared with an estimate of 18.4 lakh from the full data. For 1999, the panel estimate was 13.7 lakh. The corresponding estimate from the full data was 13.6 lakh. Thus, the full data set seems to have underestimated the number of emigrants in 2004.

The Panel data indicated that return emigrants were 9.3 lakh in 2004 and 7.6 lakh in 1999. The corresponding numbers from full data were 8.9 lakh and 7.4 lakh respectively. Again the full data seem to have underestimated return emigration in 2004 but not in 1999. The number of Non-Resident Keralites according to panel data was 28.6 lakh in 2004 and 21.3 lakh in 1999 showing an increase of 34 percent. The full data showed that NRK numbered 27.3 lakh in 2004 and 21.0 lakh in 1999 with an increase of 30 percent.

Earlier analysis based on full data indicated that the total remittances to Kerala in 2004 were Rs. 18.5 thousand crore. This estimate was based not entirely on SMS data but also on the trends in emigration and relation between emigration and remittances in the past. A part of the total remittances, household cash remittances, was estimated using SMS data alone. The estimate was Rs. 5.509 thousand crore. For the state as whole, cash remittances received by households as estimated by the panel data were about 3 percent higher than the estimate from the full data. Thus, data on household remittances were relatively accurate at the state level.

The main contribution of the panel data is that they validated, in general, the estimates of migration and remittances made from the full

data. Conventional sample surveys can at best provide standard errors of the various estimates. Panel data enable the analyst to control for sampling variation. Analysis of panel data provided convincing evidence to conclude that the estimates of migration at the state level were fairly accurate. Estimate from the full sample was not vmuch different from that from the 125 common panchayats or from the 4795 common households. Return migration estimates were more stable than emigration or out-migration.

II Panel Data at the Individual Level

Although the five thousand common households should have about 23 thousand members, not all the members in the 1999 sample could be matched with members in the 2004 survey. Clear matching, by way of name, year of birth, etc, could be done only for about 14, 114 individuals. Among the various individual characteristics that could usefully be analysed, we have selected in this section only characteristics of the economic sector of activity.

Economic Sector

Out of the total 14,114 persons common both in 1999 and 2004, 10781 had been 15 years or older in age in 1999. It is those 10,781 persons who are the objects of this analysis. Table 1 gives the distribution of these persons by the sector of their employment sector in 1999 cross-classified by the sector of their employment in 2004. How many of those who had been employed in the Government sector in 1999, for example, remained in the Government sector itself in 2004? How many moved out to other sectors? Which are the sectors to which they moved?

The diagonal figures given in Table 1 indicate the proportions of persons who remained in the same economic sector. For all the sectors, combined about 52 percent of the total workers remained in the same economic sector in 2004 as they had been in 1999 (sum of all the diagonal frequencies divided by the total of all frequencies --10,781). The other 48 percent moved to other economic sectors.

Table 1: Distribution by Employment Sector in 2004 by Employment Sector in 1999*

	1	2	3	4	7	8	10	11	12	Total
Government	56.7	37.6	4.9	1.0	0.8	4.9	1.8	0.5	2.9	3.7
Semi-Govt	7.5	27.5	10.7	0.7	1.1	5.0	3.8	0.2	0.0	1.9
Private	2.4	6.4	16.1	2.2	2.9	3.5	6.2	0.6	1.4	2.4
Self-Employm	4.2	4.6	17.4	39.2	10.3	11.7	6.4	2.2	4.3	10.7
Unpaid Family	0.0	0.0	1.3	2.9	0.5	1.2	0.8	0.7	2.9	1.1
Agricutltral lab	0.5	0.9	1.8	10.6	9.5	2.9	0.8	1.9	2.9	6.2
Non Agri.lab	3.3	5.5	27.3	20.9	57.9	24.5	16.0	3.1	10.0	19.6
Unemployed	1.2	2.8	6.5	2.7	2.8	22.5	34.2	4.6	0.0	6.7
Not requiring	3.1	1.8	4.2	8.5	4.0	1.2	0.5	6.3	35.7	8.4
Student	0.5	0.0	0.3	0.1	0.4	1.9	23.6	0.1	0.0	2.1
Household	5.2	1.8	6.0	7.5	8.6	19.2	5.7	78.2	8.6	33.0
Retired	15.5	11.0	3.4	3.8	1.1	1.6	0.1	1.5	31.4	4.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

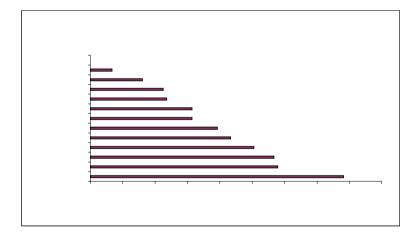
Table 2: Distribution by Employment Sector in 1999 by Employment Sector in 2004*

	1	2	3	4	7	8	10	11	12	Total
Government	60.0	10.2	4.7	3.7	3.2	6.2	4.0	5.0	0.5	98.0
Semi-Govt	15.6	14.6	20.0	4.9	9.3	12.7	16.1	4.4	0.0	98.0
Private	3.8	2.7	23.8	12.3	18.8	6.9	20.7	8.0	0.4	97.0
Self-Employment	1.6	0.4	5.8	50.5	14.8	5.2	4.9	6.9	0.3	90.0
Unpaid Family	0.0	0.0	4.3	36.8	7.7	5.1	6.0	20.5	1.7	82.0
Agri. Labour	0.3	0.1	1.0	23.5	23.7	2.2	1.0	10.4	0.3	63.0
Non Agri.labour	0.7	0.3	5.0	14.7	45.6	6.0	6.6	5.4	0.3	85.0
Unemployed	0.7	0.4	3.4	5.5	6.3	16.0	41.1	23.0	0.0	96.0
Not requiring job	1.4	0.2	1.8	14.0	7.3	0.7	0.4	25.5	2.8	54.0
Student	0.9	0.0	0.4	0.4	2.6	4.3	89.2	1.7	0.0	100.0
Household duties	0.6	0.1	0.6	3.1	4.0	2.8	1.4	80.0	0.2	93.0
Retired	15.1	2.7	3.0	12.8	4.3	1.8	0.2	12.6	5.0	58.0
Total	3.9	1.0	3.6	13.8	15.4	4.8	8.1	33.8	0.6	85.0

^{*} Employment sectors (5,6 and 9 in 1998 are omitted in Tables 1& 2. Therefore the totals in the Table 2 do not add to 100 (last column)

The important conclusion which emerges from this analysis is that the employment situation in Kerala was very dynamic during the period 1999-2004. Nearly half the workers changed their sector of employment during this period.

The most volatile of the 12 economic sectors was employment as unpaid family worker. Not too large a proportion had been employed in this sector in 1999 but ninety three percent of those who had employed in 1999 moved out of the sector and took up jobs in other sectors. The most stable economic sector was "household duties", a sector dominated by women. Seventy-eight percent of persons engaged in household duties in 1999 remained in the same sector of household duties in 2004. The 12 economic sectors are arranged according to the degree of stability in Figure 1. A few of these sectors are discussed below:



Unemployment

Some insight into the unemployment situation in Kerala is obtained by analyzing what happened during 1999-2004 to those who had been unemployed 1999. In terms of the degree of stability, unemployment sector ranks very low, 10 in a rank of 12. Most of the unemployed in 1999, about 77 percent, did not remain unemployed after 5 years. This is an important aspect of the unemployment situation in Kerala.

About 25 percent of the unemployed in 1999 became labourers in the non-agricultural sector in 2004. About 19 percent engaged themselves in household duties. Twelve percent became self-employed. These details are given below for all those who had been unemployed in 1999 and separately for those who were educated up to secondary or high level among them.

100 persons unemployed in 1999 in 2004 100 Educated Unemployed in 1999 in 2004

23 remained unemployed	31 remained unemployed
27 became labourers	17 labourers
12 self employment	5 self employment
10 Government, semi government job	15 Government, Semi-Govt
4 other gainful employment	6 other gainful employment
24 outside labour force	26 outside labour force

Among the educated unemployed in 1999, 31 percent remained unemployed even in 2004; fifteen percent received government or semi government jobs, a surprisingly high proportion, 17 percent, became labourers in the non-agricultural sector; and about quarter of them -26 percent- gave up continuing in the labour force.

Unemployed in 2004, what had been their status in 1999?

The majority of the unemployed in 2004 had been either students (41 percent) or persons engaged in household duties (23 percent). About 16 percent had been unemployed in 1999. About 6 percent had been labourers in non-agriculture. Nearly 6 percent had been self-employed. The rest had been in Government services or in the job not required category. It is important to note that most of the unemployed in 2004 had not been unemployed in 1999.

100 who were unemployed in 2004

41 were students in 1999
23 were engaged in household duties in 1999
16 were unemployed in 1999 also
6 were labourers in non-agricultural sector in 1999
6 were self-employed in 1999

Some of the individuals in the panel data had been return migrants in 1999. It is of interest to know what economic activity these return migrants were engaged in 2004. Table 3 gives the distribution of return emigrants and return out-migrants by economic activity in 2004.

Table 3: Distribution of Return Emigrants and Return
Out-migrantsin 1999 by Economic Activity in 2004

Economic Activity	REM	ROM
Government Service	1.7	4.5
Semi-Government	1.0	2.5
Private Sector	2.1	2.5
Self-Employment	9.6	10.0
Unpaid family worker	1.8	0.5
Agricultural Labourer	3.7	3.2
Non-Agricultural labourer	13.8	16.2
Unemployed	8.4	7.7
Job not required	9.2	7.4
Student	13.2	9.1
Household duties	33.1	28.9
Retired, etc	2.4	7.7
Total	100.0	100.0

The majority of the return migrants were not working; 66.3 percent of the return emigrants and 60.8 per cent of the return out-migrants.

About a-third of the return emigrants and 39.2 percent of the return outmigrants were gainfully employed. The proportions compare well with 39.7 per cent of gainful employment among the general population. From the point of view of unemployment rate, the proportion among the return migrants is only slightly lower than among the general population.

The general conclusion that follows is that return migrants to Kerala participate in economic activities of the state as much as the members of the general population. They are not a group of retirees doing nothing and enjoying the luxury of their hard earned money earned during their earlier work in other countries or states. Migration has not made much of a mark in the employment status of the return migrants in Kerala, as different from that of the rest of the population.

II Household Level Analysis

About 5000 households (50 percent) enumerated in SMS were from among those enumerated in 1999 in KMS. However, after scrutiny and editing of the data, only 4795 households could be identified as those enumerated in 1999. These 4795 households are the ones used for analysis in this section.

Unlike in the case of personal level data, which we used for an analysis employment sector only, the panel data at the household level are used for analysis of a variety of variables, some of which are household variables and others pertaining to characteristics of persons.

Components of Change in Household Population

The 4795 sample households included in the two surveys had 23,730 persons in 1999 and 21,389 persons in 2004. SMS included some persons who were born after 1999 and/or migrated into Kerala during 1999-2004. KMS included some persons who died and/or migrated out of Kerala during 1999-2004. The overall situation is indicated by the statistics given below in Table 4.

Table 4: Components of Change in Household Population

	KMS	SMS	Net Att	rition
No. of Households	4795	4795	0	
No of Persons	23730	22989	741	
Born during 1999-2	2004 and sur	viving		1600
Gross Attrition due	to mortality	and migration	1999-20	04
	= 23730-22	2989+1600	= 2341	
Net attrition	= 2341-1600		= 741	

Thus, during 1999-2004, the 4795 sample households in KMS experienced a net attrition of 741 persons. The net change is the result of increase in numbers due to births and marriages (1600) and decrease through mortality and migration of 2341 persons.

Household Size

The distribution of the sample households by size is given in Table 5 for 1999 as well as for 2004. During 1999-2004 some households, especially small households of 1999, increased their size, which some especially large households decreased their size; only a few remained unchanged in size. About 38 percent of the sample households increased their size, 28 percent decreased their size and 34 percent remained unchanged. Among 2-member households of 1999, 66 percent had increased size while 33 percent of them remained unchanged. The decrease in size was negligible. On the other hand, among households with 9 or more persons in 1999, 71 percent decreased in size and 16 percent increased. Although the number of households which experienced increases were more numerous than those that decreased, in terms of the number of total members the number in 2004 was lower than in 1999. There was a decrease in the total number of persons in the 4795 households enumerated in 1999 and 2004.

Table 5: Distribution of Households by Size, 1999 and 2004

	No. of HHS		Per			
	1999	2004	Decreased	Increased	Unchanged	All
1	88	139	0.0	69.8	30.2	100.0
3	350 625	418 725	1.0 8.7	66.5 64.1	32.5 27.2	100.0 100.0
4 5	1227 1041	1181 983	18.2 32.8	35.9 28.4	45.9 38.9	100.0 100.0
6	636	599	47.9	21.7	30.4	100.0
7	316	272	58.1	21.0	21.0	100.0
8	173	152	44.1	19.7	36.2	100.0
9+	339	326	70.6	13.5	16.0	100.0
Total	4795	4795	28.1	37.6	34.3	100.0

Attrition by Age

In Table 6, we present the number of persons in each age-group as between 1999 and 2004.

Table 6 indicates that there was attrition among the population of Kerala in the early age groups (up to 40 years) and gains (negative attrition) at older age groups. Attrition at younger age groups could have been mostly due to migration as mortality is not very significant in these age groups. Attrition due to mortality could be significant at older ages, but the figures show negative attrition or gains. The net effect of migration and mortality is a gain of population in these ages. The inference to be drawn is that Kerala experiences fairly large amounts of in-migration at older age groups, and that their numbers are larger than the number of deaths at these age groups. The net result is a gain in the elderly population, accentuating to the old age problems in the state. Direct information on net in-migration to Kerala at older ages is not generally

Table 6: Attrition by age group*, 1999 and 2004.

	KMS	SMS	Attrition (%)
0-4	1717	1600	6.8
5-9	1871	1608	14.1
10-14	2190	1764	19.5
15-19	2323	2050	11.8
20-24	2361	2230	5.5
25-29	2136	1915	10.3
30-34	1806	1784	1.2
35-39	1759	1608	8.6
40-44	1374	1485	-8.1
45-49	1384	1341	3.1
50-54	1109	1291	-16.4
55-59	996	1164	-16.9
60-64	953	984	-3.3
65-69	726	798	-9.9
70-74	507	604	-19.1
75-79	293	380	-29.7
80+	226	246	-8.8

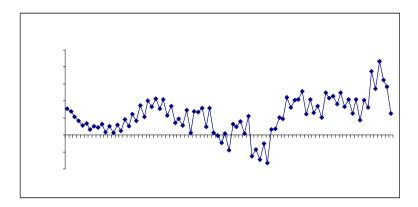
^{*} A positive number means attrition or decrease; a negative number indicates gain.

available. The data given above support the general view that old age problem in Kerala is intensified by the in-migration of the elderly in large numbers from other state (Keralites who had migrated out at their younger ages and have been returning after retirement)

Attrition by Cohort

Figure 2 gives attrition rate by year of birth (cohort). Those were who had been of the age group of 10-14 years in 1999, for example, may be compared with persons who were 15-19 years of age in 2004. The two groups are born in the same calendar years. The graph shows that almost all birth cohorts experienced attrition except those who were

born between 1945 to 1955, or those who were about 55-60 years of age in 2004. Every other cohort experienced decreases in their numbers, due to migration in the younger ages and mortality at older ages. It is through formation of new households that Kerala sustains its limited population growth.



Emigration

Panel data provide a means to estimate emigration and return emigration for 2004 and 1999 from the same set of 4795 households. These estimates can be used to measure increases in the number of emigrants and return emigrants by districts and for the state as whole. Such comparison is not vitiated by sampling errors. The results of the analysis are given in Tables 7 and 8.

According to these estimates the number of emigrants in Kerala in 2004 was 19.3 lakh compared with an estimate of 18.4 lakh from the full data. For 1999, the panel estimate was 13.7 lakh. The corresponding estimate from the full data was 13.6 lakh. Thus, the full data set seems to have underestimated the number of emigrants in 2004. The two estimates were the same for 1999. The full data indicated that return emigrants were 9.3 lakh in 2004 and 7.6 lakh in 1999. The corresponding numbers from full data were 8.9 lakh and 7.4 lakh respectively. Again

the full data seem to have underestimated return emigration in 2004 but not in 1999. The number of Non-Resident Keralites according to panel data was 28.6 lakh in 2004 and 21.3 lakh in 1999 showing an increase of 34 percent. The full data showed that NRK numbered 27.3 lakh in 2004 and 21.0 lakh in 1999 with an increase of 30 percent

Table 7: Emigrants, Return emigrants and Non-resident Keralites, 2004 and 1999: Panel data and Full data

		2004	1999	% Increase
EMI	Full	18.4	13.6	35.0
	Panel	19.2	13.7	40.8
REM	Full	8.9	7.4	20.9
	Panel	9.3	7.6	22.6
NRK	Full	27.3	21.0	30.0
	Panel	28.6	21.3	34.3

The difference between Panel data and full data is much larger at the district level than at the state level (Table 9). At the state level, the full data seem to have underestimated the increase in the number of non-resident Keralites by about 4 percentage points. But under-estimation is much larger in the districts of the former Travancore state, the largest being in Alappuzha district where the difference between the two estimates was as high as 72 percent. On the other hand, there was considerable overestimation in the northern Malabar districts, particularly Kannur and Kasargod.

Employment and Unemployment

The 4795 households included 17752 persons 15 years and above of age in 1999 and 18199 persons in 2004 indicating an increase of 2.5 percent in the 5-year period. Distribution of employment status of the adult persons is given in Table 10.

Table 8: Estimate of Emigration by District from Panel Data at the Household Level

	Emigration		% Increase	% Increase Return Emigrants		
	2004	1999		2004	1999	
Thiruvananthapuram	180259	138971	29.7	127326	122198	4.2
Kollam	135808	99259	36.8	88205	63165	39.6
Pathanamthitta	159659	105267	51.7	77295	58207	32.8
Alappuzha	77145	34826	121.5	33062	22162	49.2
Kottayam	75022	24965	200.5	18402	8738	110.6
Idukki	8160	6327	29.0	2720	7592	-64.2
Ernakulam	94129	100360	-6.2	68063	52039	30.8
Thrissur	195095	153508	27.1	111276	116168	-4.2
Palakkad	227090	156117	45.5	61934	49384	25.4
Malappuram	332560	275677	20.6	133024	129731	2.5
Kozhikode	170586	116088	46.9	118213	75592	56.4
Wayanad	8798	3972	121.5	2933	2648	10.8
Kannur	197574	108123	82.7	58852	34655	69.8
Kasaragode	65325	45311	44.2	31029	18407	68.6
KERALA	1927210	1368771	40.8	932334	760685	22.6

Table 9: Comparisons of Increases NRK from Household Level Panel Data with the Corresponding Increase Shown by the Full Data, by Districts

	Panel	Data	% Increase	Full Data	Difference
	2004	1999		% Increase	
Thiruvananthapuram	307586	261169	17.8	8.6	9.6
Kollam	224013	162423	37.9	23.0	14.9
Pathanamthitta	236955	163474	44.9	42.9	2.0
Alappuzha	110208	56989	93.4	21.2	72.0
Kottayam	93423	33703	177.2	151.5	26.7
Idukki	10880	13919	-21.8	-6.1	-15.7
Ernakulam	162192	152398	6.4	31.5	-25.1
Thrissur	306371	269676	13.6	-4.7	18.3
Palakkad	289023	205502	40.6	50.0	-9.4
Malappuram	465583	405408	14.8	-1.7	16.5
Kozhikode	288799	191681	50.7	56.3	-5.6
Wayanad	11731	6620	77.2	46.7	30.9
Kannur	256426	142777	79.6	113.0	-33.4
Kasaragode	96354	63718	51.2	114.6	-63.4
KERALA	2859544	2129456	34.3	30.0	4.3

Table 10: Distribution of Persons 15 years and above by Employment Status and Sex In 1999 and 2004

Employment Status	1999			20		
	M	F	Т	M	F	T
Gainful Employment	6100	1551	7651	5859	1468	7327
Not in Labour Force	1868	7192	9060	2079	7120	9199
Unemployed	532	509	1041	695	978	1673
Total	8500	9252	17752	8633	9566	18199
Percent Increase						
1999-2004	1	M	F		T	
Gainful Employment	-4	.0	-5.4		-4.2	
Not in Labour Force	11	.3	-1	0.1		1.5
Unemployed	30	.6	92.1		60).7
Total	1	.6	3	3.4	2	2.5

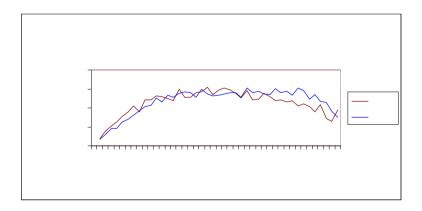


Table 10 indicates that according to panel data the number of gainfully employed persons experienced a decline of 4 percent, that the population outside the labour force showed a very modest increase of 1.5 percent and that unemployment increased by a whooping 61 percent

There are some differences between the numbers in respect of males and females. The differences are relatively small as far as the number of gainfully employed person concerned. While the number of persons outside the labour force showed an overall increase of 1.5 percent, the increase was 11.3 percent among males and a decrease of 1 percent among females. The number unemployed increased by 61 percent, 31 percent among males and 92 percent among females.

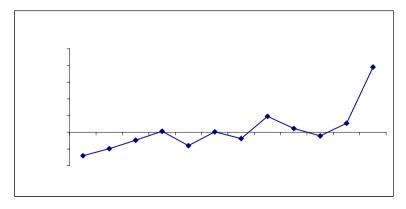
Gainfully Employed Persons

Full data indicated that gainful employment in Kerala was 9.7 million in 1999 and 10.1 million in 2004 indicating an increase of 442 thousand persons or by 4.6 percent. The same data indicated a decrease of 43 thousand among gainfully employed females.

The panel data given above came to a different conclusion. Assuming that the panel data give a better estimate (not affected by sampling error at the Panchayat level) SMS seems to have overestimated the increase in gainful employment. SMS gave a gain of 4.5 percent while Panel data give a decrease of 4.2 percent during 1999-2004.

Gainful Employment by age

As shown by Figure 4, gainful employment showed decrease at younger ages and increase at older ages. The change from negative



changes to positive change is relatively steady. It seems that those who get employed remain employed for a longer period than during the earlier years, that reducing the employment opportunities of the younger generation. This could be one of the factors responsible for the increase in unemployment in 2004.

Gainful Employment by Economic Sectors

Table 11 indicates that the decrease in gainful employment was shared by all economic sectors except the semi-government sector (comprising aided schools/colleges, co-operatives and local administration institutions etc). Another sector, which experienced increase in employment was at the non-agricultural labour, which experienced a hefty increase of 20 percent in the five-year period. The largest decline in employment was observed in the private sector, presumably due to emigration of employees from this sector.

Table 11: Gainful Employment by Economic Sectors

		Percent increase
		1998-03
1	Government Employment	-8.0
2	Semi-Government	48.3
3	Private Sector	-34.6
4	Self-Employment	-28.7
5	Unpaid family worker	-7.6
6	Agricultural labour	-2.1
7	Non-Agr. Labour	20.7
	Total	-5.0

Persons not in Labour Force

Among the economically inactive persons, (pensioners, elderly persons and handicapped persons) showed the highest increase during 1999-2004, nearly by 5 times (425 percent). On the other hand, the unemployed not seeking jobs and persons engaged in household duties showed some decrease during the period (See Table 12). There was some increase in the number in the case of students. Age-wise classification showed that the increase in the number of pensioners was evident at all age groups above 40 years of age, the maximum number being in the 50-59 age group.

Table 12: Percent Increase in the Number of Persons not in Labour Force, 1999-04

	%
Unemployed not seeking a job	-21.8
Students	12.4
Household duties	-3.5
Pensioners, elderly, handicapped	425

Unemployment

Full data indicated that the unemployment rate increased from 11.2 percent to 19.2 percent during the 5-year period 1999-2004. The panel data indicated that the unemployment rate increased from 12.0 percent to 18.6 percent, or by 6.6 percentage points. Thus, the fact that the unemployment rate increased very significantly during 1999-2004 is well established.

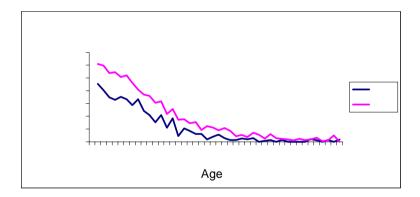
Unemployment was higher among females, 24.7 percent in 1999 and 40.0 percent in 2004 than among males, that is 8.0 percent in 1999 and 10.6 percent in 2004. Thus increase in unemployment was evident in both the sexes, but the increase among females was much higher among

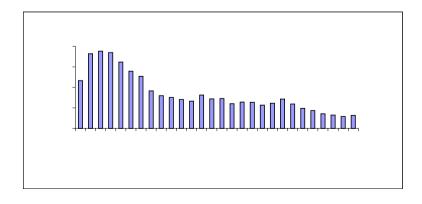
females: by 15.3 percentage points among females compared with only 2.6 percentage points among males.

In the 4795 panel households, the number of unemployed persons increased by 60.7 percent during 1999-2004. The increase was as much as 92.1 percent among females compared with 30.6 percent among males.

Age as a factor in Unemployment

Unemployment rates are higher at younger ages than at older ages. This was true in 1999 and also in 2004. But the rates were consistently higher in 2004 than in 1999. Thus the overall increase in unemployment rate during 1999-2004 was shared by all ages (See figures 5 and 6)





Aging and Unemployment

The above analysis provided new insights on the increase in unemployment rate in Kerala during 1999-2004. The hypothesis is that aging has been a factor in the increase in unemployment rate in Kerala during 1999-2004. We have seen that unemployment rate is much higher at younger ages than at older ages. Therefore, a decrease in population at younger ages should contribute to a decrease in overall unemployment rate. A five-year period is too short an interval for any significant change in age composition. The decrease in the proportion of population at younger ages is relatively small, and as a consequence, decrease in unemployment rate should also be small. Calculations show that the possible decrease should be only about 1 per 1000 persons in the labour force. From this point of view, increase in unemployment rate during 1998-2004 could not be due to the age factor.

But there is another side to the story that could show that aging could be a factor in the increase in unemployment rate. Demographic transition causes not only decreases in the population in the younger age groups, but also increases in older age groups. As an increasing number of persons live beyond the age of 55 years (the retirement age in Kerala), the number of gainfully employed persons at older age groups would increase. Since more and more persons continue to be retained in their jobs after ages 50 or 55 years, fewer and fewer employment opportunities would open to the younger generation. As employed people tend to remain employed for longer periods, conversely unemployed persons too remain unemployed for longer periods. Thus, the aging process, which is taking place rapidly in Kerala, could have been a factor in the increased unemployment rate in Kerala. Aging as factor in increased unemployment is likely to be more relevant in the coming years. A few calculations, based on data from KMS and SMS, are given below to support this conclusion (Tables 13 and 14).

Table 13: Ratio (Percent) of gainfully employed at ages 50+ (55+,60+) to gainfully employed at ages 16-49 (16-54 years, 16-59 years) in 1999 and 2004

Ages	Ratio as Percent				
	1999	2004			
50+ to 15-49	28.0	34.7			
55+ to 15-54	16.2	18.8			
60+ to 15-59	9.2	15.8			

Table 14: Gainfully employed at ages 50+, 55+,60+ to total population 50+, 55+ 60+ years

	1999	2004
50+ years	38.7	47.3
55+years	32.1	39.7
60+years	27.3	37.0

These figures indicate that the proportions of gainfully employed persons at older age groups have increased considerably during 1999-2004: from 28 percent in 1999 to 35 percent in 2004 for persons at ages 50+ years, from 16 percent to 19 percent for those at ages 55+ years and from 9 percent to 16 percent at ages 60+ years. The overall conclusion is that with aging, the employed persons remain employed for longer periods causing opening of fewer new employment in the state. Thus, aging could have been one of the factors in the increased unemployment rate in the state during 1999-2004.

Unemployment and Education

Full data has shown that education was closely related to unemployment in Kerala, that there was very little unemployment among

persons with less than primary education, and that unemployment rate is the highest among secondary educated persons.

Panel data more or less support the differentials as indicated by the full data. Unemployment rate is the highest among the secondary educated persons and that the increase in unemployment rate during 1999-2004 was also the highest among secondary educated persons (Table 15). Thus, the change in the unemployment scene as indicated the SMS data was not much vitiated by sampling error.

Table 13. Chemployment Nate by Education	Table 15:	Unemployment R	ate by Education
--	-----------	-----------------------	------------------

		Panel D	ata	F	ull Data	
Edu*	1999	2004	increase	1999	2004	increase
1	0.0	1.2	1.2	0.1	1.2	1.1
2	0.3	1.2	0.9	0.3	1.4	1.1
3	1.6	0.8	-0.8	1.1	1.3	0.2
4	1.3	2.2	0.9	1.2	1.7	0.5
5	9.4	11.8	2.4	8.2	12.1	3.9
6	23.6	38.0	14.4	23.1	38.5	15.4
7	31.0	35.7	4.7	31.4	36.4	5.0
Total	12.0	18.6	6.6	11.2	19.2	8.0

^{* 1=} illiterate; 2= literate without schooling; 3 = below primary; 4 = primary;

Unemployment Rate and Emigration

Emigration could have contributed to the increase in unemployment rate. Two possible reasons were given for the proposition. One, emigration through remittances increases chances of higher education among family members. Since unemployment and education are positively correlated, emigration could be mentioned as one of the factors

^{5 =} below secondary; 6 secondary but no degree; 7 = degree

causing higher unemployment in 2004; two, remittances enable family members to remain unemployed as there was no compelling reason for accepting immediately any job that come in their way. However, no statistical evidence has been given to support the association between emigration and unemployment. We attempt to furnish some evidence.

Table 16: Unemployment Rate by Number of Emigrants in a Household

No of Emigrants In the household	Unemployr Total Pop			ment Rate Educated
1999	2004 1999		2004	
0	11.1	17.5	224.0	36.7
1	17.6	26.8	29.9	48.6
2	22.9	28.1	44.8	50.0
All HHs	12.0	18.6	23.0	38.0

It is evident from Table 16 that unemployment rate among persons in households with emigrants, is much higher than among persons in households without emigrants. Unemployment increases steadily with the number of emigrants.

Such a relationship was observed in 1999 as well as in 2004. In both the years, unemployment is higher in households with emigrants than in households without emigrants. The rate is higher in households with 2 emigrants than in households with 1 emigrant. It is higher among households with 1 emigrant than in households without any emigrant.

One possible criticism of this conclusion could be the spurious effect of education. Emigration is higher among higher educated persons. Unemployment rate is also higher among higher educated persons.

Therefore, the positive relation between unemployment and emigration could be actually indicative of a positive relation between unemployment and education. To check this, we calculated the relationship between unemployment and emigration for secondary educated persons only. The estimates show that a high positive association between emigration and unemployment rate is observed strongly when education factor is controlled, that is by doing the analysis among secondary educated persons alone.

Remittances

Earlier analysis based on full data indicated that the total remittances to Kerala in 2004 were Rs. 18.5 thousand crore. This estimate was based not entirely on SMS data but also on the trends in emigration and relation between emigration and remittances in the past. A part of the total remittances, household cash remittances, was estimated using SMS data alone. The estimate was Rs. 5.509 thousand crore.

The Panel data (4795 common households) provided information on cash remittances received by households in 1999 and 2004. The rates of increase in cash remittances received by households in the various districts are given in Table 17.

For the state as whole, cash remittances received by households as estimated by the panel data were about 3 percent higher than the estimate from the full data. Thus, data on household remittances were relatively accurate at the state level. However, there are large differences between the panel data and thr full data with respect to the districts. Some glaring differences were noticed in districts where remittances were on the whole very small, particularly in Wayanad, Idukki and Kasaragod.

Table 17:Percent Increase in Household Cash Remittances by Districts

	Percent Increas	se 1999-2004	
	Panel Data	Full Data	Difference
Thiruvananthapuram	22.6	17.0	-5.7
Kollam	71.5	104.3	32.8
Pathanamthitta	64.8	40.0	-24.8
Alappuzha	39.9	40.5	0.6
Kottayam	48.3	55.9	7.6
Idukki	575.7	290.6	-285.1
Ernakulam	20.1	13.8	-6.2
Thrissur	103.6	88.8	-14.7
Palakkad	10.2	16.0	5.9
Malappuram	81.5	61.2	-20.4
Kozhikode	34.4	67.2	32.7
Wayanad	2281.0	159.6	-2121.4
Kannur	36.7	55.1	18.4
Kasaragode	405.9	191.0	-214.9
Kerala	56.7	53.7	-3.0

Housing Amenities and Household Durables

Information obtained in the survey on housing amenities and household durables was not much affected by sampling. The full data give more or less the same level of consumer possessions or household amenities. Table 18 gives data for all households and those that had an emigrant.

Table 18:Percentage households with various Household and Consumer Possession among Households with Emigrants in 2004

	All households		Emig	rants
	Full	Panel	Full	Panel
High Quality houses	22.2	21.3	45.6	45.3
Electrification of houses	85.3	86.2	97.2	97.3
Use of LPG for cooking	34.5	34.9	58.8	47.8
Possession of:				
Car	2.8	2.8	12.3	14.6
Taxi	6.0	6.0	3.4	2.9
Scooter	15.8	15.2	19.2	19.8
Telephone	43.6	43.7	79.0	79.6
Cell Phone	6.8	6.8	13.4	14.0
Television	59.9	60.5	79.9	79.7
VCR	17.1	17.0	37.5	38.4
Refrigerator	30.2	30.2	62.5	60.4

III Panchayat Level Analysis

Panchayat level data are used for testing a particular aspect of the study, namely, the reliability of changes in migration estimates by districts during 1999 and 2004. Some districts such as Kottayam, Kannur and Kasargode experienced large increases in the number of NRKs. Are these increases real, or are they due to the sampling error? Household level analysis showed that migration estimates at the state level are fairly

reliable. This section checks the consistency of migration estimates using Panchayat level data.

About 50 percent of the sample localities were new and the other 50 percent were the same as those used in KMS. It is a fact that the localities vary considerably with respect to the number of emigrants, return emigrants, out-migrants and return out-migrants. Is the increase in migration in a district due to the set of new localities used in the 2004 study? Had we used the same set of localities in both the studies, would there have been this much increase/decrease in the number of migrants?

To answer this question we estimated two sets of estimates of the total number of migrants for each district. The first set used the 125 localities common to KMS and SMS studies (OLD localities). The second set used all the 225 localities. The increase in migration during 1999-2004 is given in Table 19.

At the state level, the differences are not very large for external migration. The common 125 localities showed an increase of 40 percent while all the 225 localities showed an increase of only 30 percent. Thus sampling factor tends to reduce the growth of NRK during 1999-2004. Had the same sample localities been used in both 1999 and 2004, the growth of NRK during the 5-year period would have been 40 percent.

While the common localities gave a 50 percent increase in emigration during 1999-2004, all localities together show only 35 percent increase. However, the difference is relatively small for REM and ROM (See Table 19). The general conclusion that follows is that sampling does have an effect on migration estimate at the state level but the effect is relatively large at the district level. Migration estimation at the district level should be used with some reservation.

Table 19: Migration Estimates of Common Panchayats, 1999 and 2004

	1999 (125 panchayats)			2004 (125 panchayats)				
	REM	EMI	ROM	OMI	REM	EMI	ROM	OMI
Thiruvananthapuram	147850	151847	127795	42044	101431	176123	48361	37492
Kollam	88537	93429	78284	64775	82982	165734	16828	49035
Pathanamthitta	68998	112499	63223	95303	97901	173647	94306	105769
Alappuzha	18518	36622	110745	74706	41583	83608	136725	86852
Kottayam	7128	24912	54056	31835	18272	73789	54522	178338
Idukki	6543	8748	9002	6516	1461	9305	3722	3534
Ernakulam	59023	108652	76212	44590	85726	110473	157203	32894
Thrissur	130181	133674	189576	64247	107771	220084	164163	106845
Palakkad	46214	171773	182696	71303	52937	221853	149300	283705
Malappuram	129918	264007	24936	22170	143243	316923	38797	38563
Kozhikode	49197	96138	57896	25030	143947	194889	83382	46669
Wayanad	3650	4527	23271	1995	2686	8725	11411	2776
Kannur	26089	85579	24104	31992	46096	178653	18169	81561
Kasaragode	17510	41849	28878	43518	50211	68535	93654	66227
KERALA	799358	1334255	1050676	620023	976247	2002341	1070543	1120260

Table 20: Percent Increase in Migration in Common and All Panchayats, 1999-2004

		Common 1	Panchayats			All Pan	chayats	
	REM	EMI	ROM	OMI	REM	EMI	ROM	OMI
Thiruvananthapuram	-31.4	16.0	-62.2	-10.8	-13.3	28.6	-49.1	-10.9
Kollam	-6.3	77.4	-78.5	-24.3	-6.5	44.2	-57.3	-28.5
Pathanamthitta	41.9	54.4	49.2	11.0	53.1	37.1	107.6	8.9
Alappuzha	124.5	128.3	23.5	16.3	24.7	19.4	-38.7	-6.7
Kottayam	156.3	196.2	0.9	460.2	56.2	200.2	29.0	297.2
Idukki	-77.7	6.4	-58.7	-45.8	-24.9	6.6	-62.4	-54.7
Ernakulam	45.2	1.7	106.3	-26.2	65.3	16.9	235.2	32.9
Thrissur	-17.2	64.6	-13.4	66.3	-26.3	11.0	-25.8	-8.6
Palakkad	14.5	29.2	-18.3	297.9	40.2	63.3	10.2	10.2
Malappuram	10.3	20.0	55.6	73.9	14.4	-8.4	82.9	111.3
Kozhikode	192.6	102.7	44.0	86.5	79.1	44.3	14.9	134.5
Wayanad	-26.4	92.7	-51.0	39.1	15.8	69.2	-52.3	-52.3
Kannur	76.7	108.8	-24.6	154.9	60.6	129.8	-21.6	193.7
Kasaragode	186.8	63.8	224.3	52.2	184.8	84.4	210.4	8.2
Kerala	22.1	50.1	1.9	80.7	20.9	35.0	3.7	61.3

Table 21: Percentage Difference of NRK Estimates from Different Data Sources

	125 Panchayats	4795 households	Full (225 localities	Diffe	rence
	(1)	(2)	(3)	(3)-(1)	(3)-(2)
Thiruvananthapuram	-7.4	17.8	8.6	16.0	-9.2
Kollam	36.7	37.9	23.0	-13.7	-14.9
Pathanamthitta	49.6	44.9	42.9	-6.7	-2.0
Alappuzha	127.0	93.4	21.2	-105.8	-72.2
Kottayam	187.3	177.2	151.5	-35.9	-25.7
Idukki	-29.6	-21.8	-6.1	23.5	15.7
Ernakulam	17.0	6.4	31.5	14.5	25.1
Thrissur	24.3	13.6	-4.7	-28.9	-18.3
Palakkad	26.1	40.6	50.0	23.9	9.4
Malappuram	16.8	14.8	-1.7	-18.5	-16.5
Kozhikode	133.1	50.7	56.3	-76.8	5.6
Wayanad	39.5	77.2	46.7	7.1	-30.5
Kannur	101.3	79.6	113.0	11.8	33.4
Kasaragode	100.0	51.2	114.6	14.6	63.4
Kerala	39.6	34.3	30.0	-9.6	-4.3

Conclusions

The main areas of analysis of panel data were the same as those of the full data, namely migration, remittances, employment and unemployment, utilization of household ameneties, household durables, etc. This being the case what is the special contribution of the panel data over the full data? Although the topics of analysis were the same the depth of analysis was deeper with the panel data.

The main contribution of the panel data is that they validated in general, the estimates of migration and remittances made from the full data. Conventional sample surveys can at best provide standard errors of the various estimates. Panel data enable the analyst to control for sampling variation. Analysis of panel data provided convincing evidence to conclude that the estimates of migration at the state level were fairly accurate. Estimate from the full sample was not much different from that from the 125 common panchayats or from the 4795 common households. Return migration estimates were more stable than emigration or out-migration. However, the analysis also showed that although estimates were quite reliable in a few other districts, the estimates were not quite consistent in some districts.

Some important conclusions about employment and unemployment which emerged from the panel study are the following: The Employment sector in Kerala is found to be highly dynamic. Nearly half the labour force changes their sectors of employment during a five-year period. The panel data established more firmly the fact of stagnation in the employment sector suggested by the full data. Unlike the full data, the panel data showed all-round negative growth of gainful employment - both among males and females - and in most employment sectors. Nearly 80 percent of the unemployed in Kerala find employment in five years; only 20 percent remain unemployed for more than five years.

A new factor in the increased unemployment rate could be aging. Panel indicated that aging could have contributed to the increase in unemployment rate in Kerala during 1999-2004. As aging in Kerala is going to increase progressively, aging would continue to play a part in keeping the unemployment rate high in the state in the coming years. The fact that emigration has been a factor which contributed to the high order of unemployment rate in Kerala during 1999-2004 is more firmly established with concrete evidence by the panel data.

K.C. Zachariah is Honorary Fellow at the Centre for Development Studies, Thiruvananthapuram and former Senior Demographer, The World Bank, Washington D.C.

S. Irudaya Rajan is Fellow at the Centre for Development Studies, Thiruvananthapuram. Currently he is Chair Professor, Research Unit on International Migration, set up by the Ministry of Indian Overseas Affairs, Government of India, New Delhi. His main areas of research interests are Aging, Migration and Kerala Studies.

email:rajan@cds.ac.in

Bibliography

- Irudaya Rajan, S and Marie Percot. 2007. Dynamics of Indian Emigration.

 Centre for Development Studies, Thiruvananthapuram, Kerala (mimeographed).
- Irudaya Rajan, S and U S Mishra. 2007. Managing Migration in the Philippines: Lessons for India. Centre for Development Studies, Thiruvananthapuram, Kerala (mimeographed).
- Irudaya Rajan, S and Prabhat Kumar. 2007. 'International Migration From India In The Last Two Centuries'. Paper presented at the National Seminar on Indian Economy: Historical Roots and Contemporary Development Experience, held at the Centre for Development Studies, during 31 March-1 April.
- Zachariah, K.C and S Irudaya Rajan. 2007. *Migration and Development:* The Kerala Experience. Daanish Publishers, New Delhi (forthcoming).
- Marie Percot and S Irudaya Rajan. 2007. 'Female Emigration from India: Case Study of Nurses'. *Economic and Political Weekly*, Volume 42, No.4.
- Zachariah, K C and S Irudaya Rajan. 2006. 'Internal Migration in Kerala'.
 Paper presented at the conference on Macroeconomic Policies,
 Agriculture and Institutions: A Conference in Honour of
 Prof. A. Vaidyanathan, held at the Institute for Social and
 Economic Change, Bangalore, during 9-10 April.
- Irudaya Rajan, S and Sunitha Sukendra. 2006. 'Status Note On Indian Domestic Workers (House Maids) In Gulf Countries'. Report prepared for the Ministry of Indian Overseas Affairs, Government of India, New Delhi. (mimeographed)
- Irudaya Rajan S and M S Jayakumar. 2006. 'Revamping The Overseas Recruitment System: Kerala Case Study'. Report prepared for the Ministry of Indian Overseas Affairs, Government of India, New Delhi. (mimeographed)

- Irudaya Rajan. S. 2006. 'Remittances'. Pp. 75-77, In Brij V Lal. 2006 (ed). *The Encyclopedia of the Indian Diaspora. Editions Didier Millet*. Singapore/Paris.
- Irudaya Rajan. S and P R Gopinathan Nair. 2006. 'Saudi Arabia, Oman and the Gulf States'. Pp. 222-233, In Brij V Lal. 2006 (ed). *The Encyclopedia of the Indian Diaspora. Editions Didier Millet*. Singapore/Paris.
- Zachariah, KC, PR Gopinathan Nair and S Irudaya Rajan. 2006. *Return Emigrants in Kerala: Welfare, Rehabilitation and Development.*Manohar Publishers and Distributors, New Delhi.
- Zachariah, K C and S Irudaya Rajan. 2005. 'Unemployment in Kerala at the Turn of the Century: Insights from CDS Gulf Migration Studies'. Centre for Development Studies Working Paper No. 374. Thiruvananthapuram. www.cds.edu
- Zachariah, K C and S Irudaya Rajan. 2004. 'Gulf Revisited: Economic Consequences of Emigration from Kerala Emigration and Unemployment'. Centre for Development Studies Working Paper No. 363. Thiruvananthapuram. www.cds.edu
- Zachariah, K C and S Irudaya Rajan. 2004. 'Gulf Emigration of Women in Kerala' *Samyukta*, a Journal of Women's Studies, Volume IV, No.2, Pp. 41-52.
- Irudaya Rajan, S. 2004. 'From Kerala to the Gulf: Impacts of Labour Migration'. *Asia Pacific Migration Journal*, Volume 13, No.4, Pp. 497-509.
- Zachariah, K C, B A Praksah and S Irudaya Rajan. 2004. 'Indian Workers in UAE: Employment, Wages and Working Conditions'. *Economic and Political Weekly*, Volume XXXIX, No. 22, May 29 2004, Pp.2227-2234.
- Zachariah, KC, ET Mathew and S Irudaya Rajan. 2003. Dynamics of Migration in Kerala. Dimensions, Determinants and Consequences, Hyderabad: Orient Longman Pvt Limited.

- Zachariah, K.C, B A Prakash and S Irudaya Rajan. 2003. 'The Impact of Immigration Policy on Indian Contract Migrants: The Case of the United Arab Emirates'. *International Migration*, Volume 41. No.4, Pp. 161-172.
- Zachariah, K C, KP Kannan and S Irudaya Rajan. 2002. *Kerala's Gulf Connection: CDS Studies on International Labour Migration from Kerala State in India*. Centre for Development Studies (Thiruvananthapuram) Monograph Series.
- Zachariah, KC, BA Prakash and S Irudaya Rajan. 2002. 'Gulf Migration Study: Employment Wages and Working Conditions of Kerala Emigrants in United Arab Emirates'. Centre for Development Studies (Thiruvananthapuram) Working Paper No.326, 2002. www.cds.edu
- Zachariah, KC, PR Gopinathan Nair and S Irudaya Rajan. 2001. 'Return Emigrants in Kerala: Rehabilitation Problems and Development Potential', Centre for Development Studies (Thiruvananthapuram) Working Paper No.319, 2001. www.cds.edu
- Zachariah, KC, E.T. Mathew and S.Irudaya Rajan. 2001a. 'Impact of Migration on Kerala's Economy and Society'. *International Migration*, Volume 39, No.1, Pp. 63-88. (First published as a CDS Working Paper No. 297. www.cds.edu)
- Zachariah, KC, E.T. Mathew and S.Irudaya Rajan. 2001b. 'Social, Economic and Demographic Consequences of Migration on Kerala'. *International Migration*, Volume 39, No. 2, Pp. 43-71. (First published as a CDS Working Paper No. 303. www.cds.edu)
- Zachariah, K C and S Irudaya Rajan. 2001a. 'Gender Dimensions of Migration in Kerala: Macro and Micro Evidence'. Asia Pacific Population Journal, 2001, 16 (3), pp. 47-70.
- Zachariah, K C and S Irudaya Rajan. 2001b. 'Migration Mosaic in Kerala. Trends and Determinants'. *Demography India*, 2001, 30 (1), pp. 137-165.

	Annex I : Questionnaire used for the Study	y in 1998
	Schedule Number	
	KERALA MIGRATION SURV KERALA STATE - INDI	
•	CENTRE FOR DEVELOPMENT	STUDIES
	Migration status: Write the answer as 0, 1, 2 6 Block 5 and 6	etc from
1.	Return migrants from outside India	
2.	Emigrants living outside India	
3.	Return migrants from other states in India	
4.	Out-migrants living in other states in India	

MIGRATION SURVEY

Consequences of International Migration

Schedule 1 BLOCK - 1

Identification Particulars

DistrictT	aluk					
City/PanchayatV	Vard					
Number House No. /House Name						
Name of Informant						
Details about visits to the household	1	2				
Date (s) of Interview						
Name of Investigator						
Name of the supervisor						
Time Taken						

The respondent should be the Head of the household.

If the head of the household is not present, the information should be collected from the immediate responsible person

Block - 2 HOUSE HOLD DETAILS

Diuci	C - Z HOUSE HOLI	ענ	LIAILS									
01	02		03	04	05	i	06	07		08	09	10
Serial	Name of members of		Relation	Sex	Date	of	Place of	Educatio-		15 years	or above	Classification
No.	Household (Head of the HH first)		with the Head	Male – 1 Female – 2	Birtl	n	Birth	nal Status (See code)		Occupat- nal status	Marital Status	
			(Code)						(S	See code)	(See code)	
01												
02												
03												
04												
05												
06												
07												
08												
09												
Husband Unmarri Married Son in la Grand cl Father/M	the Household I/Wife ed children children aw/Daughter in law hild fother/Mother in law	III Li Pri U So qu Pri	rimary P to lower se econdary pass ualification legree holders rimary incom column - 08	ed but no other	3 4 5 6	Sei Un Ag Co Job Job Stu Ho	apployed in Pri- iff employment apaid family wericultural labo- toolies in non-a to seekers to not required adents busehold dutied d age/ Pension	t ork our gric. Sector	3 4 5 6 7 8 9 10 11 12	Divorce Separat Column Married less tha Mala / Married	ted <u>n – 10</u> 1 women wit	re 60 2
In kerala Outside Outside	Kerala Within India	- LE	mployed in Se school/colles	nte /Central Gov emi Govt. Aide ge, co-operative strative bodies.	d	Ur	olumn – 09 nmarried arried		1 2			

Block – 3 MIGRATION STATUS

01	11		12	13		14	15		16	17	
Serial	Ever lived	Ever	lived outside	If there is a	If there is anybody in column 11 a			of Column 12			
No.	outside Kerala	Ker	ala for less	Where was the	Residence code		When did the	Whether the		IF "Yes	" to
	for a period of	tha	n a year for	person living	Withi	n India – 1	person come	perso	n came back	Ques No	o. 16
	one year or more?	wor	k / looking	before coming	Outsi	de India - 2	back to India	to I	ndia on the	from whe	re did
	<i>Yes</i> – 1	for	work / for	to Keala			<i>Yes</i> – <i>1</i>		basis of	he get fin	ancial
	No – 2		studies				No – 2	dec	claration of	suppor	t to
			<i>Yes</i> – 1						amnesty	come b	ack
			No-2								
Abu Dhabi – UAE Dubai – UAE Saudi Arabia – Jeddah Kuwait Muscat Oman Qatar Bahrain Sharja – UAE Iraq & Iran		1 2 3 4 5 6 7 8 9	Singapore, Latin Americ Carebian & West Ir Nepal, Bangl Maldives & USA Europe Africa	s, Malaysia, Hongkong a, Islands dies ladesh, Srilanka,	11 12 13 14 15 16	Others States in Indi Andhra Prade Assam Bihar Gujarat Karnataka Madhya Prade Maharashtra Orissa	sh	18 19 20 21 22 23 24 25 26	Rajasthan Tamil Nadu Uttar Prades West Benga Delhi Pondicherry Others Column 17 No Support Governmen	sh l	28 29 30 31 32 33 34
maq & m	an	10	Australia		17	Punjab		27	Others	•	3

Block – 4 EMIGRATION AFTER 1980

28	Occupation tion status at present						
27	Occupational status at the time of emigration/out - migration						
26	Marital status at the time of emigration /out - migration						
25	Educational status at time of emigration /out-migration A B						
24	Age at when you first went outside Kerala			ock 3			
23				ck 2 and Bl			
22	Reason for going to other states/abroad			used in Bloo			
21	Name of the Reason for When did State/Country going to you go presently other states outside residing abroad Kerala for the first time?			the same codes			
20	Sex			and use			
19	Relation of the member with the head of the He head of the Hold			0 21, 26, 27	-	- 0 w 4	5
18	Resident of this house who have out of kerala after 1980 and stay there still?			Code: For columns 19, 20 21, 26, 27 and use the same codes used in Block 2 and Block 3	Column 22	For Job For seeking job To stay with relatives For studies	Other reasons
01	Serial No.			Codi	Col	For seek To stay v For studi	Oth

BLOCK 5: RETURNED MIGRANTS Returned from Abroad 29.1 2 3 4 1 Serial No. As in Block 2 Name As in Block 2 29.2 Returned from other states 1 2 3 4 Name As in Block 2 **BLOCK 6: CURRENT MIGRANTS** 30.1. Persons residing Abroad 1 2 3 4 Serial No. As in Block 4 Columns 18 and 21 Name As in Block 2 As in Block 4 Columns 18 and 21 30.2. Persons residing in other states 1 2 3 4 Name As in Block 2 As in Block 4 Columns 18 and 21

BLOCK – 7 EXPENSES FOR MIGRATION (FOR THOSE WHO HAD GONE ABROAD)

Qn. 31

1	2	3	4
	1	1 2	1 2 3

BLOCK – 8 SOURCES OF SPENDING FOR MIGRATION ABROAD

Qn. 32

	1	2	3	4
Item				
From own savings				
From family members				
Borrowing from friends				
/relatives/bank				
By selling gold ornaments etc.				
By selling landed property				
Others				

33. Durii	ng the last one year did		
recei [.] India			nember of your family is who is living outside (Go to question 37)
last 1	much money you have 2 months? Total fron	n all emigrai	
enter (1) (2) (3)	of goods you received (it in 35.2) Clothes Gold ornaments Light electricals V.C.R, TV and similar Others		
(1)	of goods you received Clothes Gold ornaments Light electricals V.C.R, TV and similar Others	heavy electi	ircals
35.3 Total	value of goods	(Est	imate)
36.1 How (1) (2) (3) (4) (5) (6) (7) (8) (9)	was this money used? To meed living expense To meet educational pu To pay back debt incur To buy land To pay dowry of relativ To build or renovate he To start a business Agricultural purposes Deposited in Banks Others (Specify)	es of the fan urposes red to by tic	nily

BLOCK - 10 HOUSEHOLD

37.	Is your house electrified? 1. Yes 2. No						
38.	What type of fuel is used for cooking? 1. Wood 3. Kerosene 5. L.P. Gas 2. Electricity 4. Others						
39.	What type of toilet facilities do you have in the house 1. Flush 3. Common latrine facility 2. Pit 4. No latirine facility						
40.	Does any member of this HH owns a house here or elsewhere? 1. Yes 2. No						
41.	When was this house constructed or bought? Year						
42.	Did you take any loan from Govt. or Bank or any other institution to construct or buy your house? 1. Yes 2. No						
43.	Did you get any money from abroad for constructing your house? 1. Yes 2. No						
44.	What is the approximate cost of construction of this house? 1. Below Rs. 20,000 2. Between 20,000 and 1,00,000 3. Between 1,00,000 and 5,00,000 4. Above 5,00,000						
45.	 Type of house which the HH is now occupying Luxurious Very Good (2 bed rooms with attached bathrooms, concrete roof, Mosaic floor) Good (1 bed room, brick and cement walls, concrete or tiled roof) Poor (Brick walls, cement floor, tin or asbestos roof) Kutcha (Mud walls, Mud floor & Tatched roof) 						
46.	How much land, Agricultural & Non-Agricultural together is owned by the members of this HH 1. Wet land (Cents)						

47. Does the household own any	y of the following	
Motor car	Yes	No
2. Taxi	Yes	No
3. Truck	Yes	No
4. Motor Cycle /Scooter	Yes	No
5. Telephone	Yes	No
6. Television	Yes	No
7. VCR/VCP	Yes	No.
8. Radio/ Transistor	Yes	No
9. Sofa set	Yes	No
10. Water pump	Yes	No
11. Sewing Machine	Yes	No
12. Fridge	Yes	No
13. Washing Machine	Yes	No
14. Fan	Yes	No
15. Mixer/Grinder	Yes	No
16. Toaster	Yes	No
17. Gas stove/Electric range	e Yes	No
18. Clock	Yes	No
19. Electric Iron	Yes	No
20. Camera	Yes	No
21. Stereo system	Yes	No
22. Watch	Yes	No
23. Cycle	Yes	No
48. What is your religion & cast	te	
 Schedule Caste/Tribe Nair Ezhawa Syrian Christian Latin Christina 	6. Shia Muslim7. Sunni Muslim8. Others9. Nadar Hindu	

Annex II: Questionnaire used for the Study in 2003
Schedule No.
ECONOMIC CONSEQUENCES OF GULF MIGRATION IN SOUTH ASIA; CASE STUDY OF KERALA, INDIA AND SRI LANKA KERALA STATE – INDIA 2003
Was this Household Included in the 1998 Survey
Yes No
If Yes, Write the questionnaire Number from the 1998 Survey
Number
Migration status: Write the number of Migrants (REM, EMI, ROM, OMI) 1. Return migrants from outside India from Q: 16 2. Emigrants living outside India from Q: 22 3. Return migrants from other states in India from Q: 16 4. Out-migrants living in other states in India from Q: 22

MIGRATION SURVEY

DEMOGRAPHIC CONSEQUENCES

BLOCK - 1

Identification Particulars

DistrictTaluk						
City/PanchayatWard						
NumberHouse No. /House Name						
Name of Informant	Name of Informant					
Details about visits to the household	1	2				
Date (s) of Interview						
Name of Investigator						
Name of the supervisor						

The respondent should be the Head of the Family In the absence of the Head of the family the answers should be collected from the next responsible member

BLOCK - 2 HOUSE HOLD DETAILS

60	Married women whose husband residing outside Kerala -1			tor 7 6 8 8 9 9 11 11 11 2 2 3 3 5
80	Martial Status (Code)			Unpaid family work Agricultural labour Coolies in non-agric. Sector Job seekers Job not required Students Household works Column – 08 Widow / Widower Divorced Separated
07	Occupational Status (Code)			Unpaid family work Agricultural labour Coolies in non-agric Job seekers Job not required Students Household works Column – 08 Unmarried Married Widow / Widower Divorced Separated
90	Educational Status (Code)			w 4 v 0 L 1 2 w 4
05	Date of Birth Month and Year			completed o to Secondary d but have no Degree e /Central Gov ni Govt. Aidee co-operative / tive bodies. vate sector
04	Sex Male - 1 Female - 1			Primary but not completed Primary Upper Primary up to Secondary Secondary passed but have no Degree Degree holders Column - 07 Employed in State /Central Govt. Employed in Semi Govt. Aided school/college, co-operative / local administrative bodies. Employed in Private sector Self employment
03	Relation with the Head (Code)			NHES HHO D NC L
02	Name of members of House hold			Codes: Column - 03 Head of the HH Husband/Wife Unmarried children Son in law/Daughter in law Grand child Father/Mother/Mother in law 7 Column - 06 Illiterate Iliterate Literate without school Education Column - 20
01	Serial No			Codes: Column - 0 Head of the Husband/W. Unmarried of Married chi Son in law/I Grand child Father/Moth Column - 0 Illiterate Literate with

BLOCK – 3 MIGRATION STATUS

01	10	11	12		13	14	15	16	17
	Migration Sta	gration Status of person If atleast one name in column 10 and 11 m column 2							
Serial No.	Ever lived Kerala for a period of one year or more?	Ever lived Outside Kerala for less than a year for work/looking for work/	Year & Month in which the first stayed outside Kerala		Country/State in which the person first stayed outside Kerala	Occupational stataus of the person before living from Kerala (Code of column 7)	Where was the person living before coming to Kerala Sate/Country	Residence code Within India - 1 Outside India - 2	When did the person come back to India Month and Year
			Within	Outside					

BLOCK - 4 INTER STATE AND INTERNATIONAL MIGRATION (AFTER 1980)

28	Occupation at present (Code of column 7)	
27		
26	Martial status at the time of emigration/ out migration (Code of column -8)	
25	Ed E	
24	Age when you first went outside Kerala	
23	Why we want the thing of the thing was a second with the t	
22	Code of the Country presently residing Within India-1 Outside India-2	
21	Sex Name of Code of the State/ the State/ the State/ the Female-1 Country Presently Presently residing Within India-1 Outside India-2	
20	Sex Male -1 Female-2	
19	Relation of the member with the head of the the Hhold (Code of column 3)	
18	Name of members of House hold	
01	Serial	

BLOCK - 5 QUESTIONS TO THE MEMBERS OF THE HOUSEHOLD							
29.	Did anyone in your family gets money or any other things from those residing abrode for the last one year?						
	Yes (If Yes, go to Q.30) No (If No, go to Q.33)						
30.	If Yes, total amount received last year Rs						
31.	Any other things (1) Clothes (2) Gold ornaments (3) Small electrical equipments (4) T.V, V.C.R etc (5) Others (Specify) Total amount Rs.						
32.	In what way did you use the money (1) For day-to-day life (2) Education (3) To repay the debts incurred (4) To purchase land (5) Dowry payment of relatives (6) To built / purchase new house / renovation of old house (7) Business (8) Maintain agricultural land (9) Deposited into bank (10) Others (Specify)						
	nterviewer to note – The amount which is not included in 1. No. 30, 31 should only be included in the below Q. No. 33, 34						
33.	Did anyone in your family residing abroad brought money to build house / to purchase land for the last one year?						
	Yes No						
	If Yes, how much Rs To Purchase / renovation of land To Purchase / renovation of house						
34.	Did anyone in your family brought money for any purpose which is not included above for the last one year?						
	To buy Car/Scooter/Taxi Rs.						
	To start small scale enterprise Rs.						
	Others (Specify) Rs.						
	(For eg: Dowry, education, medical expenses, repayment of debts etc)						
	Total amount Rs.						

BLOCK - 6 HOUSEHOLD								
35.	Is your house electrified? 1. Yes 2. No							
36.	What type of fuel is used for cooking? 1. Wood 3. Kerosene 5. L.P.Gas 2. Electricity 4. Others							
37.	 Type of house which the household is now occupying Luxurious							
38.	Does the family own any of the 1. Motor car 2. Taxi / Truck / Lorry 3. Motor Cycle /Scooter 4. Telephone 5. Mobile Phone 6. Television 7. VCR/VCP 8. Fridge	Yes No Yes No						
39.	What is your religion and caste. (Hindu- 1, Christians - 2, Muslims - 3, Others- 4)							
40.	On which category of religion 1. Scheduled caste/tribe 2. Nair 3. Ezhava 4. Brahmins 5. Other Hindus 6. Roman Catholic 7. Latin Catholic	and caste do you belong to 8. Yacobites 9. Marthomas 10. C.S.I. 11. Other Christians 12. Muslims 13. Others						

BLOCK - 7 EDUCATIONAL STATUS							
41. Do any one in your family go to College / School							
1. Yes 2. No							
If Yes	_	_	_				
42. Serial Number as per Block 2	1	2	3				
43. What type of School 1. Government 2. Private aided 3. Unaided							
44. If he / she school student, for what examination he/she is preparing 1. SSLC 2. ICSE 3. CBSE							
45. If he / she is a college student which type of college 1. Government 2. Private aided 3. Unaided 4. Self Financing							
46. Total educational expenses for one year							
BLOCK - 8 HEAL	TH STAT	US					
47. What type do treatment do you usually get 1. Homeopathy 2. Ayurvedic 3. Allopathic 3. Others (Specify) 48. If Allopathic treatment which type of hospital							
1. Government Hospital 49. If Private Hospital, which type 1. Private Clinic 2. Private Hospital 3. Specialty Hospital	2. Priva	te Hospit	al				
50. How much money did you spend for the last one year: Rs							

CENTRE FOR DEVELOPMENT STUDIES LIST OF WORKING PAPERS

[New Series]

The Working Paper Series was initiated in 1971. A new series was started in 1996 from WP. 270 onwards. Working papers beginning from 279 can be downloaded from the Centre's website (www.cds.edu)

- W.P. 383 SAIKAT SINHA ROY Demand and Supply Factors in the Determination or India's Disaggregated Manufactured Exports:

 A Simultaneous Error-Correction Approach. May 2007
- W.P. 382 SUNIL MANI The Sectoral System of Innovation of Indian pharmaceutical industry. September 2006
- W.P. 381 K.J. JOSEPH, GOVINDAN PARAYIL Trade Liberalization and Digital Divide: An Analysis of the Information Technology Agreement of WTO. July 2006.
- W.P. 380 RUDRA NARAYAN MISHRA Dynamics of Caste-based Deprivation in Child Under-nutrition in India. July 2006.
- W.P. 379 P.L.BEENA, Limits to Universal Trade Liberalisation: The Contemporary Scenario for Textiles & Clothing Sector in South Asia. March 2006.
- W.P. 378 K.N. NAIR, VINEETHA MENON, Lease Farming in Kerala: Findings from Micro Level Studies. November 2005.
- W.P. 377 NANDANA BARUAH, Anti Dumping Duty as a Measure of Contingent Protection: An Analysis of Indian Experience.
 October 2005.
- W.P. 376 P. MOHANAN PILLAI, N. SHANTA Long Term Trends in the Growth and Structure of the Net State Domestic Product in Kerala. October 2005.
- W.P. 375 R. MOHAN, D. SHYJAN Taxing Powers and Developmental Role of the Indian States: A Study with reference to Kerala. August 2005.
- W.P. 374 K. C. ZACHARIAH, S. IRUDAYA RAJAN. Unemployment in Kerala at the Turn of the Century: Insights from CDS Gulf Migration Studies. August 2005.
- W.P. 373 SUNIL MANI, The Dragon vs. The Elephant Comparative Analysis of Innovation Capability in the Telecommunications Equipment Industry in China and India. July 2005

- W.P. 372 MOTKURI VENKATANARAYANA On The Non-Random Distribution of Educational Deprivation of Children in India. July 2005
- W.P. 371 DIBYENDU S. MAITI Organisational Morphology of Rural Industries in Liberalised India: A Study of West Bengal.

 June 2005
- W.P. 370 SUNIL MANI, Keeping Pace with Globalisation Innovation Capability in Korea's Telecommunications Equipment Industry. March 2005.
- W.P. 369 V.R. PRABHAKARAN NAIR, Determinants of Fixed Investment: A Study of Indian Private Corporate Manufacturing Sector. March 2005.
- W.P. 368 J. DEVIKA, Modernity with Democracy?: Gender and Governance in the People's Planning Campaign, Keralam. February 2005
- W.P. 367 VINEETHA MENON, ANTONYTO PAUL, K N NAIR

 Dynamics of Irrigation Institutions: Case study of a Village

 Panchayat in Kerala. February 2005
- W.P. 366 VIJAYAMOHANAN PILLAI N. Causality and Error Correction in Markov Chain: Inflation in India Revisited. December 2004.
- W.P. 365 R. MOHAN. Central Finances in India Alternative to Procrustean Fiscal Correction. November 2004.
- W.P. 364 SUNIL MANI. Coping with Globalisation Public R&D Projects in Telecommunications Technologies in Developing Countries. November 2004.
- W.P.363 K C ZACHARIAH, S IRUDAYA RAJAN. Gulf Revisited Economic Consequences of Emigration From Kerala, Emigration and Unemployment. September 2004.
- W.P.362 M. VENKATANARAYANA. Educational Deprivation of Children in Andhra Pradesh, Levels and Trends, Disparities and Associative Factors. August 2004.
- W.P. 361 K. P. KANNAN, VIJAYAMOHANAN PILLAI N. Development as a Right to Freedom: An Interpretation of the Kerala Model. August 2004.
- W.P. 360 VIJAYAMOHANAN PILLAI N. CES Function, Generalised Mean and Human Poverty Index: Exploring Some Links. July 2004.

- W.P. 359 PRAVEENA KODOTH, Shifting the Ground of Fatherhood: Matriliny, Men and Marriage in Early Twentieth Century Malabar. May 2004.
- W.P. 358 MRIDUL EAPEN. Women and Work Mobility: Some Disquieting Evidences from the Indian Data. May 2004.
- W.P. 357 K. RAVI RAMAN. The Asian Development Bank Loan for Kerala (India): The Adverse Implications and Search for Alternatives. March 2004.
- W.P. 356 VIJAYAMOHANAN PILLAI N. Liberalisation of Rural Poverty: The Indian Experience, March 2004.
- W.P. 355 P.L.BEENA Towards Understanding the Merger-Wave in the Indian Corporate Sector: A Comparative Perspective, January 2004.
- W.P. 354 K.P. KANNAN AND R. MOHAN India's Twelfth Finance Commission A View from Kerala, December 2003.
- W.P. 353 K.N. HARILAL AND P.L. BEENA The WTO Agreement on Rules of Origin Implications for South Asia, December 2003.
- W.P. 352 K. PUSHPANGADAN Drinking Water and Well-being In India: Data Envelopment Analysis, October 2003.
- W.P. 351 INDRANI CHAKRABORTY Liberalization of Capital Inflows and the Real Exchange Rate in India: A VAR Analysis, September 2003.
- W.P. 350 M.KABIR Beyond Philanthropy: The Rockefeller Foundation's Public Health Intervention in Thiruvithamkoor, 1929-1939, September 2003.
- W.P. 349 JOHN KURIEN The Blessing of the Commons: Small-Scale Fisheries, Community Property Rights, and Coastal Natural Assets, August 2003.
- W.P. 348 MRIDUL EAPEN, Rural Industrialisation in Kerala: Re-Examining the Issue of Rural Growth Linkages, July 2003.
- W.P. 347 RAKHE PB, Estimation of Tax Leakage and its Impact on Fiscal Health in Kerala, July 2003.
- W.P. 346 VIJAYAMOHANAN PILLAI N, A contribution to Peak load pricing theory and Application. April 2003.
- W.P. 345 V.K. RAMACHANDRAN, MADHURA SWAMINATHAN, VIKAS RAWAL Barriers to Expansion of Mass Literacy and Primary Schooling in West Bengal: Study Based on Primary Data from Selected Villages. April 2003.
- W.P. 344 PRADEEP KUMAR PANDA Rights-Based Strategies in the Prevention of Domestic Violence, March 2003.

- W.P. 343 K. PUSHPANGADAN Remittances, Consumption and Economic growth in Kerala: 1980-2000, March 2003.
- W.P. 342 D NARAYANA Why is the Credit-deposit Ratio Low in Kerala? January 2003.
- W.P. 341 MRIDUL EAPEN, PRAVEENA KODOTH Family Structure, Women's Education and Work: Re-examining the High Status of Women in Kerala. November 2002.
- W.P. 340 J. DEVIKA, Domesticating Malayalees: Family Planning, the Nation and Home-Centered Anxieties in Mid-20th Century Keralam. October, 2002.
- W.P. 339 M PARAMESWARAN, Economic Reforms and Technical Efficiency: Firm Level Evidence from Selected Industries in India. October. 2002.
- W.P. 338 PRAVEENA KODOTH, Framing Custom, Directing Practices: Authority, Property and Matriliny under Colonial Law in Nineteenth Century Malabar, October 2002.
- W.P. 337 K.NAVANEETHAM, Age Structural Transition and Economic Growth: Evidence From South and Southeast Asia, August 2002.
- W.P. 336 PULAPRE BALAKRISHNAN, K. PUSHPANGADAN, M. SURESH BABU, Trade Liberalisation, Market Power and Scale Efficiency in Indian Industry, August 2002.
- W.P. 335 J. DEVIKA, Family Planning as 'Liberation': The Ambiguities of 'Emancipation from Biology' in Keralam July 2002.
- W.P. 334 E. ABDUL AZEEZ, Economic Reforms and Industrial Performance an Analysis of Capacity Utilisation in Indian Manufacturing, June 2002.
- W.P. 333 K. PUSHPANGADAN Social Returns from Drinking Water, Sanitation and Hygiene Education: A Case Study of Two Coastal Villages in Kerala, May 2002.
- W.P. 332 K. P. KANNAN, The Welfare Fund Model of Social Security for Informal Sector Workers: The Kerala Experience. April 2002.
- W.P. 331 SURESH BABU, Economic Reforms and Entry Barriers in Indian Manufacturing. April 2002.
- W.P. 330 ACHIN CHAKRABORTY, The Rhetoric of Disagreement in Reform Debates April 2002.
- W.P. 329 J. DEVIKA, Imagining Women's Social Space in Early Modern Keralam. April 2002.

- W.P. 328 K. P. KANNAN, K. S. HARI, Kerala's Gulf Connection Emigration, Remittances and their Macroeconomic Impact 1972-2000. March 2002.
- W.P. 327 K. RAVI RAMAN, Bondage in Freedom, Colonial Plantations in Southern India c. 1797-1947. March 2002.
- W.P. 326 K.C. ZACHARIAH, B.A. PRAKASH, S. IRUDAYA RAJAN,
 Gulf Migration Study: Employment, Wages and Working
 Conditions of Kerala Emigrants in the United Arab Emirates.
 March 2002.
- W.P. 325 N. VIJAYAMOHANAN PILLAI, Reliability and Rationing cost in a Power System. March 2002.
- W.P. 324 K. P. KANNAN, N. VIJAYAMOHANAN PILLAI, The Aetiology of the Inefficiency Syndrome in the Indian Power Sector Main Issues and Conclusions of a Study. March 2002.
- W.P. 323 V. K. RAMACHANDRAN, MADHURA SWAMINATHAN, VIKAS RAWAL, How have Hired Workers Fared? A Case Study of Women Workers from an Indian Village, 1977 to 1999. December 2001.
- W.P. 322 K. C. ZACHARIAH, The Syrian Christians of Kerala: Demographic and Socioeconomic Transition in the Twentieth Century, November 2001.
- W.P. 321 VEERAMANI C. Analysing Trade Flows and Industrial Structure of India: The Question of Data Harmonisation, November 2001.
- W.P. 320 N. VIJAYAMOHANAN PILLAI, K. P. KANNAN, Time and Cost Over-runs of the Power Projects in Kerala, November 2001.
- W.P. 319 K. C. ZACHARIAH, P. R. GOPINATHAN NAIR, S. IRUDAYARAJAN Return Emigrants in Kerala: Rehabilitation Problems and Development Potential. October 2001
- W.P. 318 JOHN KURIEN, ANTONYTO PAUL Social Security Nets for Marine Fisheries-The growth and Changing Composition of Social Security Programmes in the Fisheries Sector of Kerala State, India. September 2001.
- W.P. 317 K. J. JOSEPH, K. N. HARILAL India's IT Export Boom: Challenges Ahead. July 2001.
- W.P. 316 K. P. KANNAN, N. VIJAYAMOHANAN PILLAI The Political Economy of Public Utilities: A Study of the Indian Power Sector, June 2001.

- **W.P. 315 ACHIN CHAKRABORTY** *The Concept and Measurement of Group Inequality*, May 2001.
- W.P. 314 U.S.MISHRA, MALA RAMANATHAN Delivery Complications and Determinants of Caesarean Section Rates in India An Analysis of National Family Health Surveys, 1992-93, March 2001.
- W.P. 313 VEERAMANI. C India's Intra-Industry Trade Under Economic Liberalization: Trends and Country Specific Factors, March 2001
- W.P. 312 N. VIJAYAMOHANAN PILLAI Electricity Demand Analysis and Forecasting –The Tradition is Questioned, February 2001
- W.P. 311 INDRANI CHAKRABORTY Economic Reforms, Capital Inflows and Macro Economic Impact in India, January 2001
- W.P. 310 K. K. SUBRAHMANIAN. E. ABDUL AZEEZ, Industrial Growth In Kerala: Trends And Explanations November 2000
- W.P. 309 V. SANTHAKUMAR, ACHIN CHAKRABORTY, Environmental Valuation and its Implications on the Costs and Benefits of a Hydroelectric Project in Kerala, India, November 2000.
- W.P. 308 K. P. KANNAN, N. VIJAYAMOHANAN PILLAI, Plight of the Power Sector in India: SEBs and their Saga of Inefficiency November 2000.
- W.P. 307 K. NAVANEETHAM, A. DHARMALINGAM, Utilization of Maternal Health Care Services in South India, October 2000.
- W.P. 306 S. IRUDAYA RAJAN, Home Away From Home: A Survey of Oldage Homes and inmates in Kerala, August 2000.
- W.P. 305 K. N. HARILAL, K.J. JOSEPH, Stagnation and Revival of Kerala Economy: An Open Economy Perspective, August 2000.
- W.P. 304 K. P. KANNAN, Food Security in a Regional Perspective; A View from 'Food Deficit' Kerala, July 2000.
- W.P. 303 K. C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN, Socio-Economic and Demographic Consequenes of Migration in Kerala, May 2000.
- W.P. 302 K. PUSHPANGADAN, G. MURUGAN, Gender Bias in a Marginalised Community: A Study of Fisherfolk in Coastal Kerala, May 2000.
- W.P. 301 P. L. BEENA An Analysis of Mergers in the Private Corporate Sector in India, March, 2000.
- W.P. 300 D. NARAYANA Banking Sector Reforms and the Emerging Inequalities in Commercial Credit Deployment in India, March, 2000.
- W.P. 299 JOHN KURIEN Factoring Social and Cultural Dimensions into Food and Livelihood Security Issues of Marine Fisheries; A Case Study of Kerala State, India, February, 2000.

- W.P. 298 D. NARAYANA, K. K. HARI KURUP, Decentralisation of the Health Care Sector in Kerala: Some Issues, January, 2000.
- W.P. 297 K.C. ZACHARIAH, E. T. MATHEW, S. IRUDAYA RAJAN Impact of Migration on Kerala's Economy and Society, July, 1999.
- W.P. 296 P.K. MICHAEL THARAKAN, K. NAVANEETHAM Population Projection and Policy Implications for Education: A Discussion with Reference to Kerala, July, 1999.
- W.P. 295 N. SHANTA, J. DENNIS RAJA KUMAR Corporate Statistics: The Missing Numbers, May, 1999.
- W.P. 294 K. P. KANNAN Poverty Alleviation as Advancing Basic Human Capabilities: Kerala's Achievements Compared, May, 1999.
- W.P. 293 MRIDUL EAPEN Economic Diversification In Kerala: A Spatial Analysis, April, 1999.
- W.P. 292 PRADEEP KUMAR PANDA Poverty and young Women's Employment: Linkages in Kerala, February, 1999.
- W.P. 291 P. K. MICHAEL THARAKAN Coffee, Tea or Pepper? Factors

 Affecting Choice of Crops by Agro-Entrepreneurs in Nineteenth Century South-West India, November 1998
- W.P. 290 CHRISTOPHE Z. GUILMOTO, S. IRUDAYA RAJAN Regional Heterogeneity and Fertility Behaviour in India, November 1998.
- W.P. 289 JOHN KURIEN Small Scale Fisheries in the Context of Globalisation. October 1998.
- W.P. 288 S. SUDHA, S. IRUDAYA RAJAN Intensifying Masculinity of Sex Ratios in India: New Evidence 1981-1991, May 1998.
- W.P. 287 K. PUSHPANGADAN, G. MURUGAN Pricing with Changing Welfare Criterion: An Application of Ramsey-Wilson Model to Urban Water Supply, March 1998.
- W.P. 286 ACHIN CHAKRABORTY The Irrelevance of Methodology and the Art of the Possible: Reading Sen and Hirschman, February 1998.
- W.P. 285 V. SANTHAKUMAR Inefficiency and Institutional Issues in the Provision of Merit Goods, February 1998.
- W.P. 284 K. P. KANNAN Political Economy of Labour and Development in Kerala, January 1998.
- W.P. 283 INDRANI CHAKRABORTY Living Standard and Economic Growth: A fresh Look at the Relationship Through the Non- Parametric Approach, October 1997.

- W.P. 282 S. IRUDAYA RAJAN, K. C. ZACHARIAH Long Term Implications of Low Fertility in Kerala, October 1997.
- W.P. 281 SUNIL MANI Government Intervention in Industrial R & D, Some Lessons from the International Experience for India, August 1997.
- W.P. 280 PRADEEP KUMAR PANDA Female Headship, Poverty and Child Welfare: A Study of Rural Orissa, India, August 1997.
- W.P. 279 U.S. MISRA, MALA RAMANATHAN, S. IRUDAYA RAJAN Induced Abortion Potential Among Indian Women, August 1997.
- W. P. 278 PRADEEP KUMAR PANDA The Effects of Safe Drinking Water and Sanitation on Diarrhoeal Diseases Among Children in Rural Orissa, May 1997.
- W. P. 277 PRADEEP KUMAR PANDA Living Arrangements of the Elderly in Rural Orissa, May 1997.
- W. P. 276 V. SANTHAKUMAR Institutional Lock-in in Natural Resource Management: The Case of Water Resources in Kerala, April 1997.
- W.P. 275 G. OMKARNATH Capabilities and the process of Development March 1997.
- W.P. 274 K. PUSHPANGADAN, G. MURUGAN User Financing & Collective action: Relevance sustainable Rural water supply in India. March 1997.
- W.P. 273 ROBERT E. EVENSON, K.J. JOSEPH Foreign Technology
 Licensing in Indian Industry: An econometric analysis of the choice
 of partners, terms of contract and the effect on licensees' performance March 1997.
- W.P. 272 SUNIL MANI Divestment and Public Sector Enterprise Reforms, Indian Experience Since 1991 February 1997.
- **W.P. 271 SRIJIT MISHRA** *Production and Grain Drain in two inland Regions of Orissa* December 1996.
- W.P. 270 ACHIN CHAKRABORTY On the Possibility of a Weighting System for Functionings December 1996.

BOOKS PUBLISHED BY THE CDS

Biodiversity, Sustainable Development and Economic Analysis

J. Hans B. Opschoor

CDS, 2004, Rs. 100/\$11

Plight of the Power Sector in India: Inefficiency, Reform and Political Economy

K.P. Kannan and N. Vijayamohanan Pillai

CDS, 2002, Rs. 400/\$40

Kerala's Gulf Connection: CDS Studies on International Labour Migration from Kerala State in India

K.C. Zachariah, K. P. Kannan, S. Irudaya Rajan (eds)

CDS, 2002, pp 232, Hardcover, Rs. 250/\$25

Performance of Industrial Clusters: A Comparative Study of Pump Manufacturing Cluster in Coimbatore (Tamil Nadu) & Rubber Footwear Cluster in Kottayam (Kerala)

P. Mohanan Pillai

CDS, 2001, pp 158, Paperback, Rs. 175/\$18

Poverty, Unemployment and Development Policy: A Case Study of Selected Issues With Reference to Kerala

United Nations, 2000 (reprint), pp 235

(available for sale in India only), Rs. 275

Land Relations and Agrarian Development in India: A Comparative Historical Study of Regional Variations

Sakti Padhi

CDS,1999. pp 335, Hardcover, Rs. 425/\$48

Agrarian Transition Under Colonialism: Study of A Semi Arid Region of Andhra, C.1860-1900

GN Rao

CDS,1999. pp 133, Paperback, Rs. 170/\$19

Property Rights, Resource Management & Governance: Crafting An Institutional Framework for Global Marine Fisheries

John Kurien

CDS & SIFFS, 1998. pp 56, Paperback, Rs. 50/\$10

Health, Inequality and Welfare Economics

Amartya Sen

CDS. 1996. pp 26, Paperback, Rs. 70/\$ 10

Industrialisation in Kerala: Status of Current Research and Future Issues

P Mohanan Pillai & N Shanta

CDS. 1997. pp 74, Paperback, Rs. 110/\$12

CDS M.Phil Theses (1990/91-1993/94): A Review Vol.II

T T Sreekumar

CDS. 1996. pp 99, Paperback, Rs. 120/\$ 14

Trends In Agricultural Wages in Kerala 1960-1990

A A Baby

CDS. 1996. pp 83, Paperback, Rs. 105/\$ 12

CDS M.Phil Theses (1975/76-1989/90): A Review Vol.1

G N Rao

CDS. 1996. pp 162, Paperback, Rs. 155/\$ 18

Growth of Education in Andhra - A Long Run View

C Upendranath

CDS. 1994. pp 158, Paperback, Rs. 135/\$15

Growth of Market Towns in Andhra: A Study of the Rayalseema Region C 1900-C.1945

Namerta

CDS. 1994. pp 186, Paperback, Rs.125/\$ 14

Floods and Flood Control Policies: an Analysis With Reference to the Mahanadi Delta in Orissa

Sadhana Satapathy

CDS. 1993 pp 98, Paperback, Rs. 110/\$ 12

Growth of Firms in Indian Manufacturing Industry

N Shanta

CDS. 1994. pp 228, Hardcover, Rs. 250/\$ 28

Demographic Transition in Kerala in the 1980s

K C Zachariah, S Irudaya Rajan, P S Sarma, K Navaneetham,

P S Gopinathan Nair & U S Mishra,

CDS. 1999 (2nd Edition) pp 305, Paperback, Rs.250/\$ 28

Impact of External Transfers on the Regional Economy of Kerala

P R Gopinathan Nair & P Mohanan Pillai

CDS 1994. pp 36, Paperback, Rs.30/\$ 10

Urban Process in Kerala 1900-1981

T T Sreekumar

CDS. 1993. pp 86, Paperback, Rs.100/\$11

Peasant Economy and The Sugar Cooperative: A Study Of The Aska Region in Orissa

Keshabananda Das

CDS. 1993. pp 146, Paperback, Rs.140/\$ 16

Industrial Concentration and Economic Behaviour: Case Study of Indian Tyre Industry

Sunil Mani

CDS. 1993. pp 311, Hardcover, Rs. 300/\$ 34

Limits To Kerala Model of Development: An Analysis of Fiscal Crisis and Its Implications.

K K George

CDS. 1999 (2nd edition) pp 128, Paperback, Rs. 160/\$ 18

Indian Industrialization: Structure and Policy Issues. (No Stock)

Arun Ghosh, K K Subrahmanian, Mridul Eapen & Haseeb A Drabu (EDs).

OUP. 1992. pp 364, Hardcover, Rs.350/\$40

Rural Household Savings and Investment: A Study of Some Selected Villages

P G K Panikar, P Mohanan Pillai & T K Sundari CDS. 1992. pp 144, Paperback, Rs. 50/\$ 10

International Environment, Multinational Corporations and Drug Policy

P G K Panikar, P Mohanan Pillai & T K Sundari CDS. 1992. pp 77, Paperback, Rs.40/\$10

Trends in Private Corporate Savings

N Shanta

CDS. 1991. pp 90, Paperback, Rs. 25/\$ 10

Coconut Development in Kerala: Ex-post Evaluation

D Narayana, K N Nair, P Sivanandan, N Shanta and G N Rao

CDS. 1991. pp 139, Paperback, Rs.40/\$ 10

Caste and The Agrarian Structure

T K Sundari

Oxford & IBH. 1991. pp 175, Paperback, Rs.125/\$ 14

Livestock Economy of Kerala

P S George and K N Nair

CDS. 1990. pp 189, Hardcover, Rs. 95/\$ 10

The Pepper Economy of India (No Stock)

P S George, K N Nair and K Pushpangadan

Oxford & IBH. 1989. pp 88, Paperback, Rs. 65/\$ 10

The Motor Vehicle Industry in India (Growth within a Regulatory Environment)

D Narayana

Oxford & IBH. 1989. pp 99, Paperback, Rs. 75/\$ 10

Ecology or Economics in Cardamom Development (No Stock)

K N Nair, D Narayana and P Sivanandan

Oxford & IBH. 1989. pp 99, Paperback, Rs. 75/\$ 10

Land Transfers and Family Partitioning

D Rajasekhar

Oxford and IBH. 1988. pp 90, Hardcover, Rs. 66/\$10

Essays in Federal Financial Relations

I S Gulati and K K George

Oxford and IBH. 1988. pp 172, Hardcover, Rs. 82/\$ 10

Bovine Economy in India

A Vaidyanathan

Oxford & IBH. 1988. pp 209, Hardcover, Rs. 96/\$ 11

Health Status of Kerala

P G K Panikar and C R Soman

CDS. 1984. pp 159, Hardcover, Rs.100/\$11 & Paperback, Rs. 75/\$10