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AND ECONOMIC GROWTH IN
KERALA: 1980-2000**

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IN KERALA: 1980-2000**

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ABSTRACT

Kerala's lopsided development, human development before economic development, has been characterized by steady economic growth since 80s with acceleration in the 90s. The leading sources of growth are the services (tertiary sector) instead of the conventional commodity producing sectors (primary and secondary). Further analysis shows that these services are non-tradable in general and in particular, transport, trade, hotels and restaurants, telecommunication and other services. The surge in growth has emanated mainly from the increase in consumer demand in favour of durable goods. The inability of the manufacturing sector to meet the growing demand chiefly from migrant households for consumer durables has resulted in the increase in regional trade and transport. In the case of telecommunication, the demand came mostly from the large number of 'spouses away households' and from 'elderly living alone households' in the state for keeping in touch with their near and dear ones living within and outside the state. The combined effects of forward and backward linkages of the growth in tourism, trade and transport have resulted in the growth of hotels and restaurants. The durable goods accumulated by the households in the 80s have generated the growth of services in the informal sector for the repair, maintenance and servicing of these goods in the 90s. In addition, the mushrooming of private institutions in health and education has also contributed much to the growth of other services during the period.

Commercial banks have not played any significant role in the intermediation of the huge surplus generated by foreign remittances for the growth observed in the 80s and 90s since the credit-deposit ratio continues to show its declining trend during the period. In the absence of proper accounting of the savings generated in the economy, it is argued that source of finance for the growth of the service sector has

come from either the informal credit market or own-funds or both. This consumption-led growth cannot be sustained unless the state actively involves in locating the hidden markets for skilled labour globally and provide world-class training facilities for such jobs for their migration. This would mean that the growth strategy should concentrate on export of services based on skilled manpower and the export of skilled manpower itself instead of labour intensive and land-intensive traditional commodities. Another strategy for the sustainable growth is to increase the share of the fast growing domestic tourism by innovating institutions for cost effectiveness to attract such tourists. Finally state should create forward linkages of the huge consumer durables acquired by the households with the rapidly growing informal sector for repair, maintenance and servicing of durable goods. This involves, among other things, reverse engineering for developing the production technology of spare parts and organising it at the household level instead of factory level for price competitiveness.

Key words: remittances, lopsided development, linkages, durable goods, migration

JEL Classification: O53, E21, F 22

Introduction

The analysis of the state-level performance in terms of gross domestic product under economic reforms (1980-1998) indicates that the state of Kerala belongs to the group of seven states with accelerated growth in the 90s. Further Ahluwalia (2002) observes that the per capita growth of the state is above the all India average¹. While commenting on the growth performance, Acharya points out the need for further analysis of the individual states in order to identify the sources of the growth and its structural dimension². This paper fills this gap in the case of the state of Kerala for the period, 1980-2000.

The outline of the paper is as follows. The first section examines the sources of accelerated growth by major sectors and by their sub-sectors of the regional economy during the 90s. In the second section, we estimate the marginal propensity to consume (MPC) from domestic income and from remittances by decomposing the consumption elasticity into its marginal and average components. The MPC is then used for the estimation of domestic demand for consumer goods, both food and non-food, from the national sample survey on consumer expenditure, state's national income and foreign remittances for the 80s and 90s. In section 3, we provide the explanation of the acceleration in growth in terms of

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1. See Ahluwalia (2002), Table 3.2: p. 96.
 2. See *ibid.* comments by Acharya: pp. 122-123. For a limited analysis of Kerala's case within the growth convergence literature among Indian states, see, Sachs, Bajpai and Ramiah (2002).

consumer demand, migration and economic reforms. Final section provides the summary and policy implications of the study.

I

Economic Growth: Inter-sectoral Analysis.

Analysis of the state-level performance in terms of gross state domestic product (in constant prices) shows that the growth rate (exponential) of Kerala has accelerated from 3.6 % in the 80s to 5.6 % in the 90s (Ahluwalia, 2002). Let us examine the sectoral performance of the three broad sectors - primary, secondary and tertiary – during the same period. The contribution of the three sectors is examined by computing exponential growth rates of net state domestic product in constant prices. The period-wise growth rates were estimated using the kinked exponential model that imposes continuity in the growth between the two sub-periods³: sub-period 1, 1980/1-1990/1; and sub-period 2, 1991/2-1999/0. The year with slash refers to financial year. The specification of the kinked exponential model is as follows.

The discontinuous growth rate can be estimated by fitting the single equation of the form:

$$\ln Y_t = a_1 D_1 + a_2 D_2 + (b_1 D_1 + b_2 D_2) t + u_t \quad \text{—————} \quad (1)$$

Where $D_1 = 1$, for 1980/1-1990/1

$= 0$, otherwise,

$D_2 = 1$, for 1991/2-1999/0

$= 0$, otherwise.

3. See Boyce (1986): pp. 385-391 for the theory and its extensive application in the Indian agriculture, Kannan and Pushpangadan (1988).

Discontinuity between the two trend lines can be eliminated via the linear restriction at the break point k :

$$a_1 + b_1 k = a_2 + b_2 k \text{ — (2)}$$

Substituting a_2 from (2) in (1),

We get the kinked exponential model:

$$\ln Y_t = a_1 + b_1 (D_1 t + D_2 k) + b_2 (D_1 t - D_2 k) + u_t \text{ — (3)}$$

Where k is the midpoint of the two discontinuous series, and u_t is the stochastic error term. In our case, $k = 11.5$. All the sub-period growth rates, unless otherwise stated, are based on the model (3). If serial correlation exists, then the estimates are corrected for it using Cochrane-Orcutt method. The sub-period growth rates thus estimated are given in Table 1 below.

Table 1: Growth Rates by Sectors and by Sub-periods

Sector	1980/1- 1990/1	1991/2-1999/0
Primary	5.6 (.37)	NS (.31)
Secondary	6.6 (.24)	6.6 (.25)
Tertiary	4.3 (.39)	8.1 (.44)

Source: GOK, Economic Review, various issues.

- Note: 1) The figures in the parenthesis indicate the average share of the sector for the period;
2) NS: not statistically significant.

From Table 1, it can be inferred that all major sectors have contributed to the revival of growth in the economy in the first sub-period since the stagnation in the 70s. However, the revival of growth during the period was led by the secondary sector, followed by the primary and tertiary sectors. The second sub-period, the phase of

acceleration, the sources of growth are entirely different. It is very interesting to note that the acceleration is mainly due to the growth in tertiary sector, i.e. in the non-tradable sector, since there is no statistically significant growth in the primary sector and the growth rate in the secondary sector remained constant⁴. Further, the share of the tertiary sector has increased during the second sub-period. Hence it can be concluded that the main source of acceleration of growth is the tertiary sector. Let us further examine the source of growth at the disaggregate level. The period-wise kinked exponential growth rates for the sub-sectors in the tertiary sector are given in Table 2 below.

Table 2: Growth Rate of Tertiary Sector by Sub-sectors and by Sub-periods

	1980/1-1990/1	1991/2-1999/0
Railways	6.5 (.09)	NS (.09)
Transport by other means & storage	11.5 (.13)	13.1 (.14)
Communication	5.5 (.11)	15.7 (.12)
Trade, hotel and restaurants	2.6 (.15)	6.0 (.15)
Banking and insurance	12.1 (.15)	9.6 (.14)
Real estate & ownership of dwellings	42.6 (.12)	NS (.08)
Public administration	7.3 (.13)	4.2 (.14)
Other services	1.9 (.14)	6.0 (.14)

Source: Same as in Table 1.

Note: The numbers in the parentheses are the average shares of the sub-sectors during the period.

NS: Not statistically significant

4. See Subrahmanian and Azeez (2000) for the analysis of industrial growth in Kerala.

The disaggregate analysis of the tertiary sector provides very interesting results. It may be noted that the average shares of the sub-sectors remain more or less the same during the entire period. In other words, no major change has occurred in its composition. Therefore, the accelerated growth can be attributed to the acceleration of the sub-sectors. By this criterion, four sub-sectors that have contributed to the accelerated growth are: (1) transport by other means and storage; (2) communication; (3) trade, hotel and restaurants; and (4) other services. The one sector that has been wiped from the growth process is the real estate and ownership of dwellings. It had recorded a phenomenal growth (42.6%) in the 80s and had crashed in the 90s. The impact of reforms in the financial sector initiated in 1991 on the speculative activities and the stagnation of the primary sector might have contributed to the loss of the sector's decadal growth. The accounting of the growth requires an investigation of the consumer spending pattern and the saving behaviour of the domestic as well as remittance income during the period. This is taken up in the next section.

II

Domestic Income, Remittance and Consumer Demand: Decomposition Analysis.

The two sources of income for the regional economy are (1) the net domestic product and (2) the foreign remittance from the migrants. The remittance as a percentage of total income has shown an increase from 9 % in 1980/1 to 23 % in 1999/0. In other words, foreign remittances have more than doubled during the second period. From Engel's law, we know that proportion of income spent on food decline as income increases. The remaining income is available for consumption of non-food items and/or for savings. Let us first examine the income spent on consumer items from the domestic income as well as from the remittances.

Although average propensity to consume is available for the two periods in the study by Kannan and Hari (2002), the appropriate measure for our analysis is the marginal propensity to consume. The first attempt to estimate MPC was that by Krishnan (1994) using a simple Keynesian consumption function. He postulated that current consumption is linearly related to current income and current foreign remittance, which is measured by a proxy variable, bank deposit by nonresident Indians. The estimate of MPC shows that it is 0.72 for domestic income and 0.69 for remittances for the period, 1960/1- 1989/0. The estimates for the two income sources remain very close to each other. One plausible reason is the use of the proxy variable in the absence of reliable time series estimates on remittances. This problem no longer exists now since Kannan and Hari (2002) have produced time series estimates on remittance for the period, 1972/3-1999/0 within a consistent framework. We have used the time series data for the estimation of period-wise MPC using a non-parametric method instead of the traditional consumption function analysis as discussed below⁵.

The consumption elasticity of income, by definition, is:

$$E = \log C / \log Y = MPC / APC \text{ — (4)}$$

Cross-multiplication of (4) gives,

$$MPC = E * APC = (\log C / \log Y) APC \text{ —(5)}$$

Equation (5) is used for the estimation of average MPC for the two sub-periods, 1980/1-1990/1 and 1991/2 – 1999/0, from the time series data given in Kannan and Hari (2002) on per capita consumer

5. Our initial attempt to estimate the simple Keynesian function was not successful and investigations are underway to estimate it econometrically. The reliability of the estimates from the deterministic model will be evaluated with the econometric estimates as when it is available.

expenditure, per capita net state domestic product (PNSD) and per capita state income (PNSD plus per capita remittances). The per capita consumer expenditure refers to the survey period, which neither follows the calendar year nor financial year uniformly. A slash between two consecutive years refers to financial year. By convention, it begins in March and ends in April. All calculations are based on current prices. This may not be a serious problem since the ratios used for the estimation of the MPC neutralize the price effect. The results are given in Table 3.

Table 3: Marginal Propensity to Consume by Income and by Sub-periods

Period	Marginal Propensity to Consume	
	Domestic income	Domestic Income plus Remittances
1980/1- 1990/1	0.87 (.13)	0.76 (.24)
1991/2- 1999/0	0.57 (.43)	0.46(.54)
Decrease (%)	34.5	39.5

Source: Kannan and Hari (2002).

Note: The number in the parenthesis is marginal propensity to save (1- MPC).

Table 3 clearly shows that the saving rate has increased in the second sub-period from either source. It may be noted that the propensity to consume from the domestic income is higher than that of remittances. The second period shows huge savings with the households in general and migrants' households in particular. One of the main reasons for the higher savings is the reduction in the dependency ratio in the state resulting from the demographic transition⁶. Even though the MPC has

6. See Bloom and Williamson (1997) for the analysis of the same problem in the Asian context.

come down in the 90s, a cursory look at the demand for consumer goods shows rapid expansion during the period. To understand the magnitude of the expansion, we have to estimate the incremental income and remittances for the two sub-periods. The incremental income multiplied by the respective MPC gives the period-wise total consumer demand as given in Table 4.

Table 4: Growth of Consumer Demand by Income Source and by Sub-periods

(in 1980/1 prices and in Rs. Crores)

	Increase in Income		Increase in consumption	
	Sub-period 1	Sub-period 2	Sub-period 1	Sub-period 2
NSDP	1439.6	2914.0	1252.5	1661.0
Remittances	63.7	1517.9	48.4	698.2
Total	1503.3	4432.0	1300.9	2359.2

Source: Same as in Table 3 and in Table A₁.

Note: MPC for the state income (domestic income plus remittances) is used for the estimation of the incremental consumption from the remittances.

Even though MPC has come down for both sources of income in the 90s, the demand for consumer goods has continued to expand during the period as shown in Table 4. The increase in demand due to domestic income alone is about 32.6 % while that of remittances is more than 13 times in the 90s. The overall demand has increased about 81 % in the second period. The additional demand can be met either from increased production within the state or through trade. There is no evidence to show that it is met through domestic production since the sectors, both primary and secondary, do not show more growth during the second sub-period (Table 1). It can therefore be inferred that the main source

was interregional and international trade. The latter being very small, the accelerated growth is mainly from regional trade and its related services sectors. The impact of trade on the growth of other sectors such as in transport, telecommunication, hotel and restaurants vary according to the composition of consumption expenditure. Although the change in the composition of consumer expenditure may not have any significant impact on the demand for transport, it does have differential impact on trade and telecommunication. For example, if the demand is mainly for consumer durables, the services needed for its sale, installation and maintenance would require more skilled labour than for consumer non-durables particularly food items. This would generate demand for telecommunication, hotel and restaurants and other repair services. Hence the compositional change in the consumer expenditure needs further investigation. One-way of getting this breakup is the decomposition of consumer expenditure on food and non-food items. National Sample Survey Organisation (NSSO) regularly publishes such information. Three surveys by NSSO (35th round, 1983; 52nd round, 1993/94; 55th round, 1999/0) provide proportions of consumer expenditure on food items and non-food items, which are relevant for our period of analysis. For decomposing consumer demand into food and non-food items, we have used the proportion in 1983 for the first period and the proportion in 1999/0 for the second period (see Appendix Table A1 for the details). The structural shift in consumption is brought out in Table 5.

Table 5: Food and Non-food Demand by Source of Income and by Sub-periods*(in 1980/1 prices and in Rs. Crores)*

	Consumer expenditure		
	Sub-period 1	Sub-period 2	Period 2/Period 1 (% change)
NSDP			
Food	739.0	813.9	10.1
Non-food	513.4	847.1	64.9
Sub total	1252.5	1661.0	32.6
Remittance			
Food	28.1	356.1	1167.3
Non-food	19.8	342.1	1628.7
Sub-total	48.4	698.2	1342.6
NSDP+ Remittance			
Food	772.6	1205.6	56.0
Non-food	528.3	1153.6	118.4
Grand total	1300.9	2359.2	81.4

Source: Same as in Table 4 and Table A₁.

Table 5 indicates the main source of consumer demand is from non-food items in the 90s. While the total demand for food (state's income including remittance) has increased by 56 % in the second period, the demand for consumer durable has more than doubled. The contribution of the remittance to the consumer-durable led growth in the 90s is 17 times more than that of the first period. The increased demand for food and non-food items can only be met through trade since the productive sectors particularly industry and agriculture in the state do not show any accelerated growth during the period. This clearly explains the increase in trade and transportation. The linkages between the growth of trade, transportation and other services become clearer if we examine the changing pattern at the disaggregate level. This is examined in the case of road transport in Table 6. As expected, the major

components that show increased growth rates are related to trade expansion, i.e., goods vehicles (other than three wheelers including tempos) and tractor-trailers. The reasons for the growth in the category of buses will be considered later.

However, the growth of 'Other services' as seen in Table 2 can be explained partially from the expansion of the motor vehicles in the first period especially that of three- and two- wheelers, auto rickshaws and jeeps. The services for the repair and maintenance of these durables occur only with a lag. This lagged effect is a major contributor to the higher growth of other services recorded in the second period. Another component in the growth of 'Other services' is the better quality services provided by the private sector in health and educational field catering for the higher income groups in the second period. It may be noted that their individual contribution is difficult to assess since there is hardly any reliable information to quantify it. This is an area that needs further research.

Table 6: Growth Rates of Motor Vehicles by Type and by Sub-periods

	1980-1990	1990-1999
<i>Goods vehicles</i>		
Four wheelers and above	5.6	10.0
Three wheelers including tempos	15.7	9.1
<i>Buses</i>		
Stage carriers	4.6	4.9
Contract carriages/Omni buses	17.8	19.4
<i>Cars and Jeeps</i>		
Cars	8.6	7.1
Taxi Cars	7.1	6.3
Jeeps	19.6	17.7
Auto rickshaws	17.2	13.1
Scooter/Motor Cycles	15.6	14.3
Tractor Trailers	3.7	7.3
Tractors	7.5	3.5
Tillers	12.6	10.1
Trawlers	7.5	6.5
Others	10.4	8.8

Source: GOK, Economic Review (various issues).

The expansion in the number of buses especially Contract carriers and Omni buses is mainly due to the travel needs of the rapidly growing tourism industry in the state. It is estimated that the annual average percentage change in the arrival of foreign tourists has gone up from 27.8 % for the period, 1980-1990, to 28.9 % for the period 1990-2000. The other factors contributed to the growth of buses are (1) inefficiency in the public transport system, (2) the rapidly increasing health care facilities and their travel needs, and (3) the transportation of the school children in the unaided English medium schools that have mushroomed through out the length and breadth of the state. Tourism has also provided direct stimulus in the growth of hotel and restaurant. Therefore it can be concluded that regional trade, tourism, rapid expansion of health care facilities and private educational institutions together provided the stimulus for the higher growth recorded in transport, hotel, restaurants and telecommunication in the 90s.

Our discussion on the revival of the regional growth has completely ignored the financing aspect of it to which we now turn. The marginal propensity to save clearly shows that it has more than doubled during the second period. The major challenge is to account for the huge surplus generated in the economy. There is no reliable estimate on the sources and uses of funds in the regional economy during the period. Had the commercial banks increased its credit-deposit ratio, one could have given this as an explanation for the uses of funds. The Economic Review of Government of Kerala provides contrary evidence. To quote: “While bank deposits in Kerala increased by a compound growth rate of 17.7 % over the period from 1988 to 1998, advances for the same period registered a compound growth rate of 13.2 %, reflecting the declining trend in the credit-deposit ratio in the State, over the years⁷”. The deposit ratio of 65.3 % in 1989 has steadily declined to 43.1 in 1994 and

7. GOK, Economic Review 1998; p.189.

improved to 45.22 in March 1998. This would mean that the banking sector has failed to intermediate between savers and investors in the growing sectors during the period. Micro-level studies also confirm that the banking sector has not contributed much to the growth of rural small-scale enterprises, the fastest growing rural service sector in Kerala. For example, the survey data on the sources of initial funds for starting the small-scale enterprises in two blocks, Kollengode and Malampuzha, in Palakkad district show that only about 13.5 % the funds came from the commercial banks⁸. Rest of the funds is from either external source or internal source or both. The nature of these sources is not known. Until then we can have only speculations. One such speculation is that a major proportion of savings is being spent on the professional education of migrants' children outside the state. Yet another area of accounting the surplus is the money spent on gold ornaments and precious stones and metals. Perhaps, no reliable estimate can ever be generated for this luxury item. After making allowance for these, the remaining may be either made available through informal credit markets or lend by the migrants' household themselves. No reliable data can be obtained for this expenditure as well. The most difficult task ahead is to account the uses of the savings in general and that of migrants in particular. Although the prime mover in the growth resurgence is migration, its role has not been explicitly analysed particularly in the post reform period. This is examined in the next section.

III

Growth, Migration and Economic Reforms: Some Explanations

The analysis suggests that the revival and its acceleration of the regional growth in the 90s are mainly attributable to the growth and the

8. Eapen (2001):Table 6.12.

structural change in the consumer expenditure. This is made possible to a considerable extent the combined effect of migration and the reform process started in the late 80s. The second round of liberalization reforms initiated in 1991 especially in the case of foreign exchange has almost doubled the ratio of foreign remittances to state domestic product⁹ from the 80s to 90s. Our estimate on marginal propensity to save from remittances also shows that it has doubled during the period. Hence the savings along with the change in consumer spending in favour of consumer durables explain the accelerated growth process. Let us examine the role of migration in the acceleration of growth in detail. A note worthy feature is that both migrants and return-migrants have contributed to the accelerated growth of trade, transport and telecommunication during the second period¹⁰.

The most important sector, as is clear from Table 5, is the growth of trade attributable to consumer demands especially that of durables. Let us examine the share of migrant households in this regard. The share is very substantial as shown in the migration study by Zachariah et. al. (1999). The index based on 23 household consumer durables from the survey is 32 for the migrant households and 15 for non-migrant households¹¹. This indicates that the migrants' contribution to the growth of durables is more than double that of the domestic households. The estimates from the 'Return Migrants Survey in 2001' provide further evidence to show their role in the growth of the tertiary sector. The percentage shift in the economic activity before and after return to Kerala among migrants is (1) 18.6 % to 23.8 % in the case of trade, commerce,

9. Kannan and Hari (2002), Table 1.

10. Nair (2003), Table 2.

11. Zachariah et al. (1999): pp. 21-22.

hotels; and (2) 11.0 % to 14.4 % in the case of transport¹². This has policy implication of integrating the return migrants with the growing service sector.

A sector that has benefited from the economic reforms is telecommunication. Both pro- and anti- reform activists have acknowledged the beneficial impacts of the reform in the telecommunication sector. The potential entry of the private firms has disciplined the telecom sector especially in the reduction of the waiting period for fresh connections and the arbitrary increase in the tariff rates. Further, it has brought down the bureaucratic corruption and associated 'rent-collection' activities drastically. The increase in demand for communication services also came from the migrant households. An important source is from the large number of 'spouses away households' in the state. For example, the migration study in 1998 estimates that a million married women (1 out of 8) is living away from their husbands¹³. Of which about 70 % of them communicate regularly with their spouses through telephone. Additional source of communication demand is from the 3.4 million elderly persons living alone in the state as of 1998. The affordable ones will have own-connections so that their kin can reach them at anytime. Otherwise, public and private booths will be opened for meeting their communication needs. All these factors explain the phenomenal growth of telecom sector in the state.

The challenging task now is to relate the regional growth with the recent advances in the theories on economic growth. Regional development is unique since it has attained the human development comparable to the developed countries at very low levels of income.

12. Zachariah, et al. (2001), Table 15.

13. Zachariah, et al. (2000): p.2.

Hence our choice of development literature should explicitly consider both human development and economic growth, the former is the end and the latter the means for achieving the end. The neoclassical models, as surveyed by Sala-I-Martin and Barro (1995) and by Solow (2000), are concerned with economic growth only on the assumption that human development precedes growth. However, there are exceptions. Kerala's growth experience itself is a case in point and Ranis, Stewart and Ramirez (2000) give the international evidence¹⁴. Hence our review is restricted to the literature, which is concerned with both human development and economic growth. In this context, the study by Ranis and Stewart (2001) provide the analytical framework for understanding the Kerala's growth experience. In their analysis, Ranis and Stewart classify developing countries into four categories on the basis of a two-way classification of human development (HD) and economic growth (EG). They are countries with¹⁵ (1) HD and No EG (HD-lopsided), (2) No HD and EG (EG-lopsided), (3) HD and EG (Virtuous) and (4) No HD and No EG (vicious). Kerala's growth can be characterized as 'vicious category' in the 70s (stagnation period) and 'virtuous' in the 80s and 90s (revival and acceleration period). Hence public policy should concentrate on the sustainability of virtuous performance. Growth accounting during the period suggests a few strategies for the economy to take-off into self-sustainable growth. We examine three major policy issues here.

The first and foremost one is the promotion of migration. This would imply, among other things, state's active involvement in locating the hidden markets for skilled labour globally and providing them world-class training facilities. For example, French economy, according to informal sources, has a huge demand for middle level technicians for

14. For international evidence, Ranis, Stewart and Ramirez (2000).

15. See Ranis and Stewart (2001) Table 1 for details.

the operation and maintenance of its computer and electronics industry. If this is the case, then government could facilitate the recruitment of such professionals from the pool of unemployed diploma engineering holders in the state and give them training in French technology and language enabling them for migration. Similar policy initiatives can be undertaken for meeting the growing demand for teachers and for professionals in health and paramedical services globally. The globalisation would facilitate the mobility of skilled workers in the years to come. In other words, an aggressive manpower marketing strategy for meeting the growing world demand in the services is urgently needed. This outward looking strategy is based also on the comparative advantage of the region, the most literate state in India. This is also in a way export-led growth strategy; the export should be broadly defined to include skilled manpower in the exportable items.

The second area is to promote the domestic tourism, where Kerala has the least share among the southern states even though it has been endowed with scenic beauty and unparalleled backwaters. The major task to exploit the growing demand is the much-needed institutional innovation for cost effectiveness in domestic tourism. The third policy is concerned with the forward linkage arising from the phenomenal growth of consumer durables particularly motor vehicles in the state. There is no reliable estimate on the value of spare parts coming from other states annually for the rapidly growing informal sector on repair and maintenance services. The 'leakage' can be reduced substantially if the share of the huge spare parts can be produced locally. The major hurdle is the development of a competitive production technology. The technology can be developed with reverse engineering method. The infrastructure cost can be reduced considerably if the production is organized at the household level instead of at the factory level. With this strategy, the engineering based self-employed units would flourish in the state.

IV

Summary and Conclusions

The performance of the Kerala economy indicates higher growth rate in the 90s than in the 80s. Inter-sectoral analysis shows that the main source of growth is the tertiary sector especially (1) trade, hotels and restaurant, (2) transport, (3) telecommunication and (4) other services. Further examination on the sources of growth reveals the following. The acceleration in the growth of the telecommunication sector is the result of the economic reforms initiated in the 90s and the communication needs of the migrants' and return-migrants' households. The growth in trade and in transport is attributable to the shift in favour of consumer durables arising from the three-fold increase in income and the inability of the domestic sector to supply them. Additional demand for transport, particularly for buses, emanates from tourism and the transportation requirements of private schools and educational institutions started in the 90s. It also reflects the inefficiency of the public transportation. In the case of 'other services', it is explained by the growth of informal sector in the state. This includes, among others, the repair and maintenance services of the consumer durables - such as motor vehicles, refrigerators, and telephones - bought in the 80s. No reliable information is available for analysing its contribution separately. The growth in hotel and restaurant services is the result of the combined effect of growth in tourism, trade, telecommunication and other services.

The higher growth rates observed in the 90s can be attributed mainly to the combined effect of migration in the 80s to the Gulf countries and the financial sector reforms initiated in the 90s. The marginal propensity to save has more than doubled in the second period from the remittance income. This is partly due to the demographic transition taken place in the state and the higher propensity to save by

the migrant households. Despite the tremendous increase in the savings rate, the commercial banks credit-deposit ratios show a declining tendency. This would mean that commercial banks have not played any significant role in the intermediation of the savers and investors during the growth process. Further, micro-level analysis shows that the contribution of the commercial banks to the initial source of finance is only around 13.5 %. This implies that the major portion of the savings from the migrants' income is either spent on unproductive assets or intermediated by the informal credit markets to meet the financial needs of the rapidly growing trade and transport sector. The major task in future research is to have a proper accounting of the savings within the framework of flow-fund analysis.

Kerala's performance in the 70s belongs to the vicious category (human development with no economic growth) and virtuous (human development and economic growth) in the 80s and 90s. Hence the public policy should concentrate on the sustainability of the virtuous performance. Growth accounting suggests a few strategies to be pursued for the economy to take-off into self-sustained growth. Three of them are considered here.

The first and foremost one is the promotion of migration. This would imply, among other things, state's active involvement in locating the hidden markets for skilled labour globally and providing them world-class training facilities. For example, French economy, according to informal sources, has a huge demand for middle level technicians for the operation and maintenance of its computer and electronics industry. If this is the case, then government could facilitate the recruitment and training of such professionals from the pool of unemployed engineering diploma holders in the state. This will include training them in French technology and language enabling for migration. Similar policy

initiatives can be undertaken for meeting the growing demand for teachers and for professionals in health and paramedical services globally. The globalisation would also facilitate the mobility of skilled workers in the years to come. In other words, an aggressive manpower marketing strategy for the growing world demand in the services is urgently needed. This outward looking strategy is also based on 'comparative advantage' of the region, the most literate state in India. This is also in a way export-led growth strategy; the export is now skilled manpower instead of traditional commodities.

The second area is to promote domestic tourism, where Kerala has the least share among the southern states even though it has been endowed with scenic beauty and unparalleled backwaters. The major task for the exploitation of the growing demand in domestic tourism, is the much-needed institutional innovation for cost effectiveness. The third policy is concerned with the forward linkage arising from the phenomenal growth of motor vehicles in the state. There is no reliable estimate on the value of parts coming from other states annually for the rapidly growing informal sector on repair and maintenance services. The 'leakage' can be reduced substantially if a portion of the parts can be produced locally. The major hurdle is the development of a competitive production technology. This can be developed with reverse engineering and organizing production at the household level so that cost of infrastructure, one of the highest among the Indian states, can be reduced considerably for price competitiveness.

APPENDIX

Table A₁: Per capita monthly Expenditure pattern on Food and Non-Food Items

	MPFE/MPTE	MPNFE/MPTE	Total
1983 (38th round)	59.4	40.6	100
1993/94 (50 th round)	56.8	43.2	100
1999/00 (55 th round)	51.1	48.9	100

Source: GOI, NSSO, Various rounds; Sunny (1988).

Note: MPFE: monthly per capita food expenditure.
 MPNFE: monthly per capita non-food expenditure;
 MPTE: monthly per capita total expenditure.

The analysis of the consumer expenditure clearly indicates that proportion of expenditure on nonfood expenditure has been increasing steadily in Kerala. It may be observed that almost 50 % of the consumer expenditure is on non-food items.

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