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Is the Kerala Model a Sustainable Model of Growth?

Ruchi Bhalla

[ABSTRACT: Human development and economic growth have been linked for many decades. The Kerala model of development has always been acclaimed for its achievements in various sectors. The model has already achieved its place of distinction among developed countries of the world. The biggest paradox in its model of development, though, is that while Kerala has reached the peak in human development indicators, it also has a comparatively low per capita income, a high rate of unemployment, and a low rate of participation of women in the Labour Force Participation Rate. The Sustainable Development Goal (SDG) 4 of inclusiveness in education and lifelong opportunities for people seems to be directly linked with economic growth and human development. Several scholars have explored the relationship between human development and economic growth to conclude that there is a strong linkage between them. India, as an emerging economy, faces multiple challenges in its path towards holistic development. This paper has tried to assess the education–employment linkage at the national level as well as in one of the most progressive states of India, viz., Kerala. Kerala's development model has always been appreciated, but the highly skewed nature of the high growth process has been accompanied by a diminishing role for the commodity-producing sectors of agriculture and industry. This has adversely affected employment generation for the state's ageing population.
KEYWORDS: Human development, economic growth, inclusion, women's unemployment.]

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Introduction

With globalisation and technological advancement, developing and underdeveloped economies are looking for new ways to progress. The development of economies depends on their people and their avenues to express their capabilities and freedom. The real wealth of a nation is its people. A decent standard of living with good education and health facilities is the main objective of economies. Bhullar (2006) describes development as a process that is multidimensional and involving wholesale economic and social reform and restructuring. The development process involves both needs and overall end goals. Human development can be said to be the need for any economy, while economic growth is the end objective. Growth measures the income and standard of living of the people, while human development is all about "enlarging people's choices" (Sen, 1999, p. 8). Thus, both are inextricably linked.

The relationship between them has been explored in various ways. Interlinkages between the need and end concept can be best explained by the impact they have on each other. Investment in education and health indicators will lead to improvements in the standard of living, and improvements in the income of people will lead to improvements in human development of the people. As per the literature review, a positive and statistically significant relationship exists between human development (HD) and economic growth (EG). They both form a virtuous cycle in which higher and quality growth helps in augmenting human development, and human development in turn contributes positively to promoting growth of the economies (Srinivasan, 1994; Mukherjee and Chakraborty, 2011).

According to the existing literature, Scandinavian countries, especially, and many other developed countries of the world, have experienced a virtuous cycle when both EG and HD chain linkages have worked simultaneously. The data also reveals that countries that have low investment in both of them have witnessed a vicious cycle, for e.g., several African states, Mexico, etc (Ranis, 2004; Ranis, Stewart and Ramirez, 2000; Mayer-Foulkes, 2007). A causal relationship between the two has helped many economies to develop better than the countries which have demonstrated low causality. Several factors influence the two-way causal relationship between EG and HD, the strength of which varies across countries. Ramirez, Ranis and Stewart (1998) found that while investment in public expenditure on social services and education of females strengthens the interlinkages between HD and EG, improvement in the country's investment rate and distribution of income strengthens the relationship between EG and HD. They showed the two-way chain linkages between human development and economic growth and the factors influencing the chain linkages.

The Kerala model of development is famous because of its high investment in the social sector. Kerala's model focused on investing in first-generation development, i.e., investing in human development resources and ignoring the growth concept of development till 2001. The famed model focused on the one-chain linkage, i.e., HD to EG. As per the *Kerala Human Development Report* (2005), due to investment in the social sector and neglect of the economic growth factor, the economy suffered from large-scale unemployment. The development model has been highly appreciated, but the lack of skills and broken education

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system amongst the population have made it difficult to secure jobs. As Amartya Sen said about his experience of the Kerala model

> I should perhaps underline here the fact that I am referring to "the Kerala experience" rather than what is often called "the Kerala model." To think of a "Kerala model" does have its merits, but it is, I believe, ultimately counterproductive, especially for Kerala itself. To call something a model is to hint at some alleged unimprovability. That is not the case with Kerala's experience. (Anand and Sen, p. xiv)

According to Sen, the Kerala model of development is like a 'frozen model' where history has played its role. For the purpose of refinement in the people's plan, new strategies with a focus on quality and inclusivity should be taken up. A new vision and political strategy are needed to take the state forward. The high rates of unemployment, especially among females, show the presence of high gender inequality in the region. With 100% universalisation in primary and secondary education and females achieving a high literacy rate, the lack of opportunities for skill education for them demonstrates negligence in terms of the quality of education being imparted to people by the Kerala government. If the figures of total enrolment in technical courses are analysed, women are seen opting for traditional courses like nursing and teaching. Women are not opting for any special or professional courses, which would increase their employment ratio.

This study focuses primarily on the issues of the sustainability of the Kerala model by exploring the linkages between human development and economic growth. First, I compare the education–employment linkage at the national level vis-a-vis one of the most progressive states of India, viz., Kerala. Kerala's development model has always been a role model for many economies, but the highly HD inclined model and neglect of the growth sector have contributed to the declining role of sectors like agriculture and industry, leading to questions about the sustainability of the model. The low growth model has affected employment generation for the ageing population of the state. My study suggests policy measures for improving the sustainability of the model in current times.

Overview of Literature

Ramirez, Ranis and Stewart (1997) accentuated the link between EG and HD by plotting out two chains that emphasised the correlation between the two variables. For the purpose of attaining the objective of the Millennium Development Goals, several case studies, cross-country research studies, among them, suggest that quality and sustainable growth are critical. Thus, focusing on economic growth is a necessity since it generates prosperity and opportunities, thereby raising employment levels. Strong economic growth advances human development, which, in turn, promotes economic growth (OECD, 1999). The ultimate objective of every economy is to achieve high levels of growth; the only difference lies in its approach towards its accomplishment. The *Kerala Human Development Report* (2005) mentioned that Kerala is one state which surpassed other states with reference to investment in human development indicators. It consistently performed well in terms of indicators associated with human development. But if the growth component of development is looked

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at, then per capita income has lagged behind the national level (*Human Development Report*, 2005).

Balanced development and equitable growth opportunities have been the foremost objective of the Sustainable Development Goals. Developing economies like India, China, etc., are focusing on attaining the objectives of Sustainable Development Goals. Since the last few decades, almost all the macroeconomic variables are rising sharply, viz., literacy rate (75%), adult literacy rate (70%), youth literacy rate (86%), per capita GDP (7.4%). Despite this there exists scope for improvement in almost all the sectors of the economy. In the recent *Human Development Report* (2022), India slipped in the rankings: one of the main reasons for this was increasing regional inequalities. Kerala has also been underperforming in terms of employment and economic growth. According to the recent *Human Development Report* (2022), Kerala has surpassed every state in literacy rate with 100% universalisation in primary and secondary education. This universalisation has been achieved by the state even before other states thought about the increasing importance of human development indicators. But the picture with reference to enrolment in higher education seems quite dismal. According to T. P. Sreenivasan (2012), Vice-Chairman & Executive Head, Kerala State Higher Education Council, though the model of development has received applause for its 100% universal education, the higher education system needs substantive policy changes.

The *Kerala Human Development Report* (2005) mentions that Kerala is one state that has surpassed all the other states in India with reference to investment in human development indicators. It has consistently performed well with respect to human development indicators. But if the growth component of development is looked at, then per capita income has lagged behind the national level (*Human Development Report,* 2005). According to the reports of CDS-UN (1975), Kerala, in its model of development, has always prioritised people and their development by investing in human development indicators such as education and health, while the growth concept of development has been relegated to secondary consideration.

In recent times, the Kerala government has started focusing on its per capita income, but the sustainability and quality of this growth are questionable. Both quantity and quality of growth are required for sustainable development. From the experience of Kerala, it can be seen that the state exhibits lopsided human development. Investing in human development indicators can accomplish development, but without Human Development transforming into Economic Growth, the sustainability of development is questionable. To reap the benefits of human development, policies should be implemented effectively. Focusing only on development policies related to social choices creates a conflict between the choices of need and the end concept, i.e., Human Development and Economic Growth. Before the Washington Consensus, it was witnessed that countries can have sustainable development with improvements in human development investment even in times of low economic growth, but for developing economies, similar policy recommendations might not work (*Human Development Report*, 2005). Improvement in the material base for social development can be expanded by investment in economic growth. However, it is the way opportunities are distributed that defines how much the growth aspect of development can be expanded.

As per CDS-UN Study (2005), unemployment among educated people is one of the serious problems that the Indian economy is facing. For the Kerala model of development, Human

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Development Indicators like enhanced human capabilities, 100% literacy rate and conditions to live healthy lives have been achieved and even surpassed the National level. Further investment needs to transform itself into growth prospects in terms of decent job opportunities, skill-based employment and increased productive growth. According to Labour Bureau (2013), Third Annual Employment and Unemployment Survey 2012-2013, Kerala witnessed the highest number of rural youth unemployment among the major states. In rural Kerala, 25.9% are educated but unemployed, while urban areas of Kerala witnessed the second highest number of educated unemployed youth, i.e., 21%. Koshy (2014) in his paper stated that the worst factor in the low rate of economic growth in Kerala is its chronically high rate of unemployment. Data shows that this has been continuing for decades; one-fourth of the labour force has remained unemployed even after being educated, which is about three times the National average. Kerala-educated professionals moved to other neighbouring countries for employment. Though education has helped the youth to find jobs outside the state, this has led to a scornful attitude towards labour-intensive work available in the state. The consequence of this is that the state has to import unskilled labour for its production. Due to the presence of educated unemployed youth and the import of unskilled workers, the state is floundering, and its growth is stagnating and even declining.

With these statistics, one can easily say that though the state performed well in human development, it could not establish a positive relation between the type of education it invested in and employment opportunities available. The reason for such a high rate of educated unemployed is the state's faulty education system, which is mostly theoretical in nature. The state also witnessed a mismatch in the educational and skill qualifications of the youth with current employment demands. Kerala's economy has witnessed inequalities because of a mismatch between market demands and the supply of educated youth, uncontrolled population growth, migration of foreign job seekers, recession, inflation, and lack of skills, such as communication skills, analytical skills and problem-solving. The growth of new technologies demands highly skilled labour. A lack of skilled education has led to the mismatch between jobs offered and salaries paid to the workers (ASSOCHAM, 2003). Zacchariah, Mathew and Rajan (2005) identified four reasons for high rates of female unemployment. These are: influx of a large number of women into the labour force, ageing of the labour force, increase in the number of persons with secondary or higher levels of education, and emigration and inward remittances.

Table 1: State-wise, Dimension-wise Indicators used for Human Development Index 2011–12 and 2017–18 (Source: *Human Development Report* 2022)

S.No.	States/UTs	2011-12					2017-18		
		Long & Healthy Life	Know-ledge		Income	Health	Knowledge		Income
		Expectation of Life at Birth	Mean Years of Schooling (Population Age>=	Expected Years of Schooling (Yrs)	Per Capita GSDP at Constant Prices 2011-12 (Rupees)	Expectation of Life at Birth	Mean Years of Schooling (Population Age>=25 years)	Expected Year of Schooling (Yrs)	Per Capita GSDP at Constant Prices 2011-12 (Rupees)

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			25 years)						
		Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons
1	A & N Islands	67.9	6.83	14.08	103068	69	7.48	11.8	146990
2	Andhra Pradesh	68.5	4.46	10.01	76997	69.7	4.43	11.38	116542
3	Arunachal Pradesh	63.9	5.37	15.65	79019	66.2	5.21	15.6	100972
4	Assam	63.9	5.67	10.73	45538	66.2	6.34	13.69	65138
5	Bihar	68.1	3.87	9.9	23525	68.9	4.66	10.18	29385
6	Chandigarh	70.1	8.77	14.52	176227	71.05	10.72	15.56	250609
7	Chhattisgarh	64.8	4.62	12.39	61305	65.2	5.34	12.38	76073
8	Dadra & N. Haveli	67.9	6.11	11.5	71609	69	5.75	11.84	100268
9	Daman & Diu	67.9	8.13	11.29	71609	69	9.25	10.59	100268
10	Delhi	73.2	9.4	15.04	202139	74.7	9.2	15.93	284434
11	Goa	70.2	8.42	13.44	289192	70.85	9.18	13.61	357804
12	Gujarat	68.7	5.57	11.27	101075	69.7	6.33	11.66	163090
13	Haryana	68.6	6.23	11.28	116408	69.7	7	12.66	177652
14	Himachal Pradesh	71.6	6.43	14.37	105376	72.6	7.73	14.67	152128
15	Jammu & Kashmir	72.6	5.24	10.87	61852	74.1	5.8	11.33	76724
16	Jharkhand	66.6	4.52	11.49	45318	68.6	4.67	12.31	57465
17	Karnataka	68.8	5.79	12.11	98567	69.2	6.21	12.84	159061
18	Kerala	74.9	7.85	12.13	108666	75.2	8.7	13.73	150922
19	Lakshadweep	67.9	6.97	13.88	71609	69	8.57	10.71	100268
20	Madhya Pradesh	64.2	4.7	13.62	43023	66	5.06	12.31	61220
21	Maharashtra	71.6	6.69	13.48	113192	72.5	7.3	13.96	159605
22	Manipur	63.9	7.73	14.87	44649	66.2	8.65	15.44	56919
23	Meghalaya	63.9	7	15.22	66304	66.2	6.47	18.96	66113
24	Mizoram	63.9	7.56	15.37	65347	66.2	8.22	17.95	121287
25	Nagaland	63.9	8.46	13.1	61159	66.2	7.61	13.62	79369
26	Odisha	65.8	4.58	11.46	54855	68.4	5.2	12.55	83107
27	Puducherry	70.6	8.13	15.13	132739	71.7	8.87	12.87	151544
28	Punjab	71.6	6.11	12.19	95379	72.4	7.37	14.2	124152
29	Rajasthan	67.7	3.99	11.4	62907	68.5	4.59	12.25	84064
30	Sikkim	63.9	5.36	13.75	181842	66.2	7.48	15.39	270235
31	Tamil Nadu	70.6	6.11	13.95	103743	71.7	6.8	14.2	149717
32	Telangana	68.5	4.46	13.32	100733	69.7	6.17	12.93	147697
33	Tripura	63.9	5.24	13.98	51999	66.2	5.63	14.46	85480
34	Uttar Pradesh	64.1	4.38	12.47	35917	65	5.39	11.45	48900
35	Uttarakhand	71.7	6.23	12.09	113456	71	8.25	14.09	164165
36	West Bengal	70.2	5.14	12.78	56693	71.2	5.63	13.99	71312
	All India	67.9	5.3	12.18	71609	69	5.97	12.45	100268

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Table 2: State-wise HDI Scores and Ranks for the Years 2011–12 and 2017–18 (Source: *Human Development Report* 2022)

S. No.	States/UT	HDI Score 2017-18	HDI Score 2011-12	Difference in HDI Score	Rank based on Score difference	Rank HDI 2017-18	Rank HDI 2011-12	Difference in HDI Rank
1	2	3	4	5= 3-4	6	7	8	9=8-7
1	A & N Islands	0.707	0.697	0.009	35	14	9	-5
2	Andhra Pradesh	0.648	0.603	0.045	14	30	29	-1
3	Arunachal Pradesh	0.684	0.660	0.023	30	22	19	-3
4	Assam	0.651	0.579	0.072	3	28	34	6
5	Bihar	0.551	0.518	0.033	25	36	36	0
6	Chandigarh	0.827	0.768	0.059	5	2	3	1
7	Chhattisgarh	0.629	0.605	0.024	29	32	28	-4
8	Dadra & N. Haveli	0.662	0.639	0.023	31	27	24	-3
9	Daman & Diu	0.695	0.663	0.032	26	19	18	-1
10	Delhi	0.839	0.805	0.034	23	1	1	0
11	Goa	0.806	0.780	0.026	27	3	2	-1
12	Gujarat	0.698	0.652	0.046	12	18	22	4
13	Haryana	0.724	0.669	0.055	8	13	15	2
14	Himachal Pradesh	0.761	0.714	0.046	11	6	6	0
15	Jammu & Kashmir	0.663	0.630	0.033	24	26	26	0
16	Jharkhand	0.618	0.583	0.034	22	33	33	0
17	Karnataka	0.706	0.664	0.043	16	15	17	2
18	Kerala	0.775	0.725	0.050	10	4	5	1
19	Lakshadweep	0.687	0.675	0.012	34	20	13	-7
20	Madhya Pradesh	0.616	0.595	0.021	33	34	31	-3
21	Maharashtra	0.750	0.712	0.037	21	9	7	-2
22	Manipur	0.686	0.643	0.043	15	21	23	2
23	Meghalaya	0.704	0.664	0.040	17	17	16	-1
24	Mizoram	0.747	0.671	0.076	2	10	14	4
25	Nagaland	0.678	0.655	0.023	32	23	21	-2
26	Odisha	0.649	0.592	0.057	7	29	32	3
27	Puducherry	0.752	0.753	-0.001	36	8	4	-4
28	Punjab	0.738	0.680	0.058	6	12	12	0
29	Rajasthan	0.638	0.599	0.039	18	31	30	-1
30	Sikkim	0.764	0.686	0.078	1	5	11	6
31	Tamil Nadu	0.738	0.700	0.038	20	11	8	-3
32	Telangana	0.705	0.659	0.046	13	16	20	4
33	Tripura	0.667	0.616	0.051	9	25	27	2
34	Uttar Pradesh	0.592	0.567	0.026	28	35	35	0
35	Uttarakhand	0.758	0.691	0.067	4	7	10	3
36	West Bengal	0.674	0.635	0.039	19	24	25	1

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Kerala's achievements are much talked about. As Anand and Sen (1998) said, though, it's not only a model; much can be learned from Kerala's 'experience'. The Human Development objective has already been achieved in the state, and the state's model of development is termed the best for this. With a life expectancy of 73 years, Kerala has surpassed not only Indian states but also many Asian countries (*Human Development Report*, 2005). The objective of universalising elementary education has been achieved by the state, and it is much ahead of any other Indian state. The literature also specifies that other South Indian states, such as Andhra Pradesh and Tamil Nadu, are not too much behind Kerala on both counts. As per the national *Human Development Report* (2001), Kerala, among the major Indian States, including the National Average, has been ranked first in the Human Development Index (HDI) 1981, 1991 and 2001. Even in 2011, as per the Human Development Index, Kerala secured first rank and was declared best in terms of human development indicators. But an important thing to understand is that many Asian economies are already working towards achieving the objective of economic growth. Major states of India and the National Average have performed well with respect to economic growth indicators such as per capita Income, unlike Kerala, which, till 2005, had focused only on the education and health sectors. The development of any state depends not only on the qualitative, but also on the quantitative aspects. Kerala has always been far better than any other state in India in HD. According to the latest UN report, Kerala would have ranked 104 and Bihar 163 if the states were deemed to be separate countries. In fact, Kerala has been compared to the Maldives because of its excellent ranking (Kundu, 2015).

Economic Growth

The ultimate objective of every economy is to achieve a high level of growth; the only difference lies in its approach to accomplishing this. As per the *Kerala Economic Review* (2014), the state witnessed a 6.49% growth rate in the year 2012-13. According to the *Review* (2014), the growth rate of the state is the second highest among the other South Indian States and is also above the National Average (4.04%).

Table 3 makes clear that per capita income in Kerala is nearly 2.5 times higher than in Uttar Pradesh, and further that Uttar Pradesh's per capita income is only half of the all-India level. It can be said that Kerala's improved per capita income after 2005 is because of the transformation of Human Development Indicators into Economic Growth, and also because of improved state policies with regard to the growth concept of development.

Table 3: Net State Domestic Product Source: NSSO (2006 & 2014)

	50th (1993-94)	61st (2004-05)	68th (2011-12)
Kerala	47.5	6.50	16.68
India	43.3	8.49	15.77

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The above Table makes it clear that Kerala, before 2005, focused only on the investment in Human Development Indicators and delayed investment in the growth indicator of development. For comparison, the Indian economy started focusing on growth after 1995, after the Economic Reforms of 1991. As per Subhramanya (1995) the material base and productive capacity of the state have declined even though the state domestic product has increased after 2005. Several unemployment challenges experienced by the state are due to this pattern of growth. He also stated in his paper that low growth in the service sector is one of the major reasons of the high unemployment rate.

From the statistics, it can be seen that the state is Human Development inclined. Though the state has tried to transform and implement those policies which will accelerate its growth but the quality and sustainability of its growth are questionable. This can also be concluded from the analysis of Human Development (Literacy Rate) in the state and its comparison with the national data (see Table 4 below).

Table 4: Literacy Rates (Source: Census 2009, 2010 and 2011)

	1991			2001			2011		
	Male	Female	Persons	Male	Female	Persons	Male	Female	Persons
Kerala	86.1	93.6	89.8	87.9	94.2	90.9	92.1	96.1	94
India	39.3	64.1	52.2	53.7	75.3	64.8	65.5	82.1	74.0

Earlier economists like Schultz (1961), Harbison (1968), Becker (1993) and others, argued that one of the important factors responsible for the rapid growth of the American economy was the allocation of more expenditure to education, which was one of the essential components of human capital. According to Schultz (1961), there are six ways of improving the quality of a population: (1) Health facilities and services, (2) Job training, (3) Formally organised education at the elementary, secondary and the higher levels, (4) Study programmes for adults, (5) Migration of individual by changing jobs and (6) Social and economic equity. Charles and Berger (1988) asserted that investment in Human Capital can take a variety of forms, like formal schooling, on-the-job training, job market information, health and sanitation and migration. An improvement in human activities due to which a person becomes more productive, according to the changes in the economy, is called human capital formation. Schultz (1961) called productive humans an asset to the economy. Kerala has witnessed a phenomenal growth in terms of imparting free and compulsory school education, enhancing people's capabilities and providing people with long and healthy lives. It has surpassed the National Average in terms of education and health indicators. Human capital formation has seen impressive progress in the state (CDS-UN, 1975). Despite achieving such impressive progress in Human Development Indicators, the state cannot achieve the goal of Sustainable Development because its Human Development cannot be transformed into quality Economic Growth. Benefits can only be reaped if policies are implemented effectively. Because the state cannot convert its high educational numbers into

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good employment opportunities for the educated youth, it has led to slow progress in terms of growth.

Technical Education, Unemployment Rates and Economic Growth

Imparting technical and skill education is essential for any economy to develop. This section emphasises the need for expenditure in technical education to achieve the objective of quality growth and sustainable development. The table below shows how low investment in skill education actually leads to high unemployment numbers. Female participation has been given special emphasis in the table below since the state of Kerala has the largest number of literate women with the highest unemployment rate among them.

Table 5: Technical Education and Unemployment Rates in India (Source: *All India Survey on Higher Education* 2020-21 and NSSO (2014) 68th round on Employment and Unemployment Rates)

State	% enrolment in Diploma Courses 2017-18			Unemployment rate as per 68th round		
	Male	Female	Total	Male	Female	Total
Andhra Pradesh	13.42	10.88	12.15	27	22	25
Bihar	3.78	3.63	3.71	32	119	38
Chhattisgarh	14.32	5.22	9.79	26	13	21
Goa	25.94	13.43	20.22	50	50	50
Gujarat	26.50	9.01	18.31	6	7	7
Haryana	36.55	8.64	23.81	32	51	34
Himachal Pradesh	26.64	11.21	19.09	20	25	22
Jammu & Kashmir	0.71	0.20	0.46	35	205	53
Jharkhand	0.013	0.06	0.04	26	72	33

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Karnataka	40.06	30.64	35.49	19	18	19
Kerala	15.48	26.79	21.16	41	232	98
Madhya Pradesh	16.21	2.55	9.84	11	8	11
Maharashtra	37.73	28.83	33.57	15	17	16
Odisha	23.27	4.39	13.78	30	35	31
Punjab	42.73	10.74	28.04	27	60	30
Rajasthan	7.86	2.32	5.24	19	10	16
Tamil Nadu	89.05	17.49	53.25	25	49	32
Uttar Pradesh	1.68	0.59	1.18	32	77	44
Uttarakhand	20.22	8.94	14.71	26	24	26
West Bengal	6.30	1.56	3.95	41	63	45
India	19.57	9.33	14.68	26	39	29

The major objective of Sustainable Development Goals is promoting quality skill education, which will enhance inclusive growth and improve employment opportunities for the masses, especially in the states suffering from unemployment. Vocational or technical education includes all the skill-based courses such as diplomas, certificate courses, ITI, polytechnics, integrated courses and various other allied courses. Even the Eleventh and Twelfth Five-Year plans of the Planning Commission focused on investing more in technical and vocational education. The Indian economy shifted its focus to skill-based education, especially in higher education, because of the widening disparities between demand and supply in the job market. The table above focuses on the percentage of students enrolled in diploma courses: a component of technical education. The data is for persons aged 15–29 years who are enrolled in different diploma courses across different states of the economy. The national level shows a very dismal picture of the enrolment of the youth in diploma courses: 14 per cent of youth got enrolled in diplomas as per the *All India Survey on Higher Education* (2021) data. Figures with respect to females show a very discouraging picture, as only 9 per cent of females got enrolled in diplomas in 2011. The table above shows that Kerala, though having 100 per cent enrolment in general education, has just 21 per cent of youth enrolled in diplomas, with only 27 per cent of them being women. Looking at the figures, 26 per cent of females and only 20 per cent of males got enrolled in skill-based courses on a National Average. South Indian states such as Tamil Nadu, Karnataka and Andhra Pradesh have an impressive enrolment in diploma courses. Not only southern states, several other states, such as Maharashtra and Punjab, also, have seen an upward trend in terms of enrolment in diploma courses. Though

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the states that are highly populated and have high numbers of youth, such as Bihar and Uttar Pradesh, have performed badly in terms of enrolment. For the purpose of achieving the objective of Sustainable Development, investment in technical education is a must, and one of the components of technical education is enrolment in vocational education. Economies investing in vocational education have seen improvement in their employment rates and poverty ratios. Indian states are still developing because there is a presence of unemployment and high rates of people living below the poverty line. Educated unemployment is the biggest problem for Indian states since the education levels do not match the demand of jobs in the market. The Census (2011) stated that ten million Indian youth with graduate degrees or postgraduate degrees are looking for meaningful work. NSSO (2014) 68th round report on unemployment stated that 15 per cent of Indians with the highest level of education are seeking jobs. The report observes that India at present has 30 per cent of people unemployed under the age group of 15–45 years of age, and Kerala tops the list with the highest number of people who are educated and unemployed.

The situation has worsened even further, with the number reaching 9.6 from 6.8 in 2011 as per the Census data. White collared jobs demand skill education, which the Indian economy lacks the most. As stated above, 30 per cent of the educated labour is educated and unemployed because the skills don't match the current job opportunities in the economy. As mentioned before, imparting free and compulsory education to the masses won't solve the problem. Quality education, both in school and at higher levels, is the need of the hour. Even the literature suggests that investment in skills education is one of the essential remedies for achieving the objective of sustainable development.

The Kerala model of development has focused on imparting 100 per cent universal education, but there is a serious question mark against the quality, not only in higher education but also at secondary level school education. The majority of the youth face problems getting enrolled in higher education outside the state due to a lack of skills and quality education. 26 per cent of females and 21 per cent of males are under pressure to get good employment opportunities. The Kerala model of development actually questions the chain linkages since the gender specific data shows that highly qualified females are unemployed in the state. According to NSSO (2014), 68th round, out of 1000 females, 232 females who are postgraduates are unemployed, which is the highest among all the Indian states. The data questions the sustainability of the model since a large number of highly qualified females are missing from the workforce, thus creating a gap between the existing labour force and the workforce. Existing literature suggests that the gap is because of a lack of skills among the educated women in Kerala. Kerala women have the lowest participation rate in the labour force among all the major states of India, as per the recent survey on labour. A very low number of females in Kerala are active and employed. According to Anandan and Anchayil (2015), the faulty and disoriented education system in the state of Kerala, especially the over-dependence on humanities and science-specific colleges, along with traditional and conventional courses, has led to this situation. They also state that the fees in self-financing colleges are huge. Moreover, very few government colleges provide professional courses, which is also one of the major reasons for the state's faltering education system. Gender discrimination in higher education is also one of the reasons for increasing rates of unemployment. Lack of technical skills among women keeps them out of the job market provided by the private sector. This is the major reason for the high rate of female unemployment in the state.

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Table 6: Unemployment Rates (per 1000) according to Current Weekly Status, Source: NSSO (2011 and 2014)

	68th round		61st round		50th round	
	Rural (persons)	Urban (persons)	Rural (persons)	Urban (persons)	Rural (persons)	Urban (persons)
Andhra Pradesh	30	55	38	52	27	51
Assam	49	57	41	81	65	91
Bihar	39	67	31	82	30	81
Delhi	84	40	19	55	0	20
Gujarat	8	9	15	37	23	43
Haryana	38	43	43	55	39	48
Himachal Pradesh	19	34	40	45	8	29
Jharkhand	27	60	45	77	NA	NA
Karnataka	16	34	19	36	16	47
Kerala	107	85	156	180	89	129
Madhya Pradesh	15	36	27	44	18	62
Maharashtra	22	30	44	64	26	56
Orissa	51	47	74	138	44	80
Punjab	35	35	48	62	18	36
Rajasthan	24	47	31	41	7	21
Tamil Nadu	45	41	30	49	39	62
Uttaranchal	28	57	29	63	NA	NA
Uttar Pradesh	29	50	19	49	26	44
West Bengal	50	56	57	75	46	97

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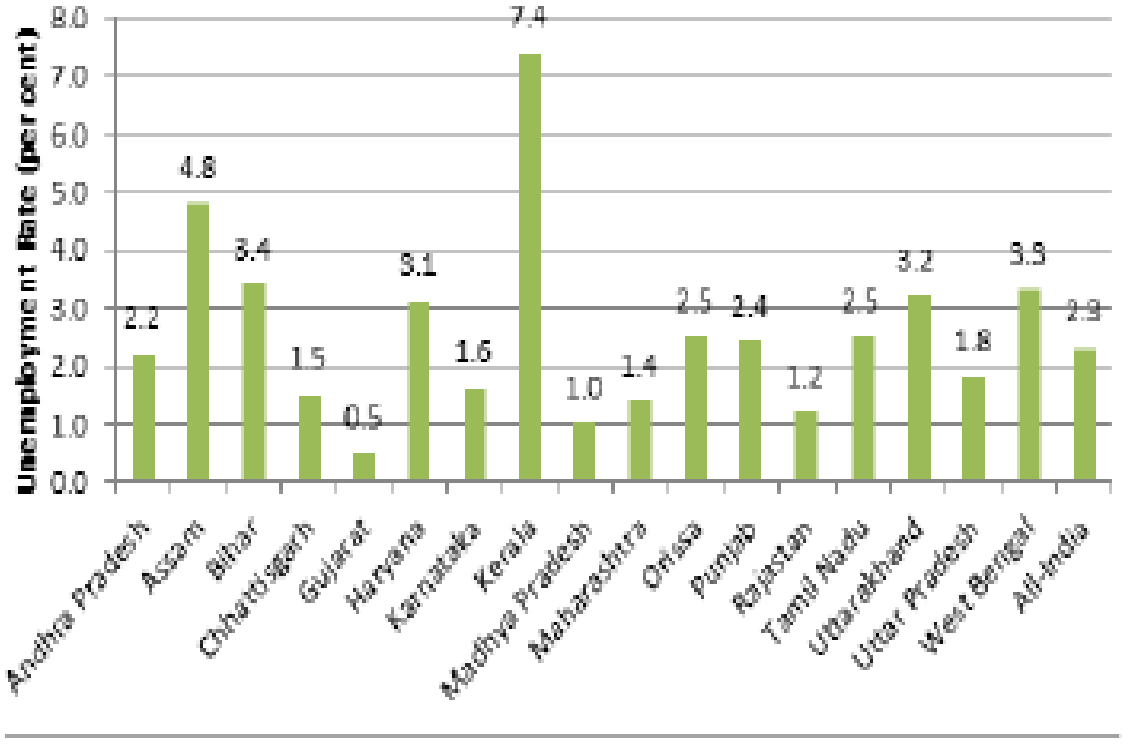
Table 6 depicts Kerala's rising unemployment rate among the major states of the country. All three NSSO rounds have found that despite having high education levels, Kerala has the highest unemployment rates.

Fig. 1. Unemployment Rate of major States for age 15–59 years (Source: Employment and Unemployment Situation in India, NSS Report No. 554, NSS 68th Round, July 2011–June 2012)



Gujarat (0.5%) experienced the lowest unemployment rate as per the Usual Principal Subsidiary Status (UPSS) approach. Madhya Pradesh (1.0%), Rajasthan (1.2%), Maharashtra (1.4%), Karnataka (1.6%), Uttar Pradesh (1.8%) and Andhra Pradesh (2.2%) are the other major states, which have lower Unemployment Rate than the all-India average (2.3%). Tamil Nadu has an unemployment rate of one-third of Kerala's.

In Kerala, the urban unemployment rates are lower as compared to rural areas under all approaches. While comparing the unemployment rate of males and females, it is seen that the female UR is much higher than the male UR. A comparison between different estimates of unemployment indicates that the Current Daily Status (CDS) estimate of unemployment is the highest. This scenario is reflected both in rural and urban areas. The higher unemployment rates, according to the CDS approach, compared to the Current Weekly Status (CWS) and usual status approaches (UPS and UPSS), indicate a high degree of intermittent unemployment in Kerala.

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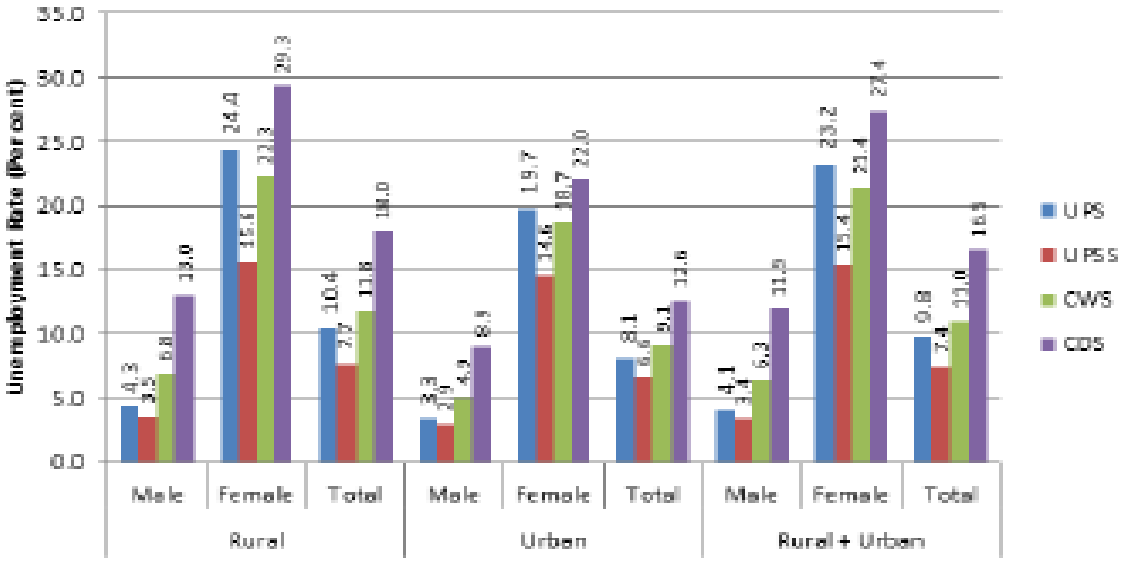
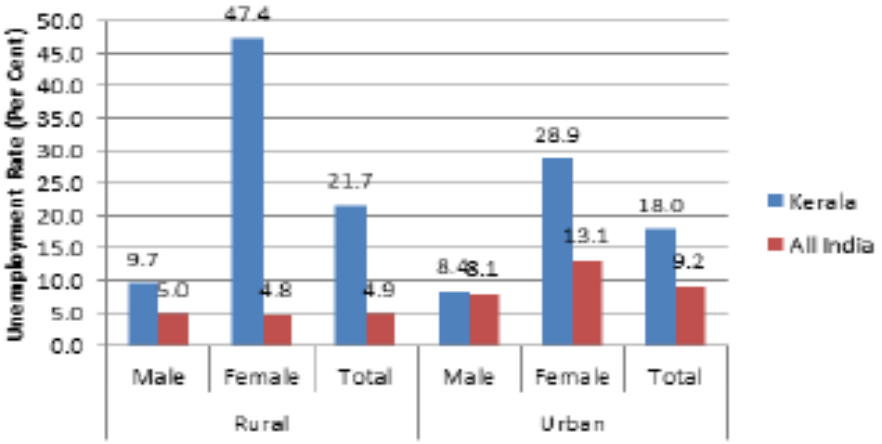
Fig. 2. Unemployment Rate in Kerala under different approaches for age 15-59 years (Source: Employment and Unemployment Situation in India, NSS Report No. 554 (2014), NSS 68th Round, July 2011- June 2012)



Persons aged 15-29 years are considered as youth, and in Kerala, 23 per cent of the total population is the youth population. The youth unemployment rate in the year 2011-12 was the highest in Kerala as compared to the overall population. The data above reveals that 18 per cent of urban youth and 21.7 per cent of rural youth are unemployed. The data also found that rural female unemployment rates were 47 per cent against the male unemployment rate of approximately 10 per cent. Females in rural areas have higher unemployment rates as compared to rural males in the state.

Fig. 3. Unemployment Rate of the Youth in Kerala and India as per UPSS approach for age 15-59 years (Source: Employment and Unemployment Situation in India, NSS Report No. 554 (2014), NSS 68th Round, July 2011-June 2012)



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Kerala has started focusing on economic growth alongside human development, as against its earlier lopsided focus on only human development. As per the *Kerala Economic Review* (2014), the state reported 6.49 per cent growth rate in the last few years, which is much above the National Average (4.04 per cent). The state recorded the highest growth rate among the other South Indian states. But the major challenges with the Kerala model are the increasing number of educated unemployed persons. According to the *Kerala Economic Review* (2015), at 7.4%, Kerala has the highest rate of unemployment among the large states in the country. Till today, quality problems hinder the success of the Kerala development model (Human Development Report 2011). *Kerala Human Development Report* (2005) noted that the crucial constraints for Kerala's further development are the lack of investment in economic infrastructure, the widening gap between demand and supply of jobs, which creates problems for educated unemployment and increasing gender 'un-freedom'. These have been, and could continue to be, an impediment to the growth prospects of the state's economy. According to the *Kerala Human Development Report* (2005), to achieve the objective of Sustainable Development, the state needs to shift its focus from general education to quality education, which is a kind of second-generation problem of human development. With such levels of unemployment, the sustainability of this model is questionable. India is a developing nation and can only become developed if all the sectors in the economy work effectively. The Kerala model shows that there is a big lag in the relation between education and employment.

India is a developing country suffering from many social evils like poverty, unemployment, inequalities, etc. Unemployment is the main reason behind the lack of success in India's development. 51.1% of Indian workers are self-employed, out of whom 54.2% of workers are from rural areas and 41.1% of workers are self-employed in urban areas as per the NSSO (2014) 66th round. The data shows that though the figures have declined in the NSSO (2014) 68th round, the service sector and industrial sector have failed to absorb the potential and productive workers. NSSO data found that among the workers who are employed, the highest number of employed workers are casual workers (33.5%), while only 15.6% workers fall under the category of salaried or regular workers. The NSSO (2014) report also reports that the increase in regular or salaried workers nearly halved between 2004-05 and 2009-10, while the number of casual workers increased to 21.9 million. These disappointing figures regarding the structure of the labour force pose a question about the sustainability of the Kerala model of development, which has such a high rate of educated unemployment.

Table 7: Occupational Structure. (Source: Census, 2011)

	2011				2001			
	Culti-vators	Agri-cultural Labour	House-hold Industry workers	Other Work-ers	Culti-vators	Agri-cultural Labour	House-hold Industry workers	Other work-ers
Kerala	7	15.8	3.6	73.6	3.7	12.5	2.3	81.5

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Uttar Pradesh	41.1	24.8	5.6	23.5	36	20.5	3.4	40.1
India	31.7	6.5	4.2	37.6	25.6	5.4	30.9	38.1

Employment in the Organised Sector

The organised sector in Kerala has witnessed a fall in its employment rates. Data reveals that employment in the organised sector declined from 12.26 lakh in 2000 to 11.4 lakh in 2005 and further decreased to 10.88 in 2013. The decline reflects a reduction of employment in the organised sector of 11.3% over a period of 13 years. This reduction is largely due to the reduction of persons working in the public sector, though the number increased marginally to 11.29 and 11.36 lakhs in 2014 and 2015, respectively.

The organised sector comprises of both the public and private sectors. In Kerala, the data reveals that though the employment rates in the public sector are declining, the rates are consistently increasing in the private sector since 2011. For instance, in 2015, in the organised sector, out of the 11.36 lakh persons employed, 5.7 lakh (50.2%) were employed in the public sector and 5.66 lakh (49.8%) were employed in the private sector. As stated earlier, Zacchariah, Mathew and Rajan (2005) have identified four factors that could be associated with the increase in unemployment in Kerala state. These are: influx of a large number of women into the labour force, ageing labour force, large surge in the number of persons with secondary or higher levels of education, and emigration and inward remittances. These factors are both a cause and an effect of unemployment. We may conclude that the persistence of large-scale chronic unemployment in the state clearly demonstrates that education and other human development indicators play a limited role in promoting quality and sustainable development.

Reasons for unemployment

The Kerala model of development has been the role model for many developing states in terms of human development. Even the early UNDP Human Development reports suggested that the Kerala model is the role model of development, and if Kerala were another country, it would have been in the top 5 positions and among the major developed countries. The reports have suggested the lessons that developing states can take from Kerala in terms of investment in Human Development Indicators.

The later reports of UNDP, however, state that Kerala underplayed the significant impact of investing in economic growth for improving the state's productive capacity and income at the per capita level. Lack of investment has led to ever-increasing unemployment among the educated youth. The Economic Growth and Human Development chain linkages were studied by the *Human Development Report* for the first time in 1996. The report stated that no economy can have sustainable development with lop-sided policy, for instance, like Kerala, which neglected EG to prioritise HD. The report also stated that investment in human

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development had not been transformed into equitable growth opportunities in Kerala, thus raising questions about its model of development.

Ranis, Stewart and Ramirez (2000) observe that countries having a lopsided policy may face the problem of being in a vicious cycle. Investing in just one component of development thus poses a serious concern. It has also increased speculation about the alternatives to this type of development. Virtuous and vicious cycles of development, as articulated by Ranis, Stewart and Ramirez (2000), have enabled researchers to develop a model that is more sustainable. A causal relationship between the need and end concept of development must be identified. Chain A studies the causal relationship between Human development and its transformation into economic growth. High levels of quality education and healthy and long life can help to improve the productive capacity of the economy. Chain B studies the relationship between Economic Growth and Human Development. An improved productive capacity and income levels may lead to an improved quality of life. The interlinkages between two chains may mutually reinforce economies to grow and develop both in terms of quantity as well as quality.

Conclusion

Backward economies need to learn from the Kerala model of development with respect to its achievements in Human Development Indicators. Investment in the skill-based education system seems to be the need of the hour, though at present. Learning from Kerala's experiences, states should not only focus on achieving good numbers in primary and secondary education, but also on a higher percentage of enrolment in higher education, as well as in quality technical education. The above paper works at establishing a relationship between education, growth and employment. Simple regression analysis results show that if India wants to develop as a whole, then investment in higher and technical education is a must for achieving good growth rates. Even if one wants to tackle unemployment, the results show that imparting good technical education can lead to low unemployment numbers.

On the question of the sustainability of the Kerala model of development, the state needs to implement policies that will enhance and develop the higher education system in the state. Investment in skill-based universities or colleges should be made to narrow the existing gap in the labour market. Adequate resource support from the government is also needed for expanding the skill education system in the state. Most of the developed nations invest up to 21 per cent of their GDP in the education system. Kerala needs to revise its model of development and invest in quality education rather than just focusing on the universalisation of education. Its faulty higher education system has led to many young people being out of the job market. Hence, the model needs a revision in terms of higher education policies.

Policies in higher education should focus on creating quantitative as well as qualitative expansion of the education system. Policies related to enhancing female participation in the labour force should be worked on. Safe-guarding of the equity consideration and skill-based courses should be promoted in the state. The government should work on bringing opportunities for the educated youth to reduce the high level of unemployment in the state. The problem of unemployment, as stated above, is due to the high gap between the demand

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for labour and the supply of labour by the state. To bridge this gap, the state should work on investing in skill-based courses and providing technical education to the youth. Regular scrutiny of the unaided colleges should be done by the government. In terms of employment, the state should focus on developing its industrial sector.

Alongside, the state needs to work on the development of the service sector. A developed service sector will help in creating more knowledge-based industries. The tertiary sector is also one sector that the state can focus on. China, for instance, worked on developing its tertiary sector. The state can learn from the Chinese model of development. Data reveals that the Kerala economy has seen a very modest growth in the tertiary sector and a very low growth in the secondary sector.

To achieve the objective of Sustainable Development Goals, the state needs policies that will help transform human development into good growth numbers and create employment. The Indian economy as a whole suffers from the problem of educated unemployment. The state of Kerala, despite achieving its human development numbers, has not been able to solve this problem. In fact, it has compounded India's problem. Though the human development helped the state to stabilise its population density, the 2011 data reveals that Kerala has one of the highest population densities. The state should also work on policies regarding the high number of its youth migrating to other parts of the world. It's time for the state to revise its model of development.

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