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UNEMPLOYMENT IN KERALA AT THE TURN OF THE CENTURY INSIGHTS FROM CDS GULF MIGRATION STUDIES

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ABSTRACT

This Working Paper is about the unemployment situation in Kerala. It is based on the findings of the two Gulf Migration Studies, Kerala Migration Study (KMS) and South Asia Migration Study (SMS), conducted by the authors at the Centre for Development Studies, Thiruvananthapuram, during the last five years. The paper gives measures of unemployment rates in the state in 1998 and 2003, examines their variation by geographic regions, such as districts and taluks, by demographic characteristics such as age, sex and marital status, by socio-cultural variables such as education, religion and community, and by economic indicators of households such as remittances received, quality of housing, possession of consumer durables, etc. On the basis of the trends and differentials in the profile of the unemployed, the study provides a few insights, some quite unorthodox, on the factors associated with the increase in the unemployment rate in the state during 1998-2003. As far as possible, all the assertions and conclusions are supported by factual data from the two surveys.

Unemployment rates in Kerala, as estimated in KMS and SMS, were more or less of the same order of magnitude as those provided by National Sample Survey (NSS) and other studies. The rates were 19.2 in 2003 and 11.2 in 1998. They, however, varied considerably by socioeconomic factors. The rate was 34 percent of the labour force in Thiruvananthapuram district but only 10 percent in Idukki district; it was 41 percent among females but only 11 percent among males; 59 percent among unmarried females but only 2 percent among married males; 50 percent among persons under 25 years of age but only 6 percent among those above 30 years; 50 percent among persons with secondary education but only 1 percent among those who did not complete primary level of education; 29 percent among the Mar Thoma Syrian Christian community, but only 11 percent among the Scheduled Castes.

A major point of interest of the Working Paper was the question: what caused the large increase (55 percent among males and 115 percent among females) in unemployment during 1998-2003?

The paper identified four factors that could possibly be associated with the increase in unemployment in the state. They are

- Influx of a large number of women into the labour force,
- Aging of the labour force,
- Large increase in the number of persons with secondary or higher levels of education, and
- Emigration and inward remittances.

The paper gives strong empirical support to the positive association between unemployment rate on the one side and education and emigration on the other. It also gives a list of taluks in which the unemployment rate was much higher than (or much lower than) the level expected on the basis of the above hypotheses. Detailed examination of the employment and other socio-economic situations in these deviant taluks could provide additional insight on the determinants of unemployment in Kerala.

The paper concluded with the observation that unemployment in Kerala is much more a social problem than an economic problem. Five factors lead to this conclusion. First, nearly 70-75 percent of the unemployed in 1998 became employed within five years, the hard-core unemployment lasting more than 5 years being only about 5-6 percent. Second, there is no geographical area that remains a high unemployment area for longer periods of time. Third, the unemployment rate among persons 30 years of age or more was only about 6 percent. Fourth, many of the unemployed came from relatively well-to-do households living in "good or luxurious" houses furnished with expensive household durables. Fifth, the unemployed are rarely the breadwinners of the households concerned, but are mostly unmarried sons or daughters of the head, or married women whose husbands are the breadwinners.

The paper offers little by way of new policies to reduce unemployment in the state except to stress the relevance of educational reforms. Although there is considerable scope for creating new jobs in the state, as most of the goods consumed in the state are produced outside

the state, the nonresident Keralites are flush with money, and the labour force on the whole is academically "well educated", the problem of the Kerala worker's reluctance to do hard manual jobs and of the near "unemployability" of most of the educated youths in the state stand in the way. In terms of policies to reduce the unemployment rate in Kerala, educational reforms deserve top priority. This is not a finding of this study, but a conclusion that deserves reiteration.

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

JEL Classification: J21, J23

I. INTRODUCTION

Unemployment has been a burning problem in Kerala for quite some time now. About 40 lakhs of persons, out of a total about 240 lakhs of adults, are currently registered with the Employment Exchanges in the state seeking employment. Not all of them are, however, unemployed; quite a large proportion of them are indeed employed.

According to the National Sample Survey, unemployment rate (unemployed as a percent of the labour force) was 21 percent in Kerala in 1999-2000. The SMS came with an unemployment rate of more or less the same order of magnitude. In that respect, the study does not add anything new to the understanding of the overall unemployment situation in the state. It, however, adds several new dimensions to our knowledge of the unemployment situation in the state and proposes a few hypotheses, some very unorthodox, about the factors associated with the high unemployment rate in the state. These dimensions, hypotheses and conclusions are the special contributions of this Working Paper

Objectives

This Working Paper is concerned with several aspects of the unemployment situation in Kerala.

First, it is concerned with the dynamics of the unemployment rate in the state in recent years, the current level of unemployment and the extent of its increase/decrease in recent years.

Second, it is concerned with the geographical aspect of unemployment, the variations of the unemployment rate from region to region, from district to district and from taluk to taluk.

Third, it raises questions about the demographic, social and economic characteristics of the unemployed: How do the unemployment rates vary between males and females, by age, marital status, education, religion, community etc.

In all the above aspects, an important point of enquiry is the dynamic aspect, the changes that took place in the unemployment rate among the various social and economic groups during the last five years.

Lastly, it is concerned with factors underlying the recent changes in the level and pattern of unemployment in the state.

Source of Data

As the title indicates, this paper is concerned with the analysis of the unemployment problem in Kerala on the basis of data obtained from the two Gulf Migration studies conducted by the authors in recent years. The first of the two, conducted in 1998, was known as Kerala Migration Study (KMS). The second, conducted in 2003, was known as South Asia Migration Study (SMS). In both these surveys, a sample of 10,000 households, selected at random from all the 62 taluks in the state provided the needed data. In SMS about 5,000 of the 10,000 sample households were the same as those selected in KMS in 1998. Thus for these 5000 households similar data are available at two points of time at a 5-year interval.

Definitions

KMS and SMS used the same type of questions to elicit information on economic activity. They used the same coding system and methods of estimation. Therefore, data on employment and unemployment from the two surveys are quite comparable.

KMS and SMS used the same method for classifying adult persons by their sector of economic activity. All persons 15 years or older were asked: during the last one year, were you employed for most of the year or unemployed looking for employment or not seeking or available for work. If you were gainfully employed for most of the year which economic sector of activity? They were classified into the following 12 economic activity sectors.

1 Employed in state/central government
2 Employed in semi-government, aided schools/colleges, co-operative/local government administrative bodies.
3 Employed in private sector
4 Self-employed
5 Employed as unpaid family worker
6 Employed as casual wage labourer in agriculture
7 Employed as casual wage labouer in the non-agricultural sector
8 Those seeking or are available for work
9 Persons not requiring jobs
10 Students
11 Persons engaged in household duties
12 Old aged/handicapped/retired persons

Persons in categories 1-7 are the employed persons (we refer to them as gainfully employed). Those who are in category 8 (job seekers) are the unemployed. They are the main focus of this Working Paper. Categories 1-8 constitute the labour force. Those who are in categories 9-12 are the persons who are not in the labour force.

Unemployment rate = category 8 divided by the sum of categories 1-8

Gainful employment rate = Sum of categories 1-7 divided by the sum of all categories

II. ECONOMIC ACTIVITY

Population by Economic Activity

There were about 24.30 million persons of the employable age (15 years of age or more) in Kerala in 2003. Of them, about 11.98 million were in the labour force (that is, gainfully employed or unemployed but seeking jobs) but 12.33 million were not. Of the 11.98 million persons in the labour force, 9.68 million were gainfully employed, and 2.29 million were unemployed. Table 1 gives the details.

In 2003, nearly two-thirds (67 percent) of the males and 15 percent of the females were gainfully employed. About 9 percent of the males and 10 percent of the females were unemployed. Nearly one-fourth of the males and three-fourths of the females were outside the labour force. Together they constituted about half the population 15 years or more.

Five years earlier, in 1998, the proportion gainfully employed was higher (43 percent in 1998 and 40 percent in 2003), and the proportion unemployed was lower (5.4 percent in 1998 and 9.4 percent in 2003); however the proportion outside the labour force had remained more or less at the same level at about 51 percent of the total.

During 1998-2003 the number of unemployed persons increased by 10 lakhs against a decrease of nearly 2.6 lakhs in the number of employed persons and an increase of 6.3 lakhs among persons outside the labour force. The increase was by 84 percent among the unemployed, by 7.0 percent among the labour force and by 5 percent among persons outside the labour force. Against these increases, the number of employed persons experienced a decrease by 2.7 percent, by 8.1 percent among females and by 1.3 percent among males. More details of these changes under different aspects are given in the discussions which follow.

Table 1: Population 15 + years by Employment Status, 1998 and 2003

(a) Employment Status in Absolute Number			
2003	Males	Females	Total
Population	15816526	16745581	32562108
15+*	11611481	12692486	24303967
Gainfully employed	7824048	1858561	9682609
Unemployed	989763	1302630	2292392
Labour Force	8813811	3161191	11975001
Not in Labour force	2797670	9531295	12328966
1998			
Population	15240069	16135263	31375332
15+*	10937569	11958110	22895679
Gainfully employed	7925187	2021399	9946586
Unemployed	639301	607113	1246414
Labour Force	8564488	2628512	11193001
Not in Labour force	2371921	9329598	11701519
Increase in Numbers, 1998-2003			
Population	576458	610318	1186776
15+	673912	734376	1408288
Gainfully employed	-101139	-162838	-263978
Unemployed	350462	695517	1045978
Labour Force	249322	532678	782001
Not in Labour force	425749	201698	627447
(b) Percentage Distribution of 15+population by Employment Status			
2003			
Gainfully employed	67.382	14.643	39.866
Unemployed	8.524	10.263	9.431
Labour Force	75.906	24.906	49.297
Not in Labour force	24.094	75.094	50.703
Total	100	100	100

1998			
Gainfully employed	72.458	16.904	43.302
Unemployed	5.845	5.077	5.442
Labour Force	78.304	21.981	48.744
Not in Labour force	21.696	78.019	51.256
Total	100	100	100
Percentage change, 1998-2003			
Gainfully employed	-1.3	-8.1	-2.7
Unemployed	54.8	114.6	83.9
Labour Force	2.9	20.3	7
Not in Labour force	17.9	2.2	5.4

* Based on 2001 Census data by Sex and Age.

Gainful Employment

Employment is the complement of unemployment. Therefore, before examining the unemployment situation, we give some details about the employment situation. As mentioned above 40 percent of the persons 15 years of age or more were gainfully employed in 2003. This is 3 percentage points lower than the corresponding rate in 1998. Thus, gainful employment had experienced some degree of contraction during 1998-2003. This contraction of employment was observed among males (5.1 percentage points) as well as among females (2.3 percentage points).#

How far are the decreases in gainful employment real and how far are they due to the sampling factor? This question was examined by

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*An earlier WP by the authors (GULF REVISITED #363) had mentioned that **d**uring 1998-2003 that the number of persons gainfully employed had **increased among males but decreased among the females. Th**e present report maintains that there was a decrease among males as well as females. At the time of drafting the earlier WP, the census (2001) age distribution was not available and was not used. This report has made use of the Census age-sex distribution to estimate the number of persons 15 years or above in 1998 and 2003. This is the source of the difference.*

comparing results from the full set of sample households (10,012) with those from the panel data (4,795). The results are described below.

The panel data give information on employment for the same set of households in both the years. Therefore, the effect of sampling on the change in employment rate would be the minimum. The 4,795 households in the panel data included 17,752 persons 15 years and above in 1998 and 18,199 persons in 2003 indicating an increase of 2.5 percent in the 5-year period. The Panel data also supported a decrease in gainful employment during 1998-2003, a significant increase in the number unemployed and an increase in the number of persons not in the labour force. The extent of the increases was, however, not the same. Gainful employment decreased by 4.2 percent in the panel data but by only by 2.7 percent according to the full data. Unemployment increased by 60.7 percent according to panel data but by 83.9 percent according to the full data Thus, although the overall direction of change was the same in both the sets of data, the extent of the changes was somewhat different.

Table 2: Distribution of Sample Population 15 years of age and above by Employment Status and Sex in 1998 and 2003

Numbers (Panel Data)	1998			2003		
	M	F	T	M	F	T
Gainful Employment	6100	1551	7651	5859	1468	7327
Unemployed	532	509	1041	695	978	1673
Not in Labour Force	1868	7192	9060	2079	7120	9199
Total	8500	9252	17752	8633	9566	18199

Percent Increase 1998-2003

	M	F	T
Gainful Employment	-4	-5.4	-4.2
Unemployed	30.6	92.1	60.7
Not in Labour Force	11.3	-1	1.5
Total	1.6	3.4	2.5

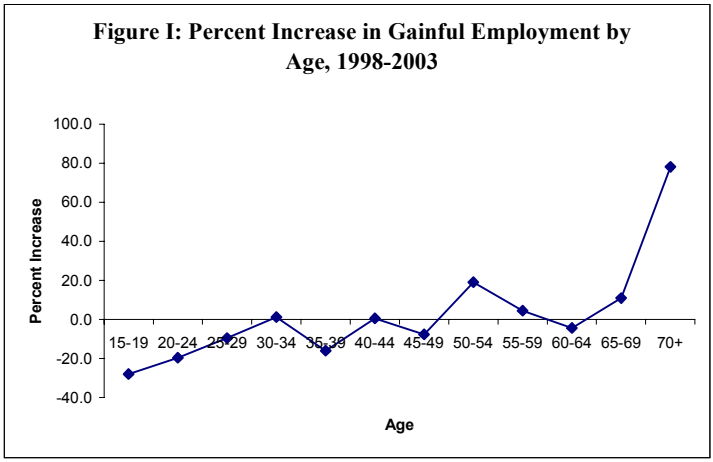
Gainful Employment by Age

Decreases in gainful employment rate were observed in most ages but not all. In general, younger ages experienced decreases and older ages experienced increases. The change from negative to positive is somewhat systematic. It seems that in 2003, those who got employed have remained in employment for a longer period than during earlier years, thus reducing the employment opportunities of the younger generation. This could be one of the factors responsible for the increase in unemployment in 2003 (see later).

Table 3: Gainfully Employed, by Age, 1998 and 2003 (Panel data at Household Level)

Age	Gainfully Employed	% increase	
	1998	2003	1998-03
15-19	340	245	-27.9
20-24	908	730	-19.6
25-29	1028	930	-9.5
30-34	978	990	1.2
35-39	1038	872	-16
40-44	837	842	0.6
45-49	815	753	-7.6
50-54	601	716	19.1
55-59	445	465	4.5
60-64	342	327	-4.4
65-69	201	223	10.9
70-74	73	130	78.1
All Ages *	7606	7223	-5

* Persons for whom age was available.



Gainful Employment by Economic Sectors

Table 4 indicates that the decrease in gainful employment was shared by all economic sectors except in the semi-government sector (comprising aided schools/colleges, co-operatives and local administration). Another sector, which experienced increase in employment, was the non-agricultural labour; in this sector employment registered a hefty increase of 20 percent during 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 4: Increase in Gainful Employment Rate by Economic Sectors (Percent).

		1998-03
1	Government Employment	-8
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

III. UNEMPLOYMENT

Unemployment Rate

The unemployment rate, defined as a proportion of the number unemployed to the number in the labour force, was 19.2 percent in 2003 and 11.2 percent in 1998*. The five-year period saw an increase of 1 million in the number of the unemployed, an 8 percentage points increase in the unemployment rate.

Panel data (household) give an unemployment rate of 12.0 percent for 1998 and 18. 6 percent for 2003. The increase is 6.6 percentage points, slightly lower than what the full data showed (8.0 percent). That there was a substantial increase in unemployment rate is confirmed by both the sets of data.

Unemployment by Districts

One noteworthy feature of the unemployment situation in Kerala is that the rates differed widely across the different parts of the state. In 2003, the rate varied from 34.3 percent in Thiruvananthapuram district to 9.6 percent in Idukki district. Thiruvananthapuram, Kasaragod, Kannur, Ernakulam and Pathanamthitta are the major districts with relatively high rates of unemployment. Idukki, Thrissur, Palakkad, Malappuram and Kozhikode are the districts with relatively low rate.

At the time when the unemployment rate increased substantially at the state level and in most of the districts, there were other districts that experienced decrease. They are Idukki, Palakkad and Thrissur. The districts, which experienced large increases in the unemployment rate are Thiruvananthapuram, Kasaragod, Pathanamthitta, Kottayam,

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* The National Sample Survey indicated a slightly higher unemployment rate of 21 percent for 1999- 2000. SMS and KMS did **not** include persons who are members of any household **not listed** in a Panchayat/Municipal ward Thus, the estimated total number of the unemployed in SMS and KMS could be an underestimate to that extent.

Ernakulam and Kannur. It will be instructive to see what factors were underlying the high rates and the large increases in some districts and the low rates and the low increases in some other districts.

Table 5: Unemployment Rate by District, 1998 and 2003

District	1998	2003	Increase	Rate among Persons 20-29 Years
Trivandrum	8.8	34.3	25.5	52.3
Kollam	7.0	15.0	8.0	39.9
Pathanamthitta	12.9	22.9	10.0	54.5
Alappuzha	14.5	21.7	7.2	50.5
Kottayam	6.8	16.5	9.7	44.6
Idukki	12.1	9.6	-2.5	25.7
Ernakulam	14.8	24.5	9.7	44.4
Thrissur	10.8	10.4	-0.4	20.5
Palakkad	14.1	11.2	-2.9	22.1
Malappuram	10.1	12.3	2.2	18.7
Kozhikode	13.1	13.1	0.0	25.1
Wayanad	12.0	13.2	1.2	31.5
Kannur	16.1	25.5	9.4	46.6
Kasaragod	5.8	27.7	21.9	42.4
Kerala	11.2	19.2	8.0	37.2

Unemployment by Taluks

Neither the KMS nor the SMS was designed to provide estimates at the taluk level. The sample size at the taluk level was not large enough for this purpose. However, the unemployment rate, being a ratio, is likely

to be fairly reliable even with a small sample. The error in the numerator would be partly offset by error in the denominator. If the number of unemployed in a taluk is underestimated by 10 percent, and the labour force is also under estimated by 10 percent, the unemployment rate obtained would be the accurate one. Table V in the annex gives the unemployment rate for all the 63 taluks for 2003. The rate varies from 1.6 percent in Devikulam taluk in the Idukki district to 40.9 in Nedumangad taluk in the Thiruvananthapuram district. The ten taluks with the highest unemployment rates and the 10 taluks with the lowest unemployment rates are given in Tables 6 and 7 (see also the Map). Eight of the taluks with high unemployment rates are located in South Kerala, in the former Travancore State.

Table 6: Ten Taluks With the Highest Unemployment Rate (from highest to lowest)

Sl No.	Taluks	% Unemployed
1	Nedumangad	40.9
2	Kozhencherry	39.7
3	Trivandrum	36.3
4	Kunnathunad	32.5
5	Neyattinkara	31.9
6	Moovattupuzha	31.3
7	Hosdurg	29.7
8	Ranni	29.6
9	Karthikapally	28.8
10	Kannur	28.6

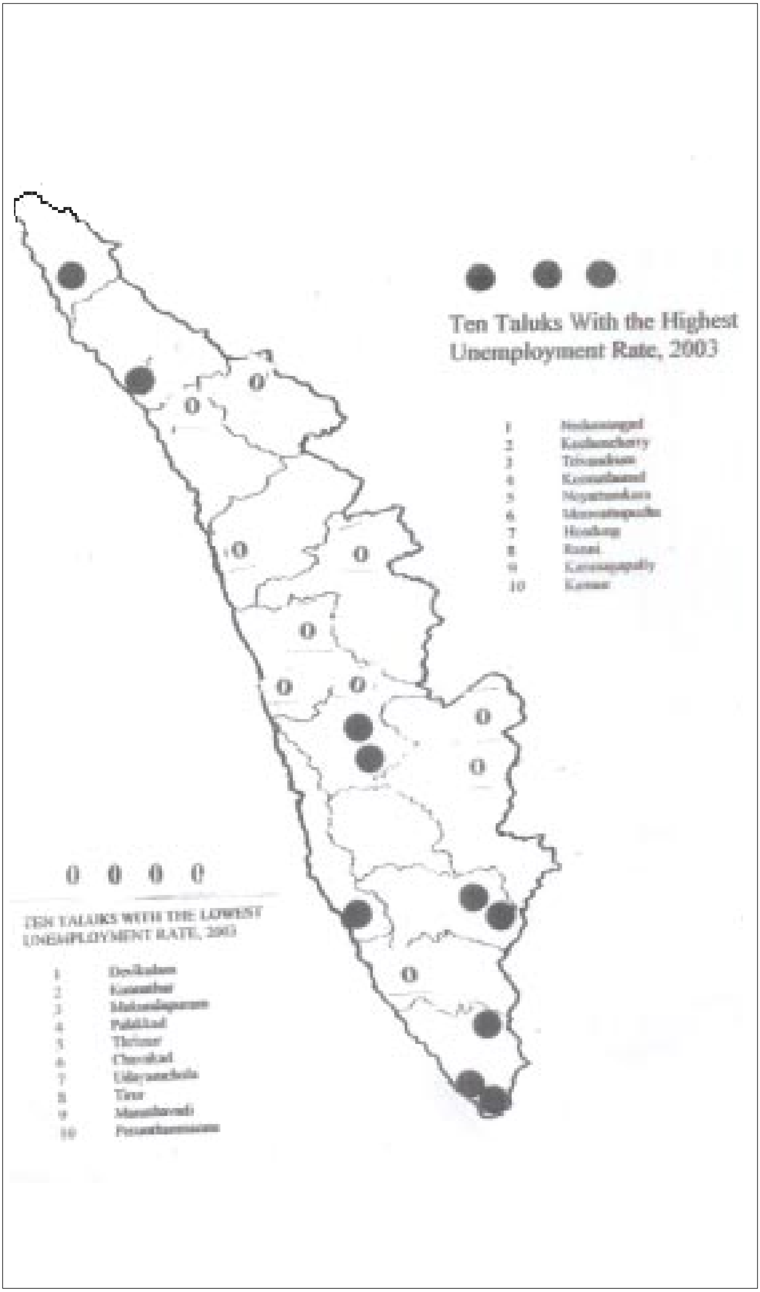

Ten Taluks With the Highest Unemployment Rate, 2003
TEN TALUKS WITH THE LOWEST UNEMPLOYMENT RATE, 2003

Table 7: Ten Taluks With the Lowest Unemployment Rate (from lowest to highest)

Sl No.	Taluks	% Unemployed
1	Davikulam	1.6
2	Kunnathur	5.4
3	Mukundapuram	6.9
4	Palakkad	7.6
5	Thrissur	8.1
6	Chavakkad	8.2
7	Udumbanchola	8.9
8	Tirur	9.0
9	Manathawadi	9.4
10	Perunthanmannu	9.4

The ten taluks with the lowest unemployment rates have their rates all below 10 percent, the lowest being only 1.6 percent in the Devikulam taluk. Three of the taluks are in the Malabar area, 5 of them in the former Cochin state area and 2 of them in the Idukki district of the former Travancore state area. It will be of interest to probe into the factors that caused such low unemployment rates.

Unemployment by Sex

The unemployment rate is different among males from that among females. In 2003, the number of unemployed males was 979,000 as against the number of unemployed females at 1,292,000. However in 1998, there was not as much difference between the two sexes with respect to the number unemployed.

Table 8: Unemployment Rates by Sex, 1998 and 2003

	Males	Females	Total
1998	7.46	23.09	11.14
2003	11.23	41.21	19.15
Increase 1998-03	+ 3.77	+18.12	+ 8.01

Sex differentials are large with respect to unemployment rate. In 2003, while the rate among males was only 11.2 percent that among females was almost four times higher, 41.2 percent. There were similar large differences in 1998 also, 7.5 among males and 23.1 among females. Increase in the unemployment rate was only 3.8 percentage points among males but it was as much as 18.1 percentage points among females. In absolute terms, while the number of the unemployed males increased by 332,000, the number of the unemployed females increased by 676,000, double the figure for males. **Thus females contributed two-thirds of the increase in unemployment in Kerala during 1998-2003. This is a noteworthy development in the unemployment scenario in Kerala.**

Unemployment by Age

Unemployment rate varies considerably by age. They are very high (above 50 percent). among females at ages below 30 years of age. They are slightly lower among males but are as much as 46 percent in the 15-19 ages and 32 percent in the 20-24 ages. At higher ages the rates are in general lower among both males and females. Sex differentials are maintained at all ages with females showing higher rates.

Table 9: Unemployment Rate by Age and Sex 1998 and 2003

	1998		2003		Total
	Males	Females	Males	Females	
15-19	50.0	50.0	46.0	77.5	55.9
20-24	30.0	50.0	31.8	70.8	44.5
25-29	20.0	55.0	15.3	60.5	29.7
30-34	8.0	35.0	7.2	38.6	15.4
35-39	3.0	15.0	3.9	32.9	12.0
40-44	2.0	5.0	2.7	14.7	5.9
45-49	0.6 (M&F)		1.1	11.3	3.5
50-54	0.4 (M&F)		1.0	8.0	2.5
55-59	0.4 (M&F)		1.6	5.1	2.2

Table 9 is based on panel data in which the effect of sampling on relative increase in unemployment rate during 1998 to 2003 could not be very significant. It shows that unemployment rates in 2003 are consistently higher than in 1998 in all age groups.

Unemployment Rate by Marital Status

Unmarried females have a very high unemployment rate, almost 60 percent. On the other hand, married males have a very low rate, only 2 percent. One possible inference from these rates is that unemployment is not common among the heads of household; usually married males. The rate is relatively high (40 percent) among married females, but then their husbands are likely to be the breadwinners of these households.

Table 10: Unemployment Rate by Marital Status, 2003

	Males	Females	Total
Single	30.4	59.1	37.4
Married	2.1	39.7	11.4
Others	2.0	4.6	3.9
Total	11.1	41.1	19.1

Unemployment by Religion and Community

Unemployment rates vary by religious groups within a narrow range, between 18.4 percent and 20.7 percent. Within this narrow margin a very noteworthy feature of unemployment rate by religion is the shift in the differentials. In 2003, the Muslims had the lowest rate, but in 1998 they had the highest. The Christians had the highest unemployment rate in 2003, 20.7 percent, but they had the lowest rate in 1998, 10.1 percent. The Hindus had the same ranks in both the years. However, their rate increased from 11.3 percent to 18.9 percent.

Table 11: Unemployment Rate by Religion

	1998	2003
Hindus	11.3	18.9
Christians	10.1	20.7
Muslims	12.0	18.4
Total	11.2	19.2

The percentage increase in the number unemployed was close to the overall average for Hindus, very much below the average for Muslims and highest for Christians. **The transition of the Muslim community from being the community with highest unemployment rate to one with the lowest rate is a significant aspect of the employment situation in Kerala in the last five years**. It is also worth recalling that the increase in the unemployment rate in Muslim-dominated districts like Malappuram was very small.

Table 12: Number of Persons Unemployed, by Religion 1998 and 2003

	Numbers		Percent
	1998	2003	Increase
Hindus	743902	1362085	83.1
Christians	227577	507393	123.0
Muslims	274935	422914	53.8
All	1246414	2292392	83.9

Community classification within religious groups in KMS was different from that in SMS. Therefore, an exact comparison of 2003 unemployment rate with that for 1998 is not possible for all communities. Available details are given in Table 13.

Table 13: Unemployment Rate by Community, 1998 and 2003

Community	1998	2003
SCST	7.1	11.1
Nairs	16.8	25.1
Ezhawas	11.4	19.7
Brahmins	--	16.3
Syrian Christians	12.6	19.6
Catholic Christians	--	18.2
Orthodox/Jacobite	--	23.7
Marthoma Christians	--	29.2
CSI Christians	--	23.1
Muslims	12.3	18.4
Kerala	11.5	19.1

Among the Hindus, the Nair community had the highest unemployment rate, and the Scheduled castes had the lowest in 2003. Among the Christian groups, the Marthoma community had the highest unemployment rate and the Catholics had the lowest in that year. The Marthoma community among Christians and the Nair community among Hindus are the worst sufferers of the unemployment problem in the state.

Unemployment by Education

Education is an important factor in determining the level of unemployment in Kerala, as most of the unemployed are educated. This is evident from the unemployment rate by educational level given in Table 14.

In 2003, the highest unemployment rate was among persons with the secondary level of education, almost 40 percent. The rate among the degree holders was not far lower, 36 percent. In 1998, the situation was slightly different. Unemployment rate had been the highest among the

degree holders, 31 percent. There was hardly any unemployment among those with below- primary-level education either in 1998 or in 2003. Over the 5-year period 1998-2003, unemployment rate had increased by 8 percentage points, but the increase among the secondary certificate holders was almost double, as much as by 15 percentage points.

Table 14: Unemployment Rate by Educational Level, 1998 and 2003

	1998	2003	Increase, 98-03
Illiterate	0.1	1.2	+1.1
Literate	0.3	1.4	+1.1
Primary Incomplete	1.1	1.3	+0.2
Primary	1.2	1.7	+0.5
Secondary Incomplete	8.2	12.1	+3.8
Secondary	23.1	38.5	+15.4
Degree	31.4	36.4	+5.1
Total	11.2	19.2	+8.1

Table 15: Number of Persons Unemployed by Educational Level, 1998 and 2003

Education	1998	2003	% increases
Below Primary	7502	20664	175
Primary	25003	18725	- 25
Below Secondary	335044	583107	74
Secondary	560073	1146842	105
Degree	318791	523053	64
Total	1,246414	2,292393	84

The number of unemployed persons in the various educational categories is given in Table 15. The largest number among the unemployed was those with secondary level education, 11.5 lakhs. The corresponding number in 1998 had been only 5.6 lakhs. The increase was thus 5.9 lakhs or by 105 percent. Unemployment among persons with primary education has shown a decline, by about 25 percent. Overall, the increase was by 84 percent.

Unemployment and Household Economic Indicators

The earlier analysis had indicated that the unemployed in Kerala are mostly young, unmarried and educated and that they were rarely the breadwinners of the households. The implication was that, the family of the unemployed was not necessarily deprived of its subsistence. Unemployment in Kerala is not likely to cause any major economic hardship to most of the households to which the unemployed belong. **Unemployment is more a social problem than an economic problem in Kerala today.** More data supporting this conclusion are given in Table 16.

Table 16: Percentage Distribution of the Unemployed by Relationship to the Head of the Household.

	Percent
Head	2.7
Spouse	8.4
Unmarried children	53.4
Married Children	8.3
Son/daughter-in-law	18.6
Others	8.6
Total	100

Table 16 indicates that the unemployed in a household rarely happens to be its breadwinner. Heads of households were unemployed in only 2.7 percent of the cases. More than half the unemployed were unmarried children of the heads of households. Nearly 90 percent of the male unemployed and13 percent of the female unemployed were unmarried. Nearly 60 percent of the unemployed females were currently married and their husbands would in all possibility be employed persons. Thus, the number of cases of real economic hardship among the households with unemployed, are likely to be relatively few. Further support to this conclusion is given in Table 17.

Table 17: Economic Indicators of Households with/without Unemployed Persons.

Indicators	1998		2003	
	Without Un-employed	With Un-employed	Without Un-employed	With Un-employed
Remittances per household	Rs. 4957	Rs.7056	Rs. 8303	Rs.7163
Proportion of households With high Quality Houses	13.2	17.2	21.5	24.2
Proportion of households Using LPG for Cooking	17.3	22.2	21.9	25.5
Proportion of households Possessing				
Automobile	2.5	2.5	2.7	3.0
Scooter	8.6	11.8	14.1	20.2
Telephone	14.1	19.3	41.1	50.4
Television	35.9	48.2	57.0	67.7
VCR	9.3	12.9	15.7	21.0
Refrigerator	18.6	22.7	28.7	34.3

Table 17 gives economic indicators separately for households without unemployed persons and for those with unemployed persons. Most of the households with unemployed persons have high quality houses and use LPG for cooking, possess cars, scooters, telephones, televisions, VCRs and refrigerators. In 1998 households with unemployed had received more money by way of workers' remittance than households without unemployed. But the relation did not hold in 2003. At the same time it is important to note that households with unemployed received in 2003 on an average Rs 7,200 by way of workers remittances. Other than in this single aspect, the unemployed came from economically better off households. Lack of contribution to the family income by the unemployed could not have caused real economic hardship to their families. Thus the conclusion that unemployment is more a social problem than an economic problem is strongly supported by MS and SMS data.

Dynamics of Unemployment, 1998-2003

Additional insights into the unemployment situation in Kerala are obtained by analyzing the subsequent experience of persons who were unemployed in1998. Among the 12 economic sectors indicated earlier, which were analyzed in KMS and SMS, the unemployment sector was found to be one of the most unstable during 1998-2003. In terms of the degree of instability during 1998-2003, unemployment sector had a rank of 10[@] . Most of the unemployed of 1998 (about 77 percent) did not remain unemployed 5 years later (in 2003). This is an important aspect of the unemployment situation in Kerala.

About 27 percent of the unemployed of 1998 had become labourers in the non-agricultural sector by 2003. 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 1998 and separately for the educated categories among them, namely

---

@ *A rank of 12 would mean the maximum and a rank of 1 would mean minimum degree of instability*

for those who possessed educational qualifications of the secondary school level or above.

Out of: ***100 Persons Unemployed in 1998***	***Out of:*** ***100 Educated Unemployed in 1998***
23 remained unemployed in 2003	31 remained unemployed in 2003
27 became labourers	17 became labourers
12 became self-employed	5 became self-employed
10 became employed in government or in semi government institutions	15 became employed in government or in semi government institutions
4 obtained other gainful employment	6 obtained other gainful employment
24 remained outside the labour force	26 remained outside labour force

Among the educated unemployed in 1998, 31 percent remained unemployed in 2003. 15 percent received government or semi government jobs. A surprisingly a high percentage, 17 percent, became labourers in the non-agricultural sector. About a quarter of them gave up continuing in the labour force.

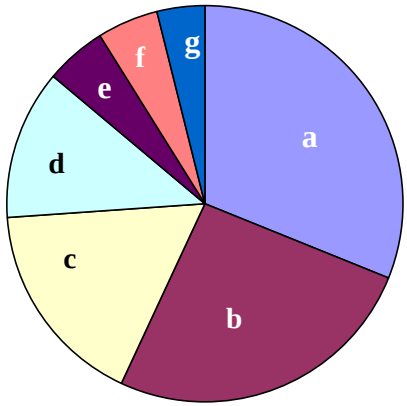
The majority of the unemployed in 2003 had been either students in 1998 (31 percent) or persons below 15 years of age (25 percent). About 12 percent had been unemployed in 1998 also; 5 percent had been labourers in non-agriculture. About 4 percent had been self-employed in 1998. The balance was in Government services or in the job not required category, etc. It is important to note that most of the unemployed in 2003 had not been employed in 1998 too.

Out of 100 persons Unemployed in 2003

31	were students in 1998
25	were below 15 years
17	were engaged in household duties
13	were unemployed
5	were labourers
4	were self-employed

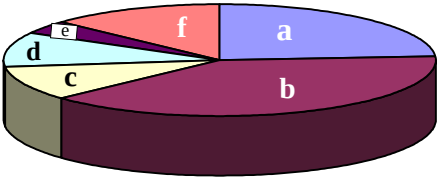
The fact that unemployment is a relatively short experience (only 25 to 30 percent of the unemployed remain unemployed for more than 5 years) adds strength to the earlier conclusion that unemployment in Kerala is not a major economic disaster to the families of the unemployed. It is more a social problem than an economic problem.

Figure II: Distribution in 1998 of Persons Unemployed in 2003



a	Students
b	Below 15 years
c	Husehold Duties
d	Unemployed
e	Labourers
f	Self Employed
g	Others

Figure III: Percent Distrbution in 2003 of Persons who Were Unemployed in 1998



a	Unemployed
b	Labourers
c	Self-employment
d	Goven.Semi-Govern
e	Other Gainful Employment
f	Not in labourforce

IV. DETERMINANTS OF UNEMPLOYMENT

Factors Associated With Unemployment

This section sets out the following four hypotheses as the reasons for the increase in unemployment in Kerala during 1998-2003.

- Influx of females in to the labour market
- Ageing
- Educational Expansion
- Emigration

Ageing and emigration are not in the usual list of factors for unemployment. They are the ones that were referred to as "unorthodox" earlier in this paper. This paper describes how ageing and emigration could have contributed to the increase in the unemployment rate in Kerala in recent years. It gives considerable empirical support to these hypotheses.

Influx of Females into Labour Market

The earlier analysis indicated that the unemployment rate among females in Kerala was 41.2 percent in 2003, 18.1 percentage points higher than the rate in 1998. The corresponding increase among males was only 3.8 percentage points. Thus, females contributed to a significant proportion of the increase in the unemployment rate during 1998-2003.

The proportion of females in the labour force increased from 23.5 percent in 1998 to 26.4 percent in 2003. The share of females in the increase in the labour force during 1998-2003, however, was as much as 68.1 percent, twice the rate of increase among males. These figures indicate that the influx of women into Kerala's labour force in recent years could have been a factor underlying increased unemployment rate in the state.

Two factors related to this influx may be pointed out - increasing importance of the service sector and the increased educational level of

women The rapidly increasing share of the service sector in the Kerala economy, a sector in which women could compete on an equal footing with their male counterparts for most of the jobs, would be one of the reasons why more and more of them are trying to enter the job market. The increase in number of women opting for higher education, especially technical education, could also be a factor.

There was hardly any change in the proportion of educated men in the labour force, but among women with secondary education, the increase was very large, from 23.5 percent to 36.6 percent. Among male degree holders, there was actually a decline.

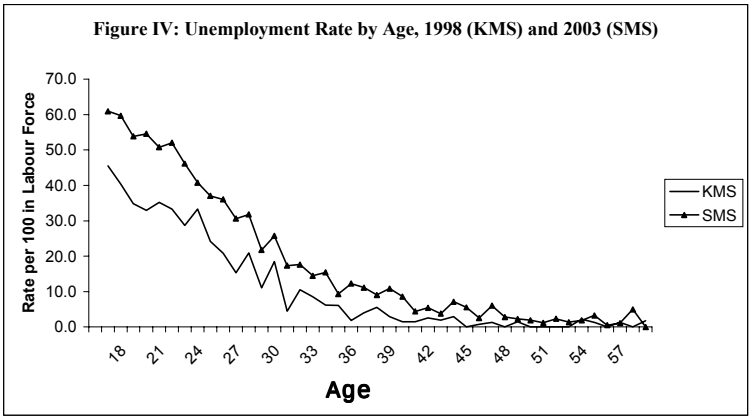
Table 18: Percent of Men and Women in the Labour Force with Higher Education Levels, 1998 and 2003

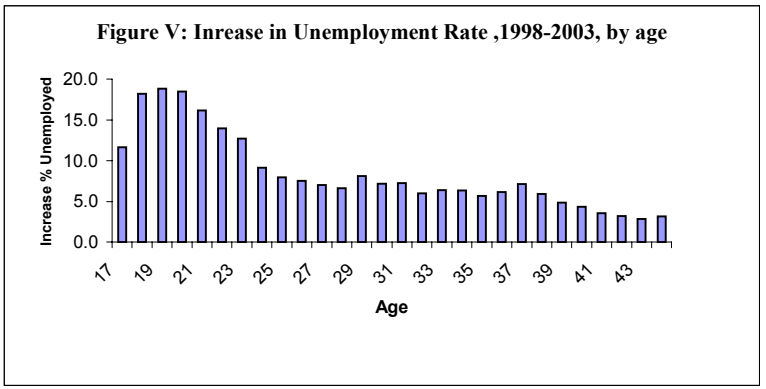
		1998	2003	Increase 1998-2003
Males	Secondary	68.9	70.0	1.1
	Degree	83.4	77.2	-6.2
	Combined	72.0	71.9	-0.1
Females	Secondary	23.5	36.6	13.1
	Degree	63.3	63.3	0.0
	Combined	32.2	43.9	11.7

Whatever is the reason, women are entering the labour market in larger numbers and in the context of a relatively stagnant employment sector and they remain unemployed causing the unemployment rate in the state to increase.

Ageing as a Factor in Increasing Unemployment

Unemployment rates are higher at younger ages than at older ages. This was true in 1998 and also in 2003. But within each age group, the rates were consistently higher in 2003 than in 1998. Thus the overall increase in unemployment rate during 1998-2003 was shared by all ages.

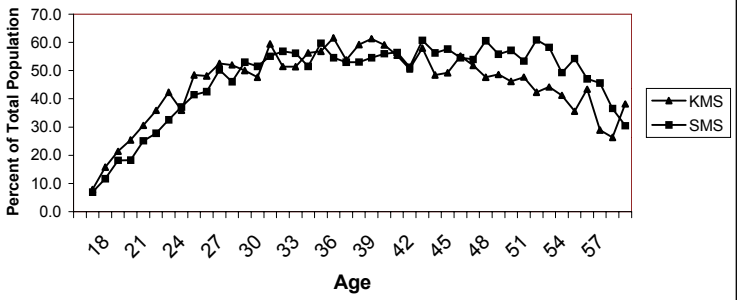




Demographic transition entails a decrease in the proportion of the population in younger ages. The decrease in the proportion of population at younger ages should contribute to a decrease in the overall unemployment rate. A five-year period is too short an interval for any significant change in age composition to take place; therefore the decrease in the proportion of the population at the younger ages in the past 5 years was relatively small. As a consequence, decrease in the unemployment rate should also have been small. Calculations show that the possible decrease in unemployment rate due to demographic transition should be only about 1 per 1000 persons in the labour force.

But the effect is in the direction of a decrease in unemployment rate and not an increase in it. From this point of view, ageing cannot explain the observed increase in the unemployment rate.

Figure VI: Percent Gainfully Employed by age, KMS 1998 and SMS 2003



But there is another side to the story that could show that ageing could be a factor in the increase in unemployment rate. Demographic transition causes not only decrease in the population in the younger ages, but also increase in the older ages. As an increasing number of persons live beyond age 55 (the retirement age in Kerala), the number of gainfully employed persons at older ages would increase (see Figure VI to see the actual change in gainful employment by age in 2003 compared to that in 1998). If more and more persons continue to retain their job after ages 50 or 55 years, fewer and fewer employment opportunities would be open to the younger generation. As employed persons tend to remain employed for longer periods, unemployed persons remain unemployed for longer periods too. Thus, ageing process, which is taking place rapidly in Kerala, could have been a factor in the increased unemployment rate in the State during 1998-2003. A few calculations, based on data from KMS and SMS, are given below to support this conclusion.

Table 19: Proportion of gainfully employed persons at ages 50+ (55+, 60+) to gainfully employed at ages 15-49 (15-54 years, 15-59 years) in 1998 and 2003

Ages	1998	2003
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 20: Proportion of Gainfully employed persons at ages 50+, (55+, 60+) to total population 50+,(55+ 60+) years in 1998 and 2003

Ages	1998	2003
50+ years	38.7	47.3
55+years	32.1	39.7
60+years	27.3	37.0

These figures indicate that the proportion of gainfully employed persons at the older age groups increased during 1998-2003: from 28 percent in 1998 to 35 percent in 2003 for those at ages 50+ years, from 16 percent to 19 percent for those at ages 55+ years and from 9 percent to 16 percent for those at ages 60+ years.

The overall conclusion is that with aging, the employed persons remain employed for longer periods causing fewer new employment openings at younger ages. Thus, ageing could have been one of the factors in the increased unemployment rate in the state during 1998-2003.

Education as a Factor in Increase in Unemployment

Education is an important factor in determining the level of unemployment in Kerala, as most of the unemployed are educated as is evident from the unemployment rate by educational level given in Table 14. In 2003, the highest unemployment rate was among secondary level

educated persons, almost 40 percent. The rate among the degree holders was not much lower, 36 percent. In 1998, the situation was slightly different. Unemployment rate was the highest among degree holders, 31 percent. There was hardly any unemployment among those with below primary level education either in 1998 or in 2003. Over the 5-year period 1998-2003, unemployment rate increased by 8 percentage points, but the increase among the secondary certificate holders was almost double, as much as by 15 percentage points.

Part of the increase in the unemployment rate during 1998-03 was due to change in educational composition (increase in the proportion of population with higher levels of education). Had there been no change in educational composition between 1998 and 2003, the increase in unemployment rate would have been from 11.2 to 16.6 or just by 5.4 percentage points, instead of the observed 8.1 percentage points. Thus 67 percent of the increase in unemployment rate was real (due to changes in the unemployment rate within educational categories) and the balance 33 percent was due to change in educational composition. Thus, education alone cannot explain the entire increase in unemployment rate during 1998-2003. There must be other factors too.

Although education alone cannot account for the entire increase in the unemployment rate, it is definitely an important factor as it explains almost a-third of the total increase. The extent of the increase in the number of persons with higher levels of education is evident from Annex Table II. In 2003, 576,000 students appeared for SSLC examination and 311,000 appeared for the Higher Secondary examination. Five years ago the corresponding numbers were 550,000 and 21,000 students respectively. The increase was 316,000 or 55 percent in the number of students who took the SSLC or the Higher Secondary School Examination.

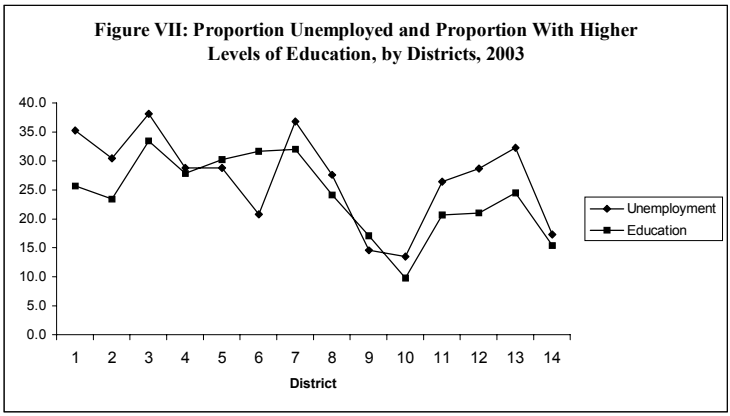
District Level Analysis

It was shown earlier that unemployment rates varied considerably by district. The rate in 2003 was 35.2 percent in Thiruvananthapuram

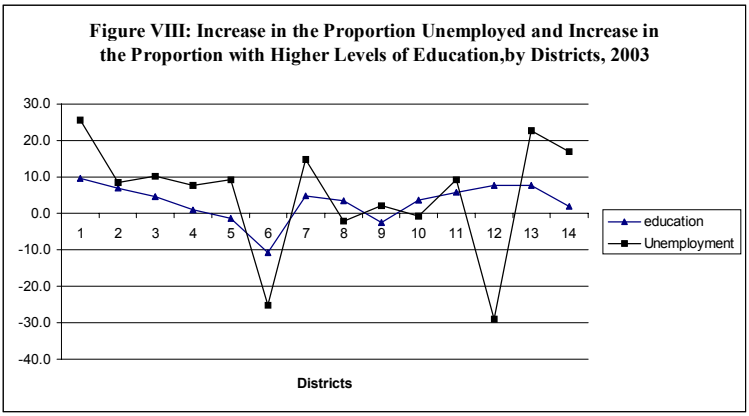
district but only 13.5 percent in Malappuram district. To what extent is the variation by district due to variation in educational level?

Two graphs are given below using district as the unit of analysis. One of them (Figure VII) relates unemployment rate in a district with the proportion of persons with high educational levels. The second one (Figure VIII) relates the increase in the proportion unemployed in a district with increase in the proportion with high levels of education. Both the graphs show some degree of positive association between education and unemployment, but the association is not very close. However, statistical analysis (excluding data from Wayanad district) indicated that nearly two-thirds of the change in the unemployment rate could be explained by change in the proportion with high levels of education. R-square was 66.6 percent, product moment correlation coefficient 0.6 which was statistically significant for 12 degrees of freedom.

Figure VII: Proportion Unemployed and Proportion With Higher Levels of Education, by Districts, 2003



A potentially important variable that is missing in this analysis is the district of birth of the unemployed. How many of those who were unemployed in Thiruvananthapuram district (for example) were Thiruvananthapuram-born persons and how many were Idukki-born persons (for example) who migrated to Thiruvananthapuram in search



of jobs? The high unemployment rate in Thiruvananthapuram could be a reflection of in-migration of unemployed from other districts.

Taluk Level Analysis

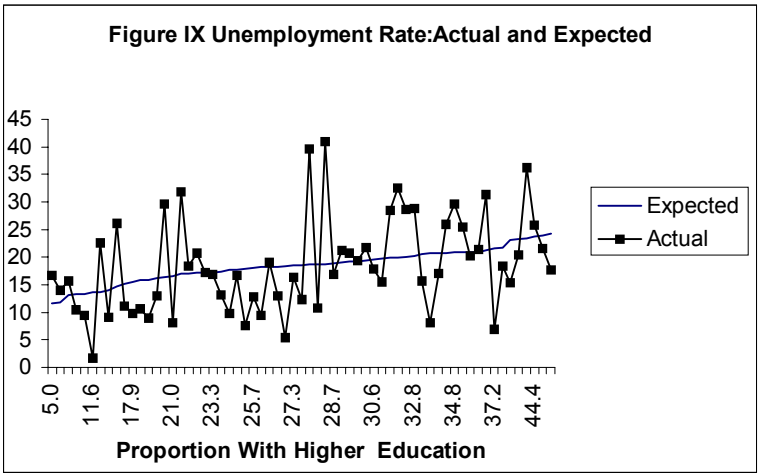
The 63 taluks of 2003 were cross-classified by unemployment rate and the proportion of persons with secondary or higher levels of education in Table 21.

Table 21: Distribution of Taluks by Unemployment Rate and Percent with Higher Levels of Education, 2003

Unemployment Rate	Percent with higher levels of education				
	36-45	26-35	16-25	below 16	Total
Above 30 %	2	3	1	0	6
20% to30%	3	11	2	2	18
10% to 20%	0	0	13	14	27
Below 10	1	4	4	3	12
Total	6	18	20	19	63

Chi-Square = 36, d.f = 9

The Chi-square calculated from the contingency table was 36.0, which, for 9 degrees of freedom is statistically significant at 1 percent level of significance. Thus, taluk level data also indicate strong positive association between unemployment rate and the proportion with secondary and higher levels of education.



However, there are many exceptions to a close association between education and unemployment rate at taluk level. The lowest unemployment rate was for Devikulam taluk, 1.6 percent. Educational level in this taluk was also relatively very low, 11.6 percent. This is mostly in line with the conclusion drawn above. At the same time, there are other taluks like Mukundapuram in which the unemployment rate was only 6.9 percent but the educational level was 37.2 percent, very much above the state average.

Figure IX gives the actual unemployment rate of taluks and the expected rate on the basis of their level of education. It shows that there are large deviations (both plus and minus) from the expected values. Taluks in which the unemployment rates were larger than the expected rate on the basis of education by more than 10 percentage points, are given below:

Difference (more than 10 percentage points)

Nedumamgad	22.2
Kozhencherry	21.0
Neyattumkara	14.8
Kunnathunad	12.7
Kasseragod	11.5
Movattupuzha	10.1

Taluks in which the unemployment rates were more or less at the level (+/- 1.5 percent) expected on the basis of educational level are listed below:

	(+/- 1.5 percent)
Paravoor	-1.5
Vaikom	-1.4
Kuttanad	-0.9
Kochi	-0.5
Pathanapuram	-0.2
Meenachil	0.0
Cherthala	+0.4
Waythiri	+0.7
Vadakara	+1.0

Taluks which had unemployment rates of less than the expected rate on the basis of education by more than 10 percentage points, are given below:

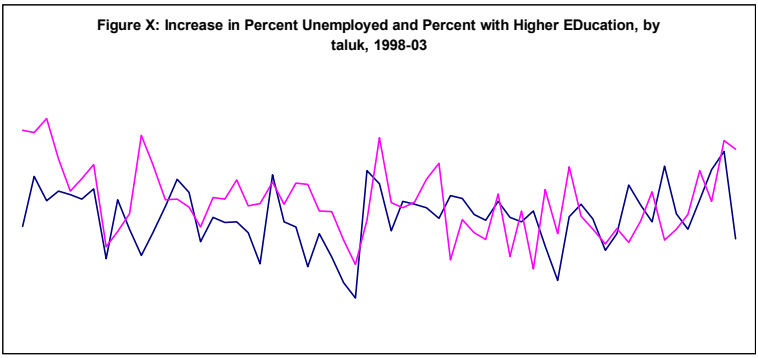
Difference (less than 10 percentage points)

Palakkad	-10.3
Thrissur	-12.5
Kunnathur	-12.9
Mukundapuram	-14.7

Additional insights on the unemployment situation in Kerala are obtained by comparing the unemployment rate in 2003 with that in 1998, by taluks. The comparison shows that:

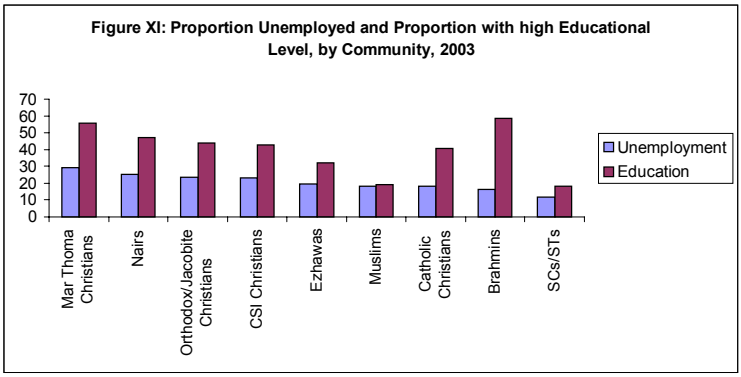
- the list of 10 taluks with the highest unemployment rate in 2003 has only one taluk common (Karthikapally) with the list of the 10 taluks with the highest rates in 1998.
- the list of 10 taluks with the lowest unemployment rate in 2003 has only one taluk common (Tirur) with the list of 10 taluks with the lowest rates in 1998.

The comparison also showed that there are many taluks in which the unemployment rates increased significantly and there are others in which the unemployment rates decreased substantially. These results point to an important conclusion about the unemployment situation in Kerala: the **unemployment problem in an area is not a permanent phenomenon, but a transitory one.** A taluk may have high unemployment rate today, but would have low rate in a couple years from today. The reverse is also true.



The relation between unemployment rate and education is examined further by comparing increases in unemployment rates of taluks during 1998-2003 with the corresponding increase in the proportions with higher levels of education in Figure X. On the whole, the figures

indicate a close relationship between changes in the educational levels with changes in the unemployment rates.



A more detailed analysis of the employment situation in taluks in which the unemployment rate is much larger than the rate expected (taluks like Nedumagad) on the basis of the level of education and of taluks in which the unemployment rate is much lower than the rate expected (taluks like Mukundapuram) could provide additional information on the factors associated with unemployment in Kerala.

Community Level Analysis

Figure XI relates unemployment rate and proportion of persons with high levels of education with community as the unit of analysis. The relationship is found closer except in the case of the Brahmin and the Roman Catholic Christian communities among whom the unemployment rate is very much lower than expected on the basis of the levels of education.

Thus improvement in educational level was a major factor in the increase in unemployment rate, but it cannot explain all the increases (see Annex II also). We have to look for other factors to complete the analysis.

Emigration and Unemployment

Emigration has direct as well as indirect effects on unemployment. The direct effect is through the relatively high rate of emigration from

among the unemployed persons in Kerala. The indirect effect could either reduce unemployment or increase it. Emigration reduces unemployment through employment creation following the utilization of remittances sent home by emigrants and the money and expertise brought back by return emigrants. These effects would reduce unemployment, not increase it.

This paper maintains that emigration could affect unemployment indirectly also, through educational expansion and replacement migration. These effects would be to increase unemployment. Thus, emigration could have both positive and negative effects on the unemployment rate. These effects are analyzed further in the following sections.

Direct Effect

In the KMS, it was argued that emigration contributed to a decline in the unemployment rate in Kerala. Had there been no emigration, the unemployment rate in Kerala in 1998 would have been 14 percent instead of the recorded (in KMS) 11 percent. Thus, emigration contributed to a reduction of the unemployment rate. This is the **direct effect**, or effect contributed by the departure of a large number of the unemployed persons. In 2003 also, there was this direct effect of emigration. As in 1998, this effect was also to reduce the unemployment rate. The arithmetic of estimating the extent of the impact is given in Annex I at the end of this paper.

Had there been no emigration, the unemployment rate would have been 21.4 percent instead of the observed 19.2 percent. Because of the emigration of 621,354 unemployed persons from Kerala, the unemployment rate declined to 19.2 percent. Thus, emigration contributed to a reduction in unemployment rate in 2003 by about 2.2 percentage points**.

** *The reported reduction of 3 percentage points in 1998 took into consideration not only emigration but also internal out-migration to other states in India. If internal migration were excluded, the decline would have been only 2.6 percentage points.*

Although emigration was 33 percent larger in 2003 than in 1998, the impact on unemployment was lower, 2.2 percentage points in place of 2.6 points. The reason seems to be the much larger number of unemployed in the general population in 2003. A relatively smaller percent of them only emigrated.

The number of unemployed persons was 2,292,392 in 2003 and 1,246,414 in 1998. The 2003 figure is higher by 84 percent. The number of unemployed persons among the emigrants was 621,354 in 2003 and 360,917 in 1998. The 2003 figure is higher by 72 percent. The impact of emigration of the unemployed was thus lower in 2003, on the level of unemployment.

Indirect Effects

The indirect effects or spin-off effects of emigration on employment and unemployment would have, however, been much larger. As mentioned above, these effects work through the remittances that emigrants send home and the money and expertise brought by return emigrants. These effects would be to decrease the unemployment rate, not to increase it. To understand the increase in unemployment rate we have to look for other factors. A major avenue for such an impact is education. Emigration helps to increase the proportion of the population with higher levels of education and through this increase, to raise the unemployment rate. The impact of emigration on education works through at least two channels discussed below under (a) the demand factor and (b) the income factor. (see Flow Chart: Emigration and Unemployment).

Demand Factor

A common aspiration among the youth in Kerala is to migrate to the Gulf countries, earn a lot of money, get married and settle down comfortably in Kerala. A high proportion of the Kerala emigrants are unmarried youth. In recent years many Governments in the Gulf region have made the secondary level of education mandatory to be eligible for becoming an emigrant to their countries. For instance, the United Arab Emirates made it mandatory that emigrants to that country should have

a minimum of secondary level of education. This requirement, which has been introduced only recently, has indirectly encouraged Kerala youth to try to secure a secondary level education certificate[++]. Most of those who secured the certificate, however, would not get a chance to emigrate and, therefore, would remain unemployed in Kerala or they might go for higher education. Some of the recent increases in the number of the educated unemployed could be attributed to the large increase in the number of this category of youth.

Income Factor

Education is costly. Without some source of funds many of the Kerala youth would not be able to pursue higher education. The required fund primarily came from emigrants' remittances. In this sense, emigration has fuelled the demand for higher education, supplied the means to meet the demand and indirectly contributed to Kerala's unemployment problem.

SMS estimated that the average cost of education of a household was about Rs 6,540. It also showed that 24 percent of the cash remittance received by Kerala households was used for educational purposes. Thus emigration through remittances played an important role in increasing the proportion of Kerala's population with high levels of formal education. This increase in turn played an important role in increasing the unemployment rate in the state in recent years.

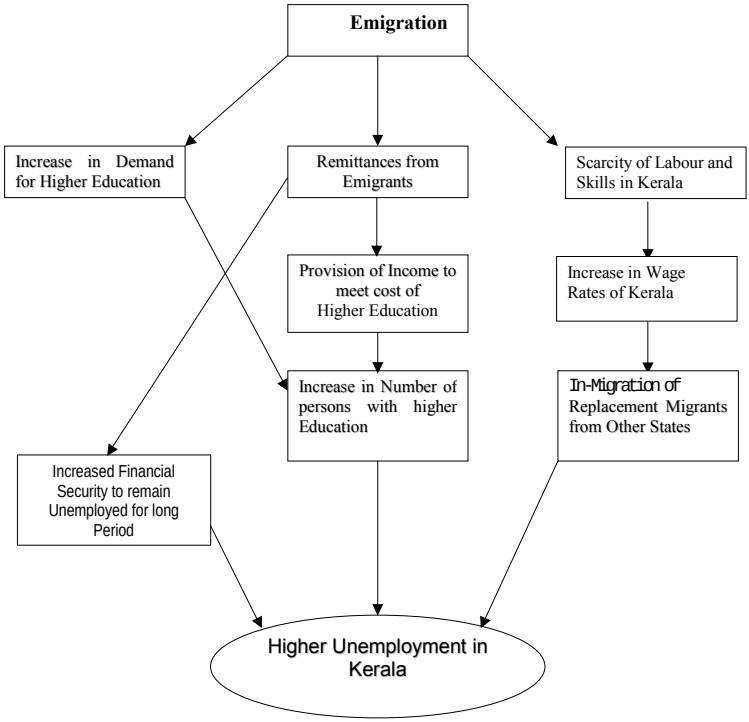
It must however be emphasized that the increase in the number of persons with higher levels of education was not solely due to the receipt of funds from emigrants by way of remittances. There are many other factors involved in the rapid expansion of education in Kerala in recent years. For instance, the stagnant and sometimes declining and uncertain economic returns from agriculture could have been a major factor for the heavy investment in higher education.

[++] This restriction was removed by the UAE government in June 2005.

Figure XII

Flow Chart

Emigration and Unemployment in Kerala



Source: K C Zachariah and S Irudaya Rajan, Gulf Revisited, Working Paper 363, P 58

The income factor works on increasing the unemployment rate in other ways too. If a person gets money from relatives abroad he/she may be able to remain unemployed for an extended period. Why should the unemployed youth work when they can live comfortably from the money

received from abroad? This is a question, which many people ask in Kerala in connection with the high unemployment rate in the state. In other words, remittances have reinforced and raised the reserve price of the labour.

Emigration could have contributed to increase in the unemployment rate for these reasons. But no statistical evidence has been supplied to support such an association. We attempt to do this here (Table 22).

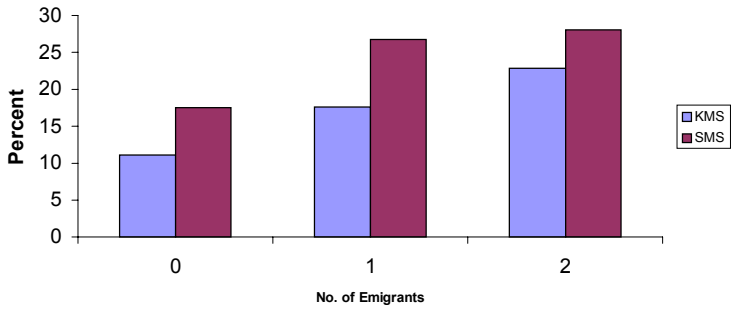
Table 22:Unemployment Rate by Number of Emigrants in a Household Full Data: All Households

No of Emigrants in the household	Unemployment Rate Among the Total population		Unemployment Rate Among the Secondary Educated	
	1998	2003	1998	2003
0	10.3	18.0	24.2	36.2
1	16.6	28.6	33.8	48.1
2	21.6	29.3	38.8	50.3
All HHs	11.20	19.2	25.6	37.8
	Panel data of common households			
No of Emigrants in the household	Unemployment Rate Among the Total population		Unemployment Rate Among the Secondary Educated	
	1998	2003	1998	2003
0	11.1	17.5	22.4	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 the Table 22 that the unemployment rate among persons in households with emigrants is higher than among persons in households without emigrants. Unemployment increases steadily with the number of emigrants in households.

Such a relationship is observed in 1998 as well as in 2003. 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.

Figure XIII: Unemployment Rate by No. of Emigrants in the Household, KMS and SMS



Similar analysis was done with the full set of data as well as with the Panel data. The overall pattern of the relationship between emigration and unemployment rate is the same in both. 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 a positive relation between unemployment and education. To verify this question, we calculated the relationship between unemployment and emigration for secondary educated persons only. These estimates are also given in table.

It shows that the high positive association between emigration and unemployment rate is observed strongly when education factor is controlled, that is, by carrying out the analysis among secondary educated persons alone.

Replacement migration and Unemployment

In the early phase of Gulf emigration from Kerala, the emigrants were mostly non-agricultural labourers with low educational level. They also included some skilled workers like carpenters, masons and electricians. The emigration of the unemployed unskilled workers helped to reduce unemployment. The money they sent back accelerated the building construction industry and thus helped further reduction in unemployment.

Initially, emigration of skilled labour did not create any major bottleneck back home, but their continued emigration resulted in significant scarcity of skilled workers in the state. The scarcity was followed inevitably by increases in wage rates. It is said that it is easy to find a plastic surgeon in Kerala than a good carpenter.

At present, Kerala has the highest wage rates among the states in India. (Annex Table II) The increasing wage rates in agriculture along with stagnant or declining prices of agricultural products in Kerala have resulted in reducing employment opportunities in agriculture. Money spent on high wages could not be recovered from the falling prices of agricultural products. The result is shrinkage of agricultural activities and employment in agriculture.

The differentials in wage rates between Kerala and the neighboring states got the attention of workers in other states. And they began to move into Kerala and take up work, which used to be done by Kerala workers, especially in the construction sector. What started as a trickle soon became a torrent. Thus began an era of replacement migration in Kerala.

After a lapse of about 60 years, Kerala has again become a net in-migrating state. As soon as a person gets a contract for any construction or roadwork, he appoints an agent to recruit workers not only from neighboring states, but also from states as far as Uttar Pradesh, Bihar, West Bengal, etc. In many construction sites in Kerala the lingua franca is not Malayalam but Hindi, Bengali or Tamil. Emigration of workers from Kerala and demographic contraction of the population in young working ages brought about by the rapid demographic transition, the higher wage rates of Kerala workers and the rising reserve price and withholding power of Kerala workers reinforced by massive remittances from abroad have engendered the era of replacement migration in Kerala. For the workers from other states, Kerala is their Gulf. In the same way the Kerala workers have penetrated into every economic sector in the Gulf region, the replacement workers from other states have started penetrating into all economic sectors in Kerala.

It is true that remittances from the Gulf kept up and boosted economic activity in the construction and the service sectors in Kerala. Normally the additional jobs thus created should have gone to Kerala workers. But, because of the large differences in the wage rates in Kerala and in its neighboring states and the unwillingness of Kerala workers to take up certain types of work, workers from other states have avidly grasped these employment opportunities. While maintaining that replacement migration has become an essential requirement for sustaining the economic activities in the state, it is an undeniable fact that that replacement migrants are standing in the way of some Kerala workers benefiting from the remittance-induced increases in economic activity in the state.

Thus, emigration which initially helped to reduce unemployment in Kerala, has in fact became a factor, although only one among many other factors, for the increased unemployment levels in the state. (see Flow Chart).

Regression Analysis

The relationship between the unemployment rate (as dependent variable) and the levels of education and emigration and a few economic indicators (as independent variables) is analyzed further with the help of multivariate regressions. This exercise was done with taluk-level as well as with household-level data.

Taluk level Analysis. This was a limited exercise using only two independent variables - education and emigration. The result indicated a positive and statistically significant association with education, but not with emigration. In 1998 also, the correlation between the unemployment rate and the proportion with higher education was statically significant (For details see Annex II)

Some of the other results of the analysis were the following

- the unemployment rate in 2003 had no statistically significant correlation with the unemployment rate in 1998;
- the unemployment rate in 2003 had a statistically significant correlation with the increase in the proportion of persons with high levels of education during 1998-03.
- improvement in the higher levels of education in a taluk during 1998-2003 was not correlated with the level of education in that taluk in 1998.

Household Level Analysis

Dependent variable was the same in all the regressions, namely, the unemployment rate (UNER)

1 UNER= (number of unemployed persons in a HH)/ (Number of persons in the labour force in the HH).

UNER is calculated for each household

Several independent variables were tried

2	EDUC	= 1	if there is any highly educated (secondary or higher) person in the HH
		= 0	if otherwise
3	EMI,	= 1	if there is any emigrant in the HH
		= 0	if otherwise
4	LPG	= 1	if the HH uses LPG for cooking
		= 0	if otherwise
5	HOUS	= 1	if the house occupied by the HH is luxurious or very good
		= 0	if otherwise
6	PHON	= 1	if the HH has a phone
		= 0	if otherwise
7	FRID	= 1	if the HH has a refrigerator
		= 0	if otherwise

All the bi-variate correlation coefficients were statistically significant (See Annex II). But partial correlation coefficients were significant only in three cases:

- Unemployment rate and Education (controlled for all other variables)
- Unemployment rate and Emigration (controlled for all other variables)
- Unemployment rate and use of LPG for cooking (controlled for all other variables)

Multi-variate Regression

Multivariate regression (See Annex II for details) using all the variables indicated very strong positive association of the unemployment rate with:

1. presence of a person with secondary or a degree in the household
2. presence of an emigrant in the household, and
3. use of LPG for cooking by the household.

The analysis did not show statistically significant independent association with possession of a luxurious or very good house or possession of phone or refrigerator by the household. Thus, the hypotheses about the relationship between unemployment on the one hand, and education and emigration on the other are supported strongly by the SMS survey data. An important conclusion from this analysis is that the impact of emigration on unemployment works not only through improvement in education, but also through other channels. According to the Flow Chart (Figure XII) the other channels are (i) financial security accruing from remittances which enables the unemployed to remain unemployed for long periods of time and (ii) replacement migration which substitutes for local workers. Thus, the regression analysis gives firm empirical backing to most of the hypotheses about increase in unemployment in Kerala given in this paper.

V - CONCLUDING REMARKS

This concluding section touches on three different points.

First, a word of caution about the relation between emigration and education. Although emigration and remittances are given as factors for the increase in the proportion of the population with higher levels of education, they should be taken by no means as the only (or the major) factor. Increase in the number of persons opting for higher levels of education should be viewed in the context of the larger macro economic transition taking place in the state. The economic value of education has been on the increase in the state even much before the era of Gulf emigration. The importance of agriculture and other primary sector activities in the economy has been on the decline in Kerala for quite some time. In the light of this persistent trend, there were not many alternatives for an aspiring youngster in Kerala, but to try to get a good education and get into non-agricultural sector activity. Thus, irrespective of gulf migration, the demand for higher education would have increased. What this paper suggests is that the shift to higher education was

accelerated by the increased demand for higher education (triggered by the possibility of emigration) and through the supply of funds for education that became available through remittances made by emigration.

Second, Is unemployment as much an economic catastrophe as it is often portrayed to be? Unemployment is no doubt a major problem in Kerala. About 4 million (about 15 percent of the adult population of Kerala) were registered with Employment Exchange in the state seeking jobs. About 2.3 million or 19.2 percent of the labour force, forty-one percent of the female labour force, thirty five percent of the labour force in Thiruvananthapuram district, and about 50 percent of labour force in the 15-24 age groups were unemployed. These figures certainly indicate the seriousness of the unemployment problem in the state. At the same time, they should be read along with other statistics indicating that the unemployment problem in the state is not very much an acute economic problem. **First** of all, nearly 75 percent of the unemployed get a job within five years of waiting; and hardcore unemployment is confined to about 5 percent (25 percent of 19.2) of the labour force. **Second**, there is no geographical area that remains a high employment area for long periods of time. Areas of high unemployment rate undergo rapid transitions to lower rates and vice versa. The unemployment rate of a taluk in 2003 was found to be not correlated with its unemployment rate in 1998; the correlation coefficient between the two was not statically significant. **Third**, the unemployment rate among persons of 30 years of age or above was only 6 percent. **Fourth**, many of the unemployed come from well-to-do households possessing good houses and expensive household gadgets and equipment. **Fifth**, the unemployed are rarely the heads of households (breadwinners). They are mostly unmarried sons or daughters, or married females whose husbands are the breadwinners of the family.

Third, about policies to reduce unemployment. Creation of new jobs is, of course the direct route to reduce unemployment. There is,

undoubtedly, plenty of scope for this line of approach in the state as most of the goods consumed in the state are produced outside the state. But there is only a small chance that any effort in this direction would yield positive results in the near future. A prior condition for such efforts to succeed is that our educated youth are "employable". A policy for tackling the unemployment problem in the state has to do with educational reform to make education relevant for employment. Educational reforms must be the number one priority. This is not a finding of this study, but it merits reiteration, in the context of policy suggestions to reduce unemployment.

A relatively minor result of this study is also worth referring to here.

In 1998, the unemployment rate in the state was higher among degree-holders than among persons with secondary school certificates: 31.4 percent among degree holders and 23.1 among secondary school certificate holders. In 2003, the relationship was reversed. The unemployment rate was higher among persons with secondary school education (38.5 percent) than among degree holders (36.4 percent). The increase in the number of unemployed persons during 1998-2003 was 100 percent for persons with secondary school education, but only 60 percent for degree-holders. One possible reason for this shift could be that by 2003 degrees holders in Kerala became more "employable" than they had been in 1998. The proportion of persons with technical degrees among all degree holders has increased in recent years, from 4.0 percent in 1998 to 11.8 percent in 2003. Could this increase in the relative share of technical graduates be the reason for the increase in the unemployment rate among degree holders being lower than that among the secondary school educated persons? Does it suggest that a cure for the unemployment problem lies in making the secondary school educated persons more employable by establishing some sort of match between education and the job market?

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ANNEXES

Annex I Direct Effect of Emigration on Unemployment Rate

The following arithmetic gives the details about the direct impact of emigration on unemployment rate.

	Unemployment rate, 2003	(percent)
Among	General population	19.2
Among	Emigrants, before Emigration	37.4
Among	Emigrants at Destination	2.0
Among	Return Emigrants	10.6

Effect of Emigration on Unemployment Rate in Kerala (the direct effect)

Number Unemployed in 2003 after emigration	2,292,392
Number in Labour Force after emigration	11,975,001
Emigrants, 2003	1,838,478
Unemployed among emigrants at the time of emigration	621,354

Number Unemployed had there been no emigration:

Number unemployed in Kerala in 2003 + number unemployed among the emigrants = 2,292,395+621,354= 2,913,749

The size of the labour force (under the assumption of no emigration)

= 11975001+1641769 = 13616770

Unemployment Rate (under the assumption of no emigration)

=2,913,749/13,616,770 = 21.4 percent

Annex II

Regression of Unemployment Rate on Education, Emigration, etc

The relationship between unemployment rate (as dependent variable) and education, emigration and a few economic indicators (as independent variables) is analyzed here with the help of multivariate regressions. This was done with taluk level data as well as with household level data.

Taluk level Analysis.

The following data were used in the analysis
UNR03= Unemployment rate in 2003
UNR98 =Unemployment rate in 1998
UNRIN= Increase in unemployment rate in 1998-03
EDR03= Proportion with high education, 2003
EDR98 = Proportion with high education 1998
EDRIN= Increase in proportion with high education in 1998-03
EMIR03=Emigration rate (per person) 2003
The results of the correlation analysis are given below:

Product Moment Correlation Coefficients

	UNR03	UNR98	UNRIN	EDR03	EDR98
UNR03					
UNR98	0.061				
UNRIN	0.874**	0.431**			
EDR03	0.366**	0.257	0.198		
EDR98	0.176	0.272*	0.027	0.647**	
EDRIN	0.296*	0.025	0.255*	0.508**	0.218
EMIR03	0.128	-0.036	0.143	0.131	-0.016

** statistically significant at 1 percent level

* statistically significant at 5 percent level

The analysis indicates a positive and statistically significant association of unemployment rate with the proportion with high education in a taluk in 1998 as well as in 2003.

Some of the other results of the analysis are as follows:

- the unemployment rate in 2003 has no statically significant correlation with the unemployment rate in 1998
- the increase in the unemployment rate during 1998-2003 is positively associated with the level of unemployment rate in 1998 and 2003 (statistically significant at 1 percent level)
- the unemployment rate in 2003 has a statistically significant correlation with the increase in the proportion of persons with high education.
- the improvement in higher education in a taluk during 1998-2003 was not correlated with its level of education in 1998

Household Level Data (2003)

Dependent variable was the same in all the regressions, namely, unemployment rate (UNER)

1 UNER= (number of unemployed persons in a HH)/ (Number in the labour force in the HH).
UNER is calculated for each household

Independent Variables

Several independent variables were tried, such as the following:

2 EDU = 1 if there is any highly educated persons in the HH (b6 = 6 or 7)
= 0 if otherwise

3 EMI, = 1 if there is any emigrant in the HH
= 0 if otherwise

4 LPG = 1 if the HH uses LPG for cooking (b36 = 5 in SMS)
= 0 if otherwise

5	HOU	= 1	if the house occupied by the HH is luxurious or very good (b37
		= 1 or 2)	
		= 0	if otherwise
6	PHO	= 1	if the HH has a phone (b384 = yes)
		= 0	if otherwise
7	FRI	= 1	if the HH has a refrigerator (b387 = yes)
		= 0	if otherwise

Bi-variate Correlation Coefficients*

	UNER	EDU	EMI	LPG	HOU	PHO
UNER						
EDU	0.267					
EMI	0.162	0.053				
LPG	0.146	0.298	0.183			
HOU	0.099	0.232	0.208	0.362		
PHO	0.147	0.350	0.271	0.474	0.447	
FRI	0.129	0.302	0.240	0.516	0.507	0.596

*All the correlation coefficients were statistically significant at 1 % level

The bi-variate correlation coefficients varied from 0.099.to 0.596. In spite of this large variation, all the correlations were statistically significant at 1 percent level

Partial Correlations

UNER and EDU	= 0.2280***	controlled for the remaining 5 independent variables
UNER and EMI	= 0.1347***	controlled for the remaining 5 independent variables
UNER and LPG	= 0.0469***	controlled for the remaining 5 independent variables

*** indicates that the correlation is statistically significant at 1 percent level

The other partial correlations were not statistically significant even at 5 percent level

Thus, education has the maximum correlation with unemployment rate. Next in importance was emigration. Possession of an LPG connection was the third in importance.

Multivariate Regression
Dependent Variable, 1 = UNER
Independent Variables 2 to 7 (see the list above)

	Independent Variable	Beta Coefficient	t-value	Significance Probability
2	EDU	0.238	21.6	.000
3	EMI	0.132	12.7	.000
4	LPG	0.052	4.3	.000
5	HOU	.0.000	0.024	0.981
6	PHO	0.006	0.425	0.671
7	FRI	-0.003	-0.184	0.854

Multivariate regression confirmed the results of the analysis by partial correlations.

The regression analysis also indicated very strong positive association between unemployment rate and (i) presence of a person with secondary level of education or a degree in the household, (ii) presence of an emigrant in the household, and (iii) use of LPG for cooking by the household.

The analysis did not show statistically significant independent association with possession of a luxurious or very good house and possession of phone or refrigerator by the household. Thus, the hypothesis

about the relationship between unemployment on the one hand, and education and emigration on the other is supported by the SMS survey data. An important aspect of the result of this analysis is that the impact of emigration on unemployment works not only through education, but also through other variables. Even after controlling for education, emigration has a significant effect on the unemployment rate in the state. According to the Flow Chart (Figure XI), emigration is hypothesized to have independent effect on unemployment through increased financial security accruing from remittances, which enables the unemployed to remain unemployed for long periods and in consequence of the replacement migration taking place in the state. Thus, regression analysis gives firm empirical backing to most of the hypotheses about increase in unemployment in Kerala given in this Working Paper (Flow Chart).

Annex Table III

Daily wage rates of Agricultural Laborers (males) in Major States of Rural India, 2001

State	Rs per day
Kerala	185
Jammu and Kashmir	115
Tamil Nadu	114
Himachal Pradesh	99
Rajasthan	83
Punjab	81
Haryana	81
West Bengal	71
Assam	69
Manipur	65
India	65
Gujarat	64
Maharashtra	62
Meghalaya	60
Karnataka	58
Andhra Pradesh	56
Tripura	55
Uttar Pradesh	55
Orissa	52
Bihar	51
Madhya Pradesh	46

Source: Wage Rates in Rural India: Labour Bureau, Ministry of Labour, Government of India.

Annex Table IV

Trend in wages (Rs), Kerala, skilled and unskilled workers in Agriculture

Year	Unskilled	Skilled
2001	127.21	182.42
2000	123.15	176.65
1999	118.9	165.35
1998	111.76	155.42
1997	103.72	145.94
1996	92.18	128.54
1995	77.17	107.2
1994	63.53	87.44
1993	54.26	76.49
1992	48.49	68.28
1991	41.38	59.00
1990	35.77	54.47

Source: State Planning Board. 2004. Economic Review 2003. Tables 15.7 and 15.8, Pp. 335.

Annex Table V

Unemployment Rate and the Proportion with Secondary School or Higher Levels of Education, by Taluks, 1998 and 2003

Sl No.	*Taluks*	*Unemployment (%)*			*Education (%)*		
		2003	1998	98-03	2003	1998	98-03
1	Neyattinkara	31.9	5.5	26.4	22.6	22.1	0.5
2	Trivandrum	36.3	10.5	25.8	43.1	29.2	13.9
3	Nedumagadu	40.9	11.4	29.6	28.2	20.7	7.5
4	Chirayinkeezhu	25.9	7.3	18.6	34.7	24.8	9.9
5	Kollam	17	7.1	9.9	34.7	25.7	8.9
6	Kottarakara	17.9	4.6	13.4	30.6	22.9	7.8
7	Pathanapuram	19.4	2.3	17.1	29.6	19.1	10.5
8	Kunnathur	5.4	10.5	-5.1	26.7	35.0	-8.2
9	Karunagapally	12.7	13.6	-0.8	25.7	18.2	7.5
10	Adoor	15.7	11.8	3.8	34.1	34.4	-0.3
11	Kozhencherry	39.7	14.7	25	27.7	35.2	-7.5
12	Ranni	29.6	12.5	17.1	34.8	36.2	-1.4
13	Mallapally	15.3	7.7	7.6	42.1	36.4	5.8
14	Thriruvalla	20.4	12.7	7.7	42.8	29.6	13.2
15	Mavelikara	25.8	20.1	5.7	44.4	34.9	9.5
16	Chenganoor	20.8	20.6	0.2	23	26.8	-3.8
17	Karthikapally	28.8	20.7	8.1	32.8	29.9	2.9
18	Kuttanad	19.1	11.3	7.7	26.2	24.8	1.5
19	Ambalapuzha	21.7	8.7	13.0	29.9	28.2	1.7
20	Cherthala	16.8	10.8	6.0	23.3	24.5	-1.3

cont'd.....

Sl.	*Taluks*	*Unemployment (%)*			*Education (%)*		
No.		2003	1998	98-03	2003	1998	98-03
21	Kanjirapally	13.1	6.6	6.5	23.9	33.5	-9.6
22	Changanaserry	17.8	5.5	12.3	45.9	31.7	14.2
23	Kottayam	15.4	9	6.4	31.2	29.6	1.6
24	Vaikom	18.4	6.3	12.1	22.6	22.4	0.2
25	Meenachil	17.2	5.5	11.7	23.2	33.6	-10.3
26	Peermade	10.6	5.9	4.6	18.5	20.1	-1.6
27	Thodupuzha	16.9	12.4	4.5	28.7	36.5	-7.8
28	Udumnanchola	8.9	12.2	-3.3	18.8	33.5	-14.7
29	Devikulam	1.6	11.5	-9.9	11.6	30.5	-18.9
30	Kothamangalam	18.3	16.3	2	37.5	22.1	15.4
31	Moovattupuzha	31.3	6.8	24.5	36	23.9	12
32	Kanayannur	21.6	14.9	6.7	44.9	45.5	-0.7
33	Kochi	21.4	16.1	5.3	35.1	27.9	7.3
34	Paravoor	20.7	13.7	7	29.6	23.2	6.4
35	Aluva	28.5	15.4	13.1	31.6	26.2	5.4
36	Kunnathunad	32.5	15.1	17.5	31.8	29.1	2.7
37	Mukundapuram	6.9	15.5	-8.6	37.2	28.5	8.7
38	Kodungallur	16.3	14.2	2.1	27.3	19.4	8
39	Thrissur	8.1	9.5	-1.4	34.3	30.6	3.6
40	Chavakkad	8.2	11.2	-3.1	21	18.9	2.1
41	Thalappally	13	4	9.1	19.6	12.5	7.1
42	Alathur	9.8	17.4	-7.6	24.6	21.7	2.9
43	Chittoor	10.4	5.7	4.7	10.4	8.8	1.7
44	Palakkad	7.6	18.7	-11.1	25.4	20.7	4.7

cont'd.....

Sl No.	*Taluks*	*Unemployment (%)*			*Education (%)*		
		2003	1998	98-03	2003	1998	98-03
45	Mannarkad	16.7	6.4	10.3	5.1	9.9	-4.8
46	Ottapalam	14	15.7	-1.6	5.8	19.9	-14.1
47	Ponnani	22.6	6.2	16.4	11.6	8.6	3
48	Trirungadi	15.7	….	….	10	….	….
49	Tirur	9	5.9	3.1	12.8	3.7	6.3
50	Perinthalmanna	9.4	9.8	-0.3	10.8	14.5	2.4
51	Nilambur	11	….	….	16.8	….	….
52	Ernad	9.7	14	-4.3	17.9	13.8	-6.1
53	Kozhikode	10.7	11	-0.2	27.8	22.9	-1.6
54	Quilandy	12.9	16.9	-3.9	26.3	19.5	11.5
55	Vadakara	16.6	14.8	1.8	24.7	16.2	6.2
56	Wythiri	20.2	10.4	9.8	35.1	20.1	1.6
57	Sulthanbathery	12.3	15.7	-3.4	27.5	23.1	16.7
58	Mananthawadi	9.4	9.8	-0.4	26.1	18.4	3.8
59	Thalasserry	21.3	17.7	3.6	29	23.7	-0.4
60	Kannur	28.6	13.2	15.4	32.4	26.5	7.6
61	Tailiparamba	25.5	18.4	7.1	35	21.4	15.6
62	Hosdurg	29.7	6.1	23.6	20.6	16.8	20.5
63	Kasaragod	26	4.8	21.2	14.7	14.5	-3

Source: Estimated by the author from SMS Data (2003)

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