KERALA'S GULF CONNECTION
Emigration, Remittances and their Macroeconomic Impact 1972-2000

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ABSTRACT

This paper attempts to construct a time series estimation of remittances from abroad to the Kerala economy for the period 1972 to 2000. It is now widely acknowledged that foreign remittances in the economy of the State of Kerala in India in the form of money sent by its workers in the Gulf countries play a crucial role. The study finds that by the early nineties remittances to the Kerala economy assumed a significant share of state income. This ranged from 17 percent during 1991-92 and 24 percent during 1997-98 with an average of 22 percent for the second half of the nineties. The liberalisation of the Indian economic policies, particularly the foreign exchange rate, benefited Kerala directly. Adding the remittance income to the Net State Domestic Product, a Modified State Income series has been constructed. As a result Kerala's per capita income not only caught up with the average per capita income for India but started exceeding it reaching 49 percent above the national average by the end of the nineties. This tallies with per capita consumer expenditure in Kerala, which was in excess of 41 percent above the national average by the end of the nineties. Remittances have also made significant impact on savings. By the nineties savings rates in the Kerala economy seem to have reached such high levels comparable to the East and South East Asian countries. The significance of remittances can also be gauged by its relative magnitudes. By the end of the nineties remittances reached such levels that they were well above the total government expenditure, value added in manufacturing and even the value added in industrial sector as a whole.

JEL Classification: F22, J61

Key Words: emigration, Gulf countries, Kerala economy, remittances, and consumption.

Introduction

The role of foreign remittances in the economy of the State of Kerala in India in the form of money sent by its workers in the Gulf countries is now widely acknowledged[1]. However reliable estimates of the quantum of such remittances over time have been difficult to obtain. The problems in estimating remittances to a regional economy like Kerala are well known. The revival of growth in the Kerala economy since the late eighties[2] once again brings into prominence the role of remittances. Given the fact that per capita consumption in Kerala since 1977-78 has consistently exceeded the national average without a corresponding excess in income, it would appear that the remittance factor is central to an understanding of the performance of Kerala in recent times.

This paper is not concerned with estimation of emigration from Kerala. This has already been done. The most useful source is Zachariah, et.al. (2001b), which has reported that in 1998 there were 13.62 lakhs Kerala emigrants living abroad[3]. This study also provided data for constructing a time series of Kerala emigrants from 1972 to 2000 (see Technical Appendix). These are sizeable numbers. Towards the end of the nineties, Keralaites working abroad constituted 10 percent of the workforce in Kerala. The size of those working abroad now equals those working in the organised sector (both public and private) in Kerala.

Against this background, we have set before ourselves two specific objectives for this paper.

First, to quantify the remittance income from abroad to the Kerala economy since 1972. This has two components: (i) remittances through legal channels, and (ii) remittances through illegal channels. Since we are not able to find out remittances through illegal channels, our attempt here is confined to (i). However, the incentive to send money through illegal channels seems to have almost dried up with the liberalisation of the exchange rate since 1991. As such our estimates are likely to be close to the total remittances from abroad to the Kerala economy during the nineties. We have ignored the remittances of persons of Kerala origin who are resident in other parts of India. In our view this is not likely to be of significance in terms of the share of the Net State Domestic Product (NSDP).

Second, to examine the extent to which remittances have influenced income, consumption and savings in the Kerala economy. First we construct a series of income, which we call Modified State Income (MSI). Consumption and savings have been estimated as shares of MSI. Some reality check is attempted for our estimates of remittances as well as such other variables as MSI and savings.

In addition to these two objectives, we have also examined the magnitude of remittances in relation to such macroeconomic variables as NSDP, value added in manufacturing and industry, and government expenditure. This has been highlighted along with the magnitude of the Kerala workforce working abroad in relation to those working within Kerala in the organised sector.

Significant findings of this study may be summarised as follows:

(1) By the early nineties remittances to the Kerala economy assumed a significant share of state income. This ranged from 17 percent during 1991-92 to 24 percent during 1997-98 with an average of 21 percent for the period 1991-92 to 1999-00. Equally significant

is the fact that a sizeable proportion of remittances is in the form of non-resident Indian (NRI) deposits in banks. For the nineties this worked to 27 percent of the total remittances. Adding the remittance income to the net state domestic product we have generated a series of Modified State Income (MSI) for Kerala for the period 1972-73 to 1999-2000.

(2) The Kerala economy benefited directly by the liberalisation of the foreign exchange rate since 1991. This 'wind fall' gain varied from nearly Rs. 525 crores in 1991-92 to Rs. 3,339 crores in 1999-00.

(3) The increase in per capita income as a result of remittances helped increase the consumption of the people in Kerala. The average per capita consumer expenditure in Kerala was below the national average till 1977-78. Since then per capita consumer expenditure in Kerala exceeded that of India progressively reaching 41 percent above the national average in 1999-00. Kerala's modified per capita income (PMSI) caught up with that of the national average only in 1984-85 but reached 49 percent above the national average in 1999-00. The delay in catching up with the national average in per capita income might be a reflection of the remittances through illegal channels.

(4) Remittances have also made a significant impact on savings. Average propensity to consume declined as income increased steadily. This helped the savings rate to increase and reach high levels comparable to East and South East Asian countries during the nineties. The challenge before Kerala now is to translate such high rates of savings (also reflected in high growth rates in bank deposits and a low credit-deposit ratio of around 40 percent) into investment so as to accelerate not merely aggregate growth of the economy but more importantly, in employment growth.

While there are signs of some decline in unemployment in Kerala during the nineties, the rate of unemployment is still high compared to the national average. Majority of the unemployed in Kerala are of the educated kind and this poses both an opportunity as well as a challenge to the Kerala society.

(5) The significance of remittances is not merely in absolute magnitudes. By mid-nineties its relative magnitudes have assumed a crucial place in the Kerala economy. By this time the size of remittances reached more than 22 percent of the NSDP, 113 percent of the government expenditure, 208 percent of value added in manufacturing and 110 percent of the value added in industry. By the end of the nineties remittances reached a level well above the last three variables. Value added in manufacturing was only less than half of the remittances.

Earlier Attempts

Earlier attempts to estimate remittances to Kerala may be classified into three in terms of their methodology. The first one by Gulati and Mody (1983) was by assuming a certain proportion of Kerala workers in the total Indian workers abroad. This is a weighted average share of persons from Kerala in the Middle East countries (40-50 per cent) and outside the Middle East (4-5 per cent) out of the total Indians abroad for these two regions. This was based on available data for two time points. By this method remittances were calculated for the period 1976-77 to 1980-81 by applying the share of Kerala workers to total remittances to India. Following this method, Isaac (1997) updated the series up to 1989-90. Nair (1989) followed the same method but assumed that 50 per cent of remittances to India would be to Kerala. A time series was constructed for the period 1973-74 to 1985-86.

The second was by Zachariah et.al. (2001b) through a primary survey of sample households spread throughout Kerala. The information elicited related to remittances in cash and kind to the households with respect to the reference period i.e. 1998. By this method it was not possible to capture the deposits directly made by the emigrants into their bank accounts (both repatriable and non-repatriable) as well as remittances other than those for family maintenance. The estimate was for one reference period only. Since the reported remittance was too low to lend any credence, Zachariah et.al. (2002) generated alternative estimates for late nineties. This is based on a recent study of Kerala migrant workers in the United Arab Emirates. It was found that 57 per cent of the remittances to India from the UAE were to Kerala. From an earlier study (Zachariah, et.al. 2001b) it was found that the remittances to Kerala from all countries worked out to 3.677 times that from the UAE. Using these ratios, the remittances to Kerala were estimated for 1998-2000. These are very close to our estimates[4] . The three studies on international migration from Kerala undertaken by Zachariah, et.al. (2001b, 2001c and 2002) have generated valuable statistics on the magnitude of migration, return migration, share of remittances by countries/regions, average amount of remittances and a host of related information. This vital information has helped us in constructing a more reliable time series of remittances to the Kerala economy.

The third method is an indirect one by Krishnan (1994). In an unpublished paper[5] on ‘Foreign Remittances, consumption and income’, the late T. N. Krishnan developed an indirect estimate of the income generated by the multiplier effect of the remittances, through the estimation of a consumption function. Although the objective of the paper was to estimate the actual remittances to the Kerala economy, the methodology adopted could capture only the income stream generated through the multiplier mechanism.

The paper examined changes in the consumption over the years and decomposed it into two components, namely consumption out of domestic income and consumption out of remittance income. The basic approach of this analysis was precisely in this direction, namely to estimate ultimately the value of remittance (consumption) multiplier and then estimating the income generated in the domestic economy using this multiplier. The variables used in the estimation are the mean annual consumption expenditure, per capita NSDP and the per capita bank deposit. Per capita bank deposit was used as a proxy variable for the remittance. This was justified on the ground that the bank deposit had shown high growth rates since the late 1970's. The model used here was a simple Keynesian one. But the difference lies in the fact that the multiplier estimated referred to consumption multiplier instead of investment multiplier in the Keynesian system. This consumption multiplier is multiplied with the consumption out of remittances, which is estimated using the model in order to estimate the total remittance. The paper argues that this is the total remittance to the economy. But actually this is the income generated through the multiplier effect and not the actual remittances.

Our Method

Our method is a direct estimate of the remittances to the economy. In the Balance of Payments statistics published by the Reserve Bank of India (RBI), remittances can be identified as credits in current account as 'net private transfers'[6] and also as 'net NRI deposits' in the capital account. From these figures, we have estimated region wise remittances to the Indian economy in terms of Middle East countries and other countries.

The method we have adopted to estimate the remittances to the Kerala economy is as follows:

$$R_{kt} = [R_{It}(ME) * k_t] + [R_{It}(OME) * k(a)] + NRE_{kt} + R_t(K)$$

Where

R_{kt} is remittance to Kerala in year t;

$R_{It}(ME)$ is remittance to India from the Middle East Countries;

k_t is the share of persons from Kerala in the stock of Indians in the Middle East;

$R_{It}(OME)$ is the remittance to India from countries other than the Middle East;

$k_t(a)$ is the assumed share of remittance to Kerala from countries other than the Middle East;

NRE_{kt} represents the non-resident external (foreign exchange) deposits in banks located in Kerala; and

$R_t(K)$ represents the money equivalent of remittance in kind to Kerala.

The details of the method adopted and the data sources are given in Technical Appendix. The important aspects of our method are: (a) We have been able to generate an year-wise stock of Keralaites in Gulf countries and their proportion in terms of the stock of Indians. This share is taken as the share of Kerala out of the total remittances to India from the Middle East countries. (b) We have assigned a share of remittances in kind to total remittances to Kerala. This was 6.18 percent of the total remittances during the nineties obtained from the 1998 survey of Zachariah, et.al. (2001b). For the earlier period this has been taken as twice the rate for nineties since the temptation for bringing electronic and other valuable goods was much greater prior to the liberalisation of the Indian economy; and (c) Since the data on NRI deposits in banks located in Kerala are published as 'outstanding deposits as on 31 March' we have taken the annual change as the net inflow on this account.

Estimates of Remittance Income

Based on the above method we have constructed a time series data on foreign remittances to Kerala. The relevant figures are given in Table 1. What comes out clearly from these estimates is that the magnitude of foreign remittance into Kerala started acquiring significance by early eighties when international labour migration began to acquire momentum. In terms of absolute magnitudes, average annual remittances ranged from Rs. 536 crores during 1980-85 to Rs. 10,835 crores during 1995-2000. As a percentage of the State Domestic Product (SDP) remittances constituted, on an average, around 11 percent since early eighties to the early nineties (till the end of the fixed exchange rate system). During the nineties it increased to around 21 per cent. Note that this share increased to 22 percent during the second half of the nineties.

Increase in the flow of remittances

It is quite clear that the growth in remittances to Kerala has exceeded the growth in SDP by a wide margin throughout the period. This high growth in remittances (both in foreign exchange and rupee terms) is indirectly supported by the growth rate in bank deposits (see Table 2). Since there was a decline in remittances during 1990-91 (as a result of speculation on the depreciation of the rupee), we have estimated separately the growth rate in remittances in foreign exchange to adjust for this factor by ignoring that year. The results, given in Table 2, show that the growth rate in remittances after the exchange rate liberalisation has accelerated to reach 22 percent per annum compared to 18 percent before. Thus, although a significant number of Kerala workers return from the Gulf countries[7] and has given the impression of a negative trend in international labour migration, the remittance figures do not support such an assumption. As Zacharia and Rajan (2001a) noted, the migration process remained positive or balanced until the end of the century.

On the basis of our estimates of remittances, we make the following observations:

(a) Remittances increased in absolute terms during the entire period 1972-73 to 1999-2000 but accelerated after the exchange rate liberalisation.

(b) Remittances as a percentage of NSDP also increased from around 11 per cent to more than 21 per cent reflecting a faster rate of growth in remittances than the NSDP. However, the increase in the growth of remittances after the liberalisation is likely to be partly a result of the reduction in remittances through unofficial channels. As such the growth rate in remittances during the eighties could be an underestimation. This is supported by the growth rates in bank deposits, which is more or less equal for both the periods.

Figure 1. Trends in Net State Domestic Product (NSDP). Modified State Income (MSI) and Remittance

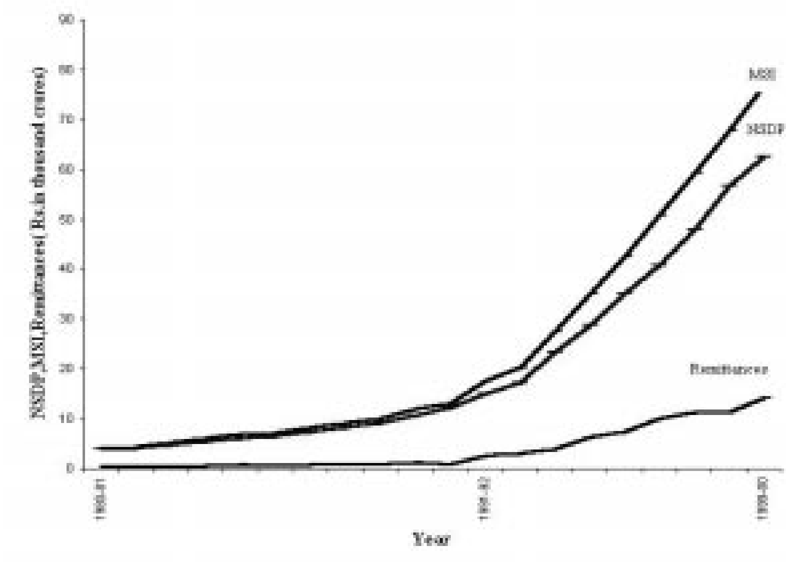

Table 1: Foreign Remittances to and State Income (NSDP) in Kerala (Rs. crores)

Year	Net Private Transfers	Net Inflow of NRI Deposit	Remittance in Kind	Toal Remitt-ance	NSDP	Remittance as % of NSDP
1	2	3	4	5	6	7
1972-73	5.77	1.7 (20)	0.84	8.31	1457	0.57
1973-74	8.00	1.4 (13)	1.20	10.60	1823	0.58
1974-75	13.47	5.9 (27)	2.64	22.01	2086	1.06
1975-76	33.72	3.7 (8)	8.52	45.94	2228	2.06
1976-77	56.99	35 (32)	16.26	108.25	2398	4.51
1977-78	92.44	44 (27)	25.24	161.68	2521	6.41
1978-79	93.36	36 (24)	22.76	152.12	2754	5.52
1979-80	138.57	41 (19)	37.50	217.07	3156	6.88
1980-81	244.40	48 (14)	55.84	348.24	3823	9.11
1981-82	274.22	63 (16)	45.16	382.38	4050	9.44
1982-83	326.67	105 (21)	48.74	480.41	4712	10.20
1983-84	380.97	187 (30)	55.72	623.69	5523	11.29
1984-85	509.36	271 (31)	67.18	847.54	6141	13.80
1985-86	472.47	50 (8)	58.84	581.31	6503	8.94
1986-87	562.11	299 (32)	68.12	929.23	7354	12.64
1987-88	715.09	176 (17)	81.18	972.27	8258	11.77
1988-89	608.98	215 (23)	75.58	899.56	9182	9.80
1989-90	727.89	428 (34)	84.04	1239.93	10668	11.62
1990-91	581.24	292 (30)	72.60	945.84	12173	7.77
1991-92	1693.22	735 (29)	109.11	2537.33	15102	16.80
1992-93	1565.24	1460 (46)	99.09	3124.33	17175	18.19
1993-94	2366.30	1516 (37)	146.62	4028.92	23401	17.22
1994-95	5212.67	871 (13)	326.67	6410.34	28697	22.34
1995-96	5851.76	1217 (16)	365.91	7434.67	35087	21.19
1996-97	7446.37	2075 (20)	478.25	9999.62	40819	24.50
1997-98	8203.73	2557 (22)	541.30	11302.03	47924	23.58
1998-99	8145.46	2672 (23)	468.16	11285.62	56563	19.95
1999-00	8257.14	5395 (38)	505.74	14157.88	62557	22.63

Note: (1) Figures in brackets indicate NRI deposits as a percentage of total remittances. (2) Net Private Transfers to Kerala have been worked out on the basis of the methodology given in the text. Col. 3 refers to the deposits of non-resident Indians in the banks located in Kerala. These are published in the *Economic Review* published by Government of Kerala, annually. NSDP refers to Net State Domestic Product, which is collected from CSO Estimates of State Domestic Product (Government of India, *Estimates of State Domestic Product,* Various Issues).

Table 2: Growth rates of key variables for Kerala

Variable		1976-77to 1989-90	1991-92 to 1999-00
1.	Remittance (Rs.)	18.17	22.06
2.	Remittance (US$)	12.78	15.83
3.	NSDP (Current prices)	11.86	18.41
4.	MSI (Current prices)	12.24	19.01
5.	PNSDP (Current prices)	10.38	17.27
6.	PMSI (Current prices)	10.78	17.87
7.	APCE	10.69	11.36
8.	Total Bank Deposit	17.10	16.53
(a)	Domestic Bank Deposit	16.53	13.92
(b)	NRE Deposit	18.31	19.50

Note: NSDP means Net State Domestic Product; MSI means Modified State Income (NSDP + Remittances). PNSDP and PMSI stand for per capita NSDP and MSI respectively. APCE means annual per capita consumer expenditure.

(c) Kerala benefited substantially as a result of exchange rate liberalisation in 1991 moving from a fixed exchange rate to a floating (though managed) exchange rate system[8]. This, in our opinion, should be reckoned as the single most gain of Kerala as a result of economic reforms introduced in 1991. We have quantified this gain by estimating the difference between actual exchange rate since 1991 and the expected exchange rate without liberalisation. This may be represented as

$$G_{rt} = R_t \; (r_{at} - r_{et})$$

Where G_{rt} = gain in rupees as a result of exchange rate liberalisation,

R_t = actual remittance in US dollars,

r_{at} = actual exchange rate,

r_{et} = expected exchange rate, and

t = time point.

Table 3 presents the relevant figures. Since the exchange rate liberalisation Kerala has gained, on an average, Rs. 1,899 crores per annum varying from Rs. 525 crores in 1991-92 to Rs. 3,339 crores in 1999-2000.

Table 3. Gain to Kerala Economy due to Exchange Rate Liberalisation

Year	Remitt-ance (Rs. Crores)	Exchange Rate Rs./ US$ (Actual)	Remitt-ance in US$ (Crores)	Estimated Exchange rate Rs./US$*	Estimated Remitt-ance (Rs. Crores)	Gain due to exchange rate liberalisation (Rs. Crores)
1	2	3	4	5	6	7
1972-73	7.47	7.67	0.97	7.67	7.47	0
1973-74	9.40	7.79	1.21	7.79	9.40	0
1974-75	19.37	7.94	2.44	7.94	19.37	0
1975-76	37.42	8.68	4.31	8.68	37.42	0
1976-77	91.99	8.97	10.26	8.97	91.99	0
1977-78	136.44	8.58	15.90	8.58	136.44	0
1978-79	129.36	8.22	15.74	8.22	129.36	0
1979-80	179.57	8.09	22.20	8.09	179.57	0
1980-81	292.40	7.9	37.01	7.90	292.40	0
1981-82	337.22	8.97	37.59	8.97	337.22	0
1982-83	431.67	9.66	44.69	9.66	431.67	0
1983-84	567.97	11.34	50.09	11.34	567.97	0
1984-85	780.36	11.89	65.63	11.89	780.36	0
1985-86	522.47	12.23	42.72	12.23	522.47	0
1986-87	861.11	12.77	67.43	12.77	861.11	0
1987-88	891.09	12.96	68.76	12.96	891.09	0
1988-89	823.98	14.48	56.90	14.48	823.98	0
1989-90	1155.89	16.64	69.46	16.64	1155.89	0
1990-91	873.24	17.94	48.68	17.94	873.24	0
1991-92	2428.22	24.47	99.23	19.18	1903.25	525
1992-93	3025.24	30.65	98.70	20.50	2023.90	1001
1993-94	3882.30	31.36	123.80	21.92	2713.88	1168
1994-95	6083.67	31.39	193.81	23.44	4542.24	1541
1995-96	7068.76	33.44	211.39	25.06	5296.52	1772
1996-97	9521.37	35.49	268.28	26.79	7186.64	2335
1997-98	10760.73	37.16	289.58	28.64	8293.10	2468
1998-99	10817.46	42.07	257.13	30.62	7872.67	2945
1999-00	13652.14	43.33	315.07	32.73	10313.34	3339

Note: * Estimated exchange rate refers to the rate under a regime of fixed exchange rate system that was in existence till 1991. The figures for 1991-92 onwards refer to the projected exchange rates had there been no liberalisation of the exchange rate system.

How reliable is our estimate?

Given the importance of remittances to the Kerala economy, a legitimate question that might be raised is that of the reliability of our estimate. The difference between our method and the method used by Gulati and Mody (1983) is that whereas they assumed the percentage of the Kerala workers in the Gulf region to be 40-50 percent over time, we have developed an annual series of the stock of Indian and Kerala emigrants in the Gulf countries to find out Kerala's share. Using these variables we estimated the remittances to the state. Still there may be some chance of underestimation. The remittance in kind was estimated using a single year's data and there could be errors of underestimation by receiving households as in the case of reporting incomes. There is also some ground to believe that the share of Kerala emigrants in the total Indian emigrants may be higher than what has been officially reported. However, we are not in a position to check the veracity of this possibility. On the other hand, there are some indications that the share of remittances to Kerala is much higher than the share of population. For instance, Zachariah, et.al. (2002) reported that Kerala accounted for 57 percent of the money transfers from a major UAE money exchange centre[9] .

Some counterchecking of our estimates is possible. For example, the projected stock of Indians in the Gulf region for the year 2000 is 30.87 lakhs (see Table A1 in the Technical Appendix). The Gulf Division of the Ministry of External Affairs of the Government of India gave a figure of 30.7 lakhs for the year 2000 (quoted in Zachariah, et.al. 2002). For Kerala, the total number of Keralaites generated from the unpublished data of the 1998 study (Zachariah, et.al. 2001b) for 1987 and 1992 are 3.05 and 6.45 lakhs respectively (see Table A2 in Technical Appendix). The Department of Economics and Statistics of the Government of Kerala reported the stock of Keralaites in Gulf countries for these years as 3.00

and 6.41 lakhs respectively. The close correspondence between these two independent sources as well as that of the Government of India figures and our estimate of the stock of Indians in Gulf countries imparts a sense of reliability to our estimates of the share of Keralaites in total Indians in the Gulf countries. Using this population share for the share of remittances is likely to be an underestimation for reasons mentioned above. We are particular that our estimates should not err on the higher side. Based on remittances received from UAE Exchange Centre, Zachariah, et.al. (2002) worked out remittances for Kerala in 2000 at Rs.15,192 crores as against our estimate of Rs.14,158 crores for 1999-2000.

We have however every reason to believe that the estimated remittances are on the lower side. This is because of the possibility of some remittances still coming through illegal channels. Although the difference between the open market exchange rate and the 'black' market rate is likely to be close to zero, for a small segment of workers in the Gulf this may still be the preferred channel. This is because around 20 per cent of the workers from Kerala in the UAE were found to be daily wageworkers although most of them enjoyed regular employment (Zachariah, et.al. 2002). For these workers negotiating the procedures for sending money through the banking system might involve higher transaction costs compared to the unofficial channels[10].

Impact on Income, Consumption and Savings

The macro economic impact of the remittances on the regional economy was evaluated by estimating the impact of the remittances on income, consumption and savings. As mentioned in the beginning a modified SDP, called MSI, for Kerala was estimated by adding the series of total remittances with the SDP. The per capita MSI was also estimated. The results are given in Table 4.

The remittances to the Kerala economy started assuming significance from the early eighties. During the eighties the share of remittance in state income ranged between 9 to 14 percent. Since 1991-92 the share increased to 17 to 24 per cent with an average of 21 per cent for the nineties. The average share for the second half of the nineties was 22 percent. Once again, we must caution that the share for the eighties might be an underestimation due to the administered exchange rate system and the consequent incentive for sending remittances through illegal channels. If this argument is a plausible one then the share of remittances in the SDP during the eighties might have been above what has been reported in Table 4.

We have also worked out the relationship between the per capita consumption, per capita SDP and MSI through the estimation of the average propensity to consume out of SDP and MSI. The results are given in Table 5. The propensity to consume remained well above 80 percent of the MSI and 85 percent of the SDP till the early nineties. Since then average propensity to consume has declined to half of the PSDP and less than half of the PMSI. This means that the growth in per capita consumption was outpaced by the growth in per capita income after 1991-92. As revealed in Table 2, the growth in consumption remained more or less the same during pre- and post-liberalisation periods (around 11 percent) but the growth in income (in current prices) accelerated during the nineties (19 as opposed to 12 percent during the pre-liberalisation period). It may be mentioned here that per capita consumer expenditure in Kerala is one of the highest among Indian states since the mid-eighties.

This means that the saving rate in Kerala has increased considerably. Savings rates were estimated by deducting the per capita mean consumption expenditure from the per capita MSI. These are given in column 5 in Table 5. The savings rate in the Kerala economy seems to have increased tremendously since the early nineties. The savings rate that was around 21 percent during 1972-73 to 1990-91 (around the national average) more than doubled to cross 50 percent during 1991-92 and 1999-00. This is similar to the savings rates of the high growth economies of East and South East Asia. This is reflected in the trend in the bank deposits. The total bank deposits and its annual growth are given in columns 6 and 7 in Table 5.

Table 4: NSDP and MSI for Kerala (Total and Percapita)

Year	NSDP (Rs. Crs)	MSI (Rs. Crs)	PMSI (Rs.)	PSDP (Rs.)	PMSI as % of PSDP
1	2	3	4	5	6
1972-73	1457	1466	661	665	101
1973-74	1823	1834	811	816	101
1974-75	2086	2108	910	920	101
1975-76	2228	2274	955	975	102
1976-77	2398	2507	1010	1055	105
1977-78	2521	2682	1043	1110	106
1978-79	2754	2906	1121	1183	106
1979-80	3156	3373	1270	1358	107
1980-81	3823	4171	1508	1645	109
1981-82	4050	4432	1576	1725	109
1982-83	4712	5192	1809	1993	110
1983-84	5523	6147	2092	2329	111
1984-85	6141	6989	2296	2612	114
1985-86	6503	7085	2398	2613	109
1986-87	7354	8284	2676	3014	113
1987-88	8258	9230	2937	3283	112
1988-89	9182	10081	3233	3549	110
1989-90	10668	11908	3718	4150	112
1990-91	12173	13119	4200	4526	108
1991-92	15102	17639	5140	6004	117
1992-93	17175	20300	5768	6818	118
1993-94	23401	27430	7788	9129	117
1994-95	28697	35108	9432	11539	122
1995-96	35087	42521	11390	13803	121
1996-97	40819	50819	13089	16295	124
1997-98	47924	59226	15195	18779	124
1998-99	56563	67849	17756	21299	120
1999-00	62557	76715	19461	23865	123

Note: NSDP stands for state income and MSI for modified state income. P stands for per capita.

Table 5: Average propensity to consume (APC) and save (APS) in Kerala

Year	APCE (Rs)	APC out of PNSDP	APC Out of PMSI	APS out of PMSI	Total bank deposit (Rs. in crores	Percentage change in col 6
1	2	3	4	5	6	7
1972-73	534	0.81	0.80	0.20	284	-
1973-74	593	0.73	0.73	0.27	339	19
1974-75	659	0.72	0.72	0.28	407	20
1975-76	732	0.77	0.75	0.25	485	19
1976-77	813	0.81	0.77	0.23	670	38
1977-78	903	0.87	0.81	0.19	889	33
1978-79	1013	0.90	0.86	0.14	1118	26
1979-80	1137	0.90	0.84	0.16	1286	15
1980-81	1276	0.85	0.78	0.22	1567	22
1981-82	1432	0.91	0.83	0.17	1815	16
1982-83	1600	0.88	0.80	0.20	2149	18
1983-84	1795	0.86	0.77	0.23	2631	22
1984-85	1976	0.86	0.76	0.24	3479	32
1985-86	2177	0.91	0.83	0.17	3600	3
1986-87	2400	0.90	0.80	0.20	4154	15
1987-88	2647	0.90	0.81	0.19	4811	16
1988-89	2938	0.91	0.83	0.17	5667	18
1989-90	3262	0.88	0.79	0.21	6620	17
1990-91	3624	0.86	0.80	0.20	7858	19
1991-92	4028	0.78	0.67	0.33	9671	23
1992-93	4479	0.78	0.66	0.34	12112	25
1993-94	4982	0.64	0.55	0.45	14941	23
1994-95	5587	0.59	0.48	0.52	17458	17
1995-96	6268	0.55	0.45	0.55	20171	16
1996-97	7034	0.54	0.43	0.57	23354	16
1997-98	7896	0.52	0.42	0.58	27552	18
1998-99	8866	0.50	0.42	0.58	31532	14
1999-00	9959	0.51	0.42	0.58	38619	22

Note: APC stands for annual per capita consumer expenditure; PMSI for modified per capita state income. Source for Col.2: Estimated from quinquinnial survey on consumer expenditure from various NSS rounds.

Table 6: State Income, Modified State Income and Consumer Expenditure in Kerala as percentage of all India

Year	PNSDP (Kerala) as % of PNDP (India)	PMSI (Kerala) as % of PNNP (India)	APCE (Kerala) a% of APCE (India)
1	2	3	4
1972-73	82	83	93
1973-74	83	85	94
1974-75	82	83	96
1975-76	83	86	97
1976-77	84	88	99
1977-78	77	83	101
1978-79	79	84	112
1979-80	85	91	114
1980-81	87	94	116
1981-82	79	87	117
1982-83	84	93	118
1983-84	85	95	120
1984-85	85	97	120
1985-86	81	89	121
1986-87	83	94	121
1987-88	82	95	122
1988-89	76	85	123
1989-90	78	88	123
1990-91	76	84	124
1991-92	83	100	125
1992-93	84	101	126
1993-94	99	119	127
1994-95	104	130	129
1995-96	110	136	131
1996-97	111	140	134
1997-98	118	147	136
1998-99	119	145	139
1999-00	120	149	141

Note: PNDP stands for per capita net domestic product and PNNP for per capita net national product.

Table 7: Relative magnitude of remittances to Kerala

Year	Remittances as % of			
	SDP	Govt. expenditure	Value added in manufacture	Value added in industry
1975-76	2	11	16	12
1979-80	7	32	46	34
1989-90	12	47	70	42
1994-95	22	111	179	105
1999-00	23	113	208	110

An indirect test of reliability of our estimates of remittances and consequently of modified state income (MSI) is possible by examining the trend in per capita consumer expenditure and income in Kerala relative to all India. The relevant figures are given in Table 6. The annual average per capita consumer expenditure (APCE) in Kerala was below the national average till 1976-77; since then it steadily increased and by 1999-00 stood at 41 percent above the national average. However, the per capita income (PMSI) did not catch up with the national average until 1991-92. This, we believe, is due to the missing part of remittances in our estimate i.e., that sent through illegal channels. The nineties clear the picture when the per capita income in Kerala steadily increased to reach 49 percent above the national average by 1999-00. The gap in consumption and income as between Kerala and all India is remarkably similar by the second half of the nineties.

Relative Magnitude of Remittances

There is no doubt that, by the nineties, remittance income has emerged as a major macroeconomic variable in the Kerala economy. The relevant figures are given in Table 7. By mid-nineties, remittances constituted 22 percent of the SDP, a little more than the value added in industry, 111 percent of government expenditure and 179 percent of value added in manufacturing. By the end of the nineties, remittance income has increased to 113 percent of government expenditure and 208 percent above the value added in manufacturing and 110 above value added in industry.

The relative importance of remittances is not confined to its income dimension. As per the 55th round of the National Sample Survey, Kerala's crude work participation rate was 38.3 percent (Usual Principal and Subsidiary Status) that gives an absolute workforce of 12.2 million out of a total population of around 31.8 million in 2000. Of the 1.36 million Kerala emigrants abroad in 1998 (Zacharaiah, et.al. 2001b), 90 percent or 1.22 million were in the category of the employed. This means that Keralaites working abroad constituted around 10 percent of the workforce in Kerala. In 1998, the total workforce in the organised sector in Kerala was around 1.22 million i.e., 0.63 million in the public sector including government services and 0.59 million in the organised private sector (Government of Kerala 2000b:S-16). This shows that, by the end of the nineties, the Kerala workforce abroad was equal to the organised sector workforce within Kerala.

Some Larger Issues

As stated at the very outset, this paper was limited in its objective to measuring the magnitude of remittances from abroad to the Kerala economy and its macro economic impact. However, the emergence of remittances as a crucial factor in the Kerala economy raises a large number of issues. A brief comment is made here on some of them.

We think it is important to investigate in detail the link between remittances, economic reform and the turnaround in aggregate growth in the Kerala economy since the late eighties. A deeper issue to investigate would be the link between investment in human capital and the socio-economic characteristics of international labour migration and the resultant changes in the standard of living of the people. One of the formidable challenges facing Kerala today is its inability to convert the savings in the economy (available in the form of loanable funds) into productive investment. That it has not been able to meet the challenge effectively is demonstrated by a low credit-deposit ratio of around 40 percent for the past decade. Given the low efficiency of the state level public sector enterprises and the consequent low credibility, not much funds have been attracted by this sector. This can come about only with a thorough going restructuring of the large number of public sector enterprises and utilities in the state. The alternative before the government is to encourage the private sector to make use of the available surplus for investment. This is partly, if not wholly, constrained by an unfavourable image of Kerala as an 'investor unfriendly' state in sharp contrast to its positive image as a state with high achievements in social development and recently in the sphere of tourism. The challenge before any government committed to the long-term development of the state is to change this negative image and create favourable conditions for enhancing investment both in public and private sectors. The importance of the former should be emphasized when one takes into consideration the need to enhance the quality and efficiency of such critical and basic factors as power, transportation and environmental sanitation. The state already enjoys a highly favourable position in many critical areas such as three airports with international connections, a major seaport and a number of minor ports, road density, telephone density, educational and health care facilities and the availability of an educated labour force. Labour problems have been and continue to be a major hindrance (although at a diminishing rate during the nineties) but not many are aware that it is confined to only a few sections of the workforce. This can be overcome by attracting high value adding activities ensuring regular employment to the workforce. That the small and medium scale industries have been performing better than the large ones is an indication of the emerging scenario (see Subrahmanian and Azeez 2000). To this should be added the emergence of a modern service sector.

In such a scenario, the government has to play a proactive role by enhancing investment and its effectiveness in public utilities and a host of related spheres and facilitating a favourable climate for attracting private investment. This calls for a greater mobilisation of government revenue. It is here the remittance factor also becomes relevant. Kerala is rated high in terms of its revenue mobilisation effort. Its own revenue as a percentage of net state domestic product was around 10.3 for the nineties i.e. higher than all states average of around 8.8. When we replace NSDP with the modified state income (MSI) to include remittances, the share comes down to 8.5 i.e. somewhat lower than the all states average. What this points out is the failure of the government in tapping the tax potential without enhancing the tax rates. Downsizing the government, a currently fashionable remedy for fiscal imbalances, is a retreat from its responsibility. Redefining the role of the government and strengthening its revenue base for effective developmental intervention will be a positive step.

As in other parts of India, the informed public and the larger civil society in Kerala is concerned about the dangers of globalisation of the Indian economy. But the ongoing debate has not focused on how to confront globalisation as a matter of public policy. However, large sections of the people of Kerala seem to have positioned, as a matter of their individual/private strategy, to take advantage of globalisation. One is their active presence in the international labour market concentrated in the Gulf countries. The other is the increasing trend in the export orientation of many of its agricultural products as well as those from agro-processing and other industries (cashew, coir, marine fish, ayurvedic pharmaceuticals and a host of new products). The growth in international travel and tourism and the successful factoring of health and ecological attractions into them is yet another example of taking advantage of a global market. But the striking development, in our opinion, is the exposure of well over two million Keralaites to the outside world through international migration. They now have a first hand experience of the world outside their own country.

Technical Appendix

For estimating remittances to the Kerala economy we have computed the following: (i) the share of Kerala in the Net Private Transfers (NPT) in the current account of the Balance of Payments of India, (ii) the Non-Resident Indian (NRI) deposits in banks located in Kerala, and (iii) the money equivalent of remittances in kind.

Computation of Item (i): Data relating to Net Private Transfers to India are available according to currency areas (such as sterling area, dollar area, OECD area and rest of non-sterling area) but not according to countries or geographic regions such as the Middle East. However it is well known that an overwhelming share of Keralaite emigrants is in the Middle East countries. Therefore the first task is to estimate the NPT to India from Middle East countries and all other countries. Based on the distribution of Indians abroad, Nayyar (1994) made certain assumptions for calculating the share of remittances to India from the Middle East countries. They are given bellow.

	Sterling Area Persian Gulf	Non-Sterling Area W Asia and N Africa
1973-74	10	-
1974-75	20	50
1975-76	50	50
1976-85	66	90
1985-91	66	80
1991-00	66*	80

Note: From the point of remittances, the important Persian Gulf countries in the Sterling Area are Bahrain, Kuwait, Oman, Qatar and UAE. For West Asia and North Africa, the countries of importance are Saudi Arabia, Iran, Iraq and Libya. For details on the assumptions see Nayyar (1994). *We assume the same share for 1991-2000 as in the previous period suggested by Nayyar.

Having estimated the share of NPT to India from Middle East and other regions respectively, the next task is to estimate a share for Kerala from these two regions. For Middle East, we estimated the share of persons from Kerala in the stock of Indians in Gulf countries. This share was applied to the remittances from Middle East Countries.

Table A 1. Stock of Emigrant Population from India in Gulf Countries (Figures in lakhs)

Year	1975	1976	1979	1981	1983	1987	1991
Stock of India	2.66[1]	2.05[2]	5.01[3]	5.99[4]	9.16[5]	9.57[6]	16.5[7]

Note: NA= Not available.

Source: 1.Birks and Sinclair (1981); 2.Serageldin, Ismail et al. (1981); 3,4,5,6,7.Government of India, Ministry of Labour, *Annual Report*, various issues.

The share of Keralaites in Gulf countries was estimated as follows. First, we have the data on stock of Indians for some time points as given in Table A1. Using the information, we have constructed a time series data by interpolation and extrapolation. However, we found that extrapolation may not be a realistic one for the period 1998 to 2000 for India in view of declining stock as revealed through survey data for Kerala. We have independently checked this and found that the annual flow of labour (with emigration clearance) from India and Kerala has been declining for the last three years. Therefore the projected figures for India, as given in Table A3 below, have been computed by assuming the same compound growth as Kerala. The share of Kerala in the total stock of Indians in Gulf countries have been applied to the total NPT to India from Middle East countries to obtain Kerala's share in NPT.

For Kerala, we have been able to obtain the actual stock of Keralaites in 1980-98 in Gulf countries from the unpublished data of 1998 study of Zachariah, et.al (2001b). These relate to (a) number of emigrants in 1998 by year of emigration, (b) number of return emigrants by year of return, (c) the number of return emigrants by year of emigration. The sum of the cumulative total of emigrants under (a) and the year-wise figures of (c) will give the stock of Keralaites in the Gulf countries in a given year. For the period 1980-98 these are given in the last column of A2. For the period 1972-79 we have estimated the stock of Keralaites, by interpolation with the condition that the figures for 1980 should match the actual figures. For 1998-2000 we have projected the figures taking into account the reported fall in stock of Keralaites in gulf countries from 13.62 lakhs in 1998 to 11.40 lakhs in 2000. Table A2 gives the details of emigrants and return emigrants. Table A3 gives the stock of Indians in Gulf countries and the share of Kerala.

Table A2: Stock of Kerala emigrants in Gulf countries.

Year	Emigrants (Annual)	Emigrants (Cumulative)	Return Migrants who migrated	Stock of emigrants (3)+(4)
1	2	3	4	5
Before 1980	32443	32443	146112	178555
1980	11031	43474	35709	79183
1981	30496	73970	23725	97695
1982	33741	107711	44172	151883
1983	40229	147940	35132	183072
1984	24657	172596	28005	200601
1985	38283	210879	31357	242236
1986	38932	249811	26610	276420
1987	21412	271223	33868	305091
1988	75916	347139	35160	382300
1989	28550	375689	26055	401744
1990	88245	463934	45158	509092
1991	48016	511949	27962	539911
1992	85000	596950	48445	645395
1993	108359	705309	38666	743975
1994	111604	816913	43132	860044
1995	120688	937601	25257	962858
1996	145344	1082945	14249	1097194
1997	146642	1229587	6868	1236455
1998	88894	1318480	0	1318480

Note: Col. 2 means those emigrated in that year. E.g. 1,20,688 persons emigrated in 1995 and was outside India in 1998 (survey time); Col. 3 is the sum of all emigrants till that year. E.g. 9,37,601 persons emigrated in 1995 or earlier years; Col. 4 means return emigrants who emigrated in that year (obtained from the matrix of year of return by year of emigration); Col. 5 is the total number of emigrants in that year (including those who returned later).

Table A3: Estimated Stock of Indian and Kerala Emigrants in the Gulf Countries (Lakhs)

Year	India	Kerala	Kerala as % of India
1973	1.95	0.34	17.26
1974	2.27	0.39	16.93
1975	3.05	0.44	14.50
1976	3.49	0.51	14.52
1977	3.99	0.58	14.55
1978	4.57	0.67	14.57
1979	5.23	0.76	14.59
1980	5.99	0.79	13.22
1981	5.99	0.98	16.31
1982	7.41	1.52	20.50
1983	9.17	1.83	19.96
1984	9.3	2.01	21.57
1985	9.31	2.42	26.02
1986	9.45	2.76	29.25
1987	9.58	3.05	31.85
1988	10.98	3.82	34.82
1989	12.6	4.02	31.88
1990	14.45	5.09	35.23
1991	16.57	5.40	32.58
1992	18.58	6.45	34.74
1993	20.83	7.44	35.72
1994	23.35	8.60	36.83
1995	26.18	9.63	36.78
1996	29.35	10.97	37.38
1997	32.9	12.36	37.58
1998	36.88	13.18	35.75
1999	33.74	12.11	35.89
2000	30.87	11.04	35.75

Having thus obtained the share of NPT of Kerala, from Middle East, the next task is to find out Kerala's share in NPT from countries other than Middle East. For this we applied a share of 5 percent for the period 1972-73 to 1990-91. This is somewhat higher than Kerala's population share (nearly 4 percent) to reflect the higher emigrating propensity of Keralaites. For the subsequent period (i.e. 1991-92 to 1999-2000) Kerala's share is taken at 8.5 percent. This is obtained from the Kerala Migration Study conducted by Zachariah, et. al. (2000) wherein the source of remittances was obtained from the sample households.

Computation of Item (ii): This relates to the NRI deposits in banks in India. Data relating to NRI deposits in banks located in Kerala are published in the annual *Economic Review* published by the State Planning Board, Government of Kerala. These deposits are of three types: FCNR(B) which are repatriable deposits in foreign currency, NR(E)RA are repatriable deposits in Indian rupees and NR(NR)RD are in non-repatriable deposits in Indian rupees.

Computation of item (iii): This refers to remittances in kind. The 1998 Kerala Migration Study (Zachariah, et. al. (2001b) estimated the share of remittances in kind and this works out to 6.18 percent of total remittances. For the nineties we have applied this share. For the period before 1990-91, we have doubled this share to reflect the greater temptation to bring valuable electronic and other consumer durable goods.

In Table A4, we give the estimated stock of Keralaites in all countries obtained in the same way as Table A3 (which refers to only gulf countries).

Table A4: Estimated Stock of Emigrants in all countries (Lakhs)

Year	Kerala
1973	0.34
1974	0.39
1975	0.45
1976	0.51
1977	0.59
1978	0.67
1979	0.77
1980	0.80
1981	0.98
1982	1.60
1983	1.94
1984	2.03
1985	2.58
1986	2.84
1987	3.05
1988	4.04
1989	4.24
1990	5.30
1991	5.68
1992	6.63
1993	7.65
1994	8.80
1995	9.95
1996	11.26
1997	12.80
1998	13.62
1999	12.51
2000	11.40

Notes:

1 Although Kerala's history of international migration, in any significant sense, can be traced to only about 70 years or so, the migration to Gulf countries since the oil price boom of 1973 became a watershed and constitutes the single largest stream of international migration so far. As such this provoked a large number of studies on the various socio-economic aspects of migration and its probable impact on certain aspects of the economy. Some of these studies are Gulati and Mody (1983), Nair (1989), Saith (1990), Krishnan (1994), Isaac (1997) and Zachariah, et.al. (2001b, 2001c and 2002).

2 Kerala's remarkable recovery, after a long period of stagnation in income, was highlighted in a study of the growth performance of Indian states by Ahluwalia (2000). In a study of the growth performance of the industrial sector Subrahmanian and Azeez (2000) underlined the continuing high growth performance of the Kerala economy since the late eighties. Kannan reported the recovery from the slow growth "since the late 1980s that marked the beginning of economic liberalisation process in the country" (1998:L-67) but did not pursue this finding further.

3 The 1998 study, called Kerala Migration Study reported by Zachariah, et.al. (2001b) was based on a study of sample households. This means that the estimate of Kerala emigrants refers to only those who have a household to report about their emigration. This is the relevant one as far as remittances are concerned. However, this excludes secondary migration of Keralaites who are resident in other states in India.

4 The estimates of remittances by Zachariah, et.al. (2002) are as follows: Rs. 12,110 crores for 1998, Rs. 14,143 crores for 1999 and Rs. 15,192 crores for 2000. Our estimates are: Rs.11,302 crores for 1997-98, Rs. 11,286 crores for 1998-99 and Rs.14,158 crores for 1999-00.

5 This was an unpublished paper presented in two seminars, one at the Centre for Development Studies, Thiruvananthapuram and the other at the Indian Statistical Institute, Kolkatta, before presenting it at the International Congress on Kerala Studies organised by the AKG Centre for Research Studies, Thiruvananthapuram during August, 1994.

6 The RBI defines Net Private Transfers as "Private transfers constitute remittances by non- residents for family maintenance, repatriation of savings by Indian resident's abroad and personal gifts and donations to religious and charitable institutions in India. In addition, other components such as import of gold and silver brought in as baggage by returning Indians and local withdrawals were included under private transfer receipts since 1992-93 and 1996-97 respectively" (*Reserve Bank of India Bulletin,* January 2001:28).

7 As per the 1998 study (Zachariah, et. al. 2001b), the stock of return migrants in that year was more than 7 lakhs. However, there were new emigrants to gulf as well as repeated emigration by return migrants so that the net international migration in that year was reported positive. The study reported that the average time spent by a Kerala emigrant in the Gulf was around 7 years.

8 Some extra burden on local banks might have been imposed for remitting old foreign currency accounts.

9 The data refers only to the month of May 2001 from the UAE Exchange Centre. This Centre is reported to account for 57 percent of the total remittances to India from the UAE. See Zachariah, et.al. (2002).

10 As Zachariah, et.al. (2002) point out, the study was not based on a scientific sampling of the population of Kerala workers due to practical difficulties. Yet it may not be an unrealistic one because a number of workers employed are unskilled manual labourers. The abovementioned study also reported that 32 per cent of the workers interviewed stayed in worker camps. For this class of labourers sending money to their families involve high transaction costs due to various factors such as limited education to deal with banks, permission to take leave to go to the urban centres where banks are located and dependence on friends to deal with the banking system. Remittances through unofficial (illegal) channels involve no such costs as the system is based on social network and 'trust'.

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