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A Comparative Study of Employment Generation under MGNREGS in Kerala

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Introduction

The core objective of MGNREGS is to augment wage employment to rural households who are willing to do unskilled manual work. The distinguishing aspect implied in the employment guarantee is that provision of employment is triggered by the demand for work by the wage-seekers. However, statistics revealed that over the years, there has been a down-turn in the scale of employment generation through MGNREGS (Aggarwal, 2016; Jha & Gaiha, 2012). Several factors could lessen the coverage of employment. Low level of employment demand, denying employment to those who have demanded, inefficient administration, denied wage payments etc. are some of the factors that result in the dismal performance of employment generation through MGNREGS. The advocates of MGNREGS perceive that low employment coverage can be attributed to the low level of employment demand which stems out from the success of the scheme in enhancing income and assuring private investment opportunities. On the contrary, studies suggest that the low level of employment generation is the outcome of huge unmet demand for work by the wage-seekers. Uncertainty in securing work and delays in getting work during the crucial times prevent them from actively demanding work and induce to seek other employment opportunities (Narayanan, Das, Liu, & Barrett, 2016; Dutta, Murgai, Ravallion, & Walle, 2014).

The progress in employment generation under MGNREGS shall be assessed through person days of employment created per household, households availing 100 days of employment and by examining the coverage of employment provided against demand. The present study has relied only on the third aspect of assessing the extent of employment generation, which seems pertinent to examine the progress during the study period. The entire analysis is based on secondary data sources collected from MGNREGS website and the period of study is from 2011-12. to 2017-18. There is significant variability across States in the implementation and uptake of MGNREGS (Breitkreuz, et al., 2017). One of the notable contradictions found in MGNREGS implementation is that the scheme is running better where it is required the minimum. In this backdrop, the present study analyses the coverage of employment in Kerala, and it is compared with other States in India. Regional variation in employment coverage is also done with respect to Kerala.

Employment generation in Kerala

Table 1 and figure 1 presents the extent of employment demanded and provided to rural households in Kerala under MGNREGS during the study period. A decelerated growth is visible in both employment demand and allocation. The AGR worked out shows that employment demanded and provided becomes negative in most of the years, except during 2012-13 and 2015-16. In these two years, employment demanded is positive with a value 19.45 and 6.37, whereas the values pertaining to employment provided are 7.75 and 9.09 respectively during 2012-13 and 2015-16. AGR recorded the highest negative value during 2017-18 (-8.47 for employment demanded and -10.00 for employment provided).

Table 1 Employment demanded and provided to households by MGNREGS in Kerala during the period 2011-12 to 2017-18

Years	Demanded		Provided		Percentage of Coverage
	Number	AGR	Number	AGR	
2011-12	1418062		1416441		99.89

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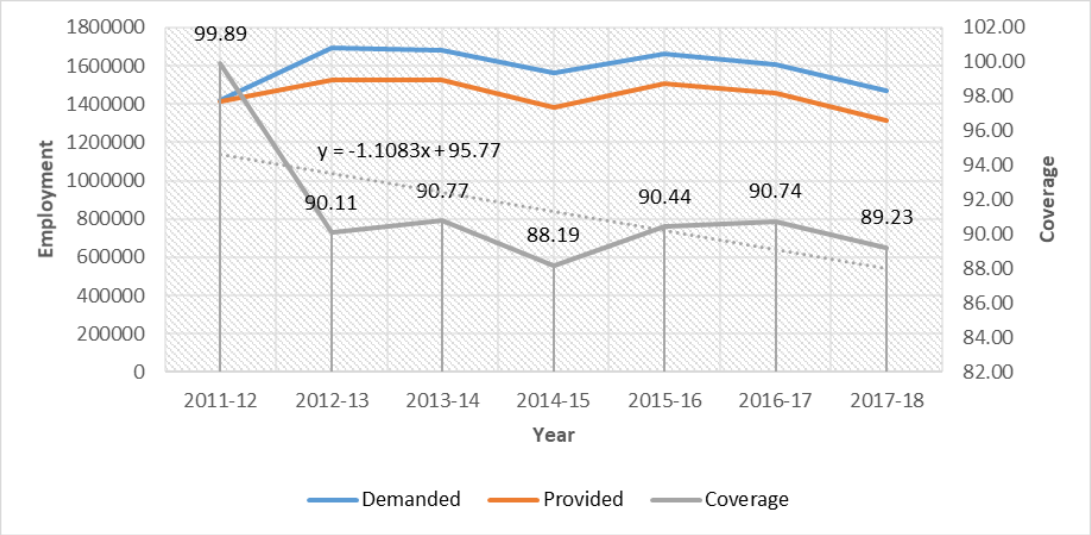
2012-13	1693873	19.45	1526283	7.75	90.11
2013-14	1678824	-0.89	1523863	-0.16	90.77
2014-15	1565148	-6.77	1380236	-9.43	88.19
2015-16	1664786	6.37	1505672	9.09	90.44
2016-17	1606075	-3.53	1457420	-3.20	90.74
2017-18	1470071	-8.47	1311681	-10.00	89.23
CAGR	0.6		-1.27		
Slope	-1200.3		-16792.8		

Source: MGNREGS Official Website

The CAGR value given in the table indicates that the growth in employment demanded over the years is not so impressive. The negative CAGR recorded for employment provided revealed that there persists a visible gap between employment demanded and provided in Kerala. This finding is also supported by the percentage of coverage given in the table. Coverage of employment under MGNREGS in Kerala during 2011-12 was 99.89 percent. From such a huge coverage, the percentage gradually falls, and it becomes 89.23 during the last year of the study period.



Source: MGNREGS Official Website

Figure 1 Coverage of employment demanded in Kerala during the period 2011-12 to 2017-18

Above figure vividly portrays the gap between employment demanded and provided in Kerala. The trend line corresponding to the coverage of employment to rural households in Kerala indicates that there has been a reduction of -1.108 percentages annually over the years. Hence, the coverage has a decreasing trend throughout the study period. The employment generation scenario under MGNREGS in Kerala detailed above discloses that over the years, there has been a decrease in demand for work. Similarly, large extent of unmet demand is also seen. Therefore, it can be concluded that employment generation in Kerala exhibits a dismal performance as years pass.

Comparison of extent of employment generation in Kerala with India

In this section, employment generation under MGNREGS in Kerala is compared with that of the national scenario. Z test has worked out to find out the difference in proportion between Kerala and India and an attempt is

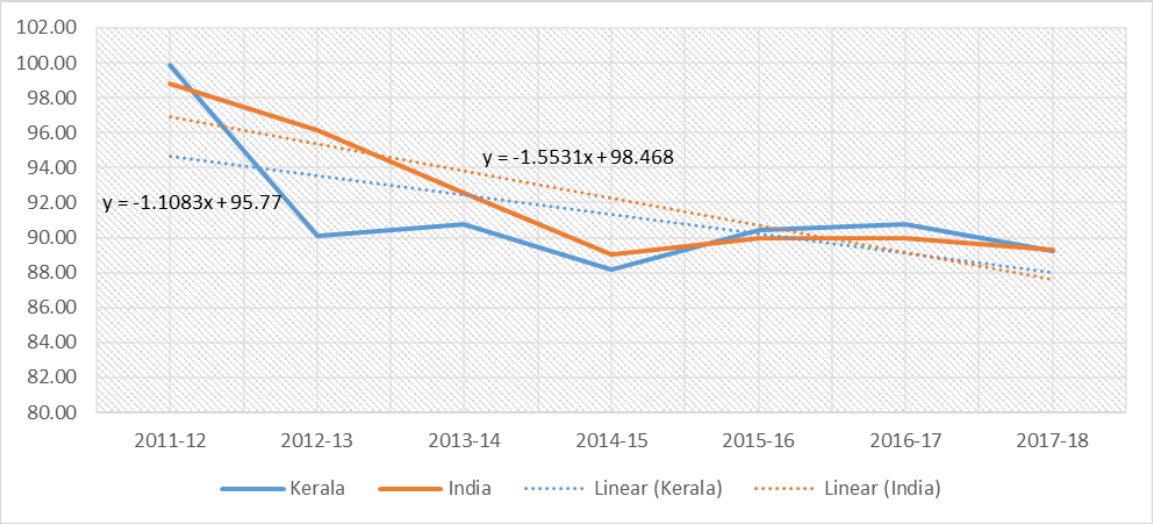
also made to trace out the most suitable growth equation which exhibits the pattern of employment generation. Table 2 presents the result of comparison between Kerala and India with respect to employment generation.

Table 2 Employment demanded and provided to households in India and Kerala during the period from 2011-12 to 2017-18

Years	Kerala			India			Difference in coverage		
							Diff	Z test for proportion	
	De-manded	Provided	Coverage	Demanded	Provided	Cover-age		Z	Sig.
2011-12	1418062	1416441	99.89	49145612	48558936	98.81	1.08	118.177	0.000
2012-13	1693873	1526283	90.11	51856078	49870181	96.17	-6.06	395.330	0.000
2013-14	1678824	1523863	90.77	51788929	47922486	92.53	-1.76	85.319	0.000
2014-15	1565148	1380236	88.19	46477593	41371489	89.01	-0.83	32.553	0.000
2015-16	1664786	1505672	90.44	53480644	48132946	90.00	0.44	18.719	0.000
2016-17	1606075	1457420	90.74	56931290	51222978	89.97	0.77	32.107	0.000
2017-18	1470071	1311681	89.23	57317711	51176772	89.29	-0.06	2.340	0.020
Mean	1585263	1445942	91.34	52428265	48322255	92.25	-0.92	42.438	0.000
CAGR	0.60	-1.27	-1.86	2.60	0.88	-1.67			
Slope	-1200.300	-16792.800	-1.109	1298515.571	384627.214	-1.553			

Source: MGNREGS Official Website

From the table, it can be seen that the number of employments demanded during 2011-12 in Kerala is 1418062 of which employment was provided to 1416441 households. The coverage of employment provided is estimated as 99.89 percent. During the same year, the total number of employments demanded in India was 49145612 of which employment was provided for 48558936 households. The coverage of employment provided is estimated at 98.81 percent. The difference between the coverage of Kerala and India is 1.08 percent. The Z test for proportion shows that there is significant difference in the coverage of employment of Kerala and India as the significance level of Z value is less than 0.05. From the result it is evident that the coverage of Kerala during 2011-12 was significantly higher than that of India. But the next year, the difference between the coverage of Kerala and India is -6.06 percentages which is also significant at 5 percent level as per Z test for proportion. The negative difference continued till 2015-16 in diminishing magnitude. The result indicates that the coverage of employment at national level is significantly higher than that of Kerala for the three consecutive years. The difference in the coverage of employment becomes positive during 2015-16 and it remained in this nature by increasing the magnitude. From the result, it can be inferred that the employment coverage of Kerala was significantly higher during 2015-16 and 2016-17. But thereafter the coverage increases in favour of national level. From the analysis, it is evident that the coverage of employment over demand under MGNREGS is not stable either at national level or in Kerala. The CAGR of coverage of employment of Kerala and India are -1.86 and -1.67 respectively indicating that the coverage has decreased at a uniform rate of 1.86 and 1.67 percentage in Kerala and India.



Source: MGNREGS Official Website

Figure 2 Employment coverage to households by MGNREGS in Kerala and India with linear trend line

The slope of coverage in Kerala and India was also found to be negative and was equal to -1.108 and -1.553 respectively. The result indicates that the average decrease in percentage is 1.108 and 1.553 respectively in Kerala and India.

The growth curve of Kerala and India are found to be fluctuating widely from their mean value and so the growth was tested for most suitable trend lines. The result of the test is presented in Table 3.

Table 3 R square of growth equations of employment demanded and provided to households by MGNREGS in Kerala and India during the period 2011-12 to 2017-18

	Kerala			India		
	Demanded	**Provided**	**Coverage**	**Demanded**	**Provided**	**Coverage**
Linear	0.001	0.200	0.381	0.512	0.061	0.768
Logarithmic	0.043	0.080	0.610	0.380	0.011	0.905
Inverse	0.185	0.010	0.816	0.256	0.000	0.881
Quadratic	0.592	0.484	0.699	0.633	0.419	0.952
Cubic	0.649	0.485	0.920	0.636	0.422	0.953
Compound	0.000	0.206	0.379	0.485	0.052	0.769
Power	0.051	0.084	0.608	0.360	0.008	0.903
S	0.200	0.012	0.812	0.244	0.000	0.875
Growth	0.000	0.206	0.379	0.485	0.052	0.769
Exponential	0.000	0.206	0.379	0.485	0.052	0.769
Logistic	0.000	0.206	0.379	0.485	0.052	0.769

Source: MGNREGS Official Website

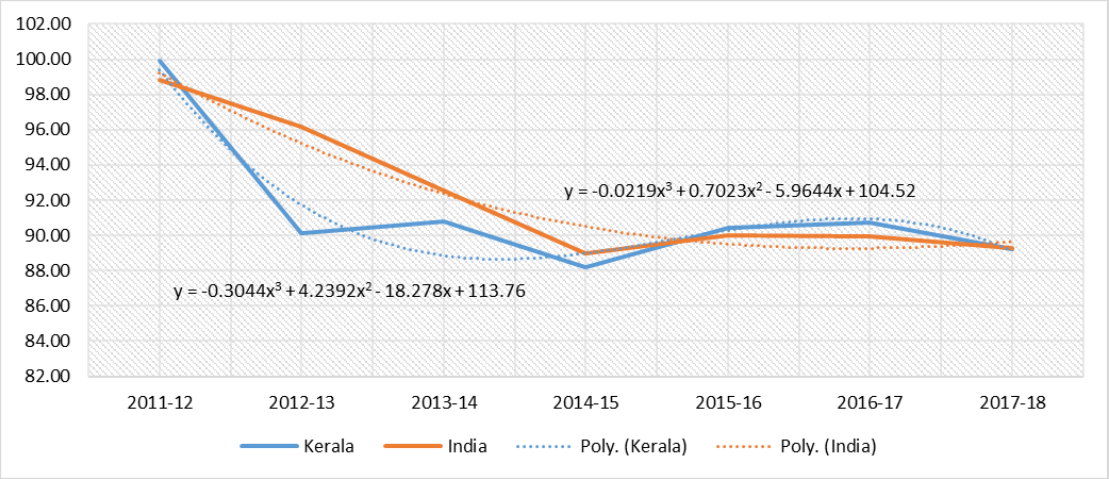
From the table, it can be seen that R square is the highest for cubic equation in both demand and provided for Kerala and India. The result reveals that the most suitable growth equation for employment demanded and provided are cubic curve.

Table 4 Parameter estimates of cubic growth curve of employment demanded and provided to households by MGNREGS in Kerala and India during 2011-12 to 2017-18

	Kerala			India		
	Demanded	Provided	Coverage	Demanded	Provided	Coverage
Content	1171824.857	1392399.429	113.764	50200106	52161494	104.524
b1	350274.683	55321.988	-18.278	-15199.6	-2702542	-5.964
b2	-73314.488	-5632.988	4.239	-104134	184500.9	0.702
b3	4273.472	-491.833	-0.304	39032.56	29293.86	-0.022

Source: MGNREGS Official Website

Figure 3 presents employment coverage to households by MGNREGS in Kerala and India with cubic trend line. From the figure, it can be seen that the cubic trend line of India is above that of Kerala during the first four years of study period and thereafter the trajectory of the trend line of Kerala traces above that of India.



Source: MGNREGS Official Website

Figure 3 Employment coverage to households by MGNREGS in Kerala and India with cubic trend line

The result shows that the employment coverage of India was higher during the period from 2011-12 to 2014-15, but after that the coverage of Kerala become higher. The coverage of employment in Kerala compared to and India was found to be the lowest during the period 2012-14 and was found to be the highest during 2016-17.

Comparison of extent of employment generation in Kerala with other States

The extent of employment generated in Kerala was compared with other States in India and the result of the analysis is presented in Table 5. From the table, it can be seen that the linear slope of growth of coverage of employment in all the States except Arunachal Pradesh, Mizoram and Manipur are found to be negative which indicates that in these States, the coverage of employment decreases as years advances.

Table 5 Coverage of employment for households during 2011-12 to 2017-18 in different States of India

Zone	States	Year							Linear Slope	Chi-Square	Sig.
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18			
Kerala		99.89	90.11	90.77	88.19	90.44	90.74	89.23	-1.109		
North	Haryana	99.74	97.34	89.82	82.89	84.52	84.61	84.73	-2.707	0.979	0.986

	Himachal Pradesh	95.52	94.23	94.25	90.69	90.70	92.84	92.85	-0.512	0.387	0.999
	Jammu And Kashmir	97.93	98.16	92.30	86.86	92.81	91.80	92.03	-1.068	0.467	0.998
	Punjab	99.74	97.13	90.72	84.72	89.61	87.82	86.58	-2.115	0.425	0.999
	Rajasthan	96.10	92.98	91.59	89.52	90.03	90.90	89.74	-0.886	0.134	1.000
	Uttar Pradesh	99.51	94.54	90.78	86.33	86.14	85.81	86.33	-2.201	0.417	0.999
	Uttarakhand	99.60	99.12	98.16	92.49	92.53	91.24	92.20	-1.557	0.895	0.989
West	Goa	99.94	99.84	99.78	99.66	98.88	99.51	98.24	-0.238	2.838	0.829
	Gujarat	98.22	90.85	90.02	86.15	86.68	80.14	84.67	-2.336	0.901	0.989
	Maharashtra	98.95	98.83	90.87	90.52	89.75	88.86	90.57	-1.650	0.470	0.998
South	Andhra Pradesh	99.01	95.36	94.10	89.34	91.02	99.23	93.09	-0.468	0.683	0.995
	Karnataka	99.32	90.58	75.96	72.27	74.33	84.50	88.52	-1.650	4.698	0.583
	Tamil Nadu	99.49	99.38	99.34	99.58	99.33	99.46	99.31	-0.014	2.887	0.823
	Telangana	93.50	90.73	87.85	84.37	86.59	92.64	84.69	-0.853	0.568	0.997
East	Bihar	98.01	95.81	86.58	70.19	77.32	77.04	77.47	-3.872	5.312	0.505
	Jharkhand	99.53	98.90	93.65	90.19	88.62	83.88	76.98	-3.669	1.668	0.948
	Odisha	99.07	90.53	90.49	86.73	89.65	86.33	89.83	-1.320	0.132	1.000
	West Bengal	99.72	99.53	95.20	89.54	94.01	92.62	92.24	-1.338	0.722	0.994
Centre	Chhattisgarh	99.48	96.55	91.40	85.58	83.23	83.86	84.80	-2.771	0.948	0.988
	Madhya Pradesh	99.59	99.37	92.16	89.99	89.35	83.09	86.63	-2.652	0.864	0.990
North-east	Arunachal Pradesh	90.91	83.44	89.26	93.42	93.96	97.86	87.51	0.833	1.195	0.977
	Assam	99.56	98.99	95.51	89.30	90.05	87.97	88.72	-2.144	0.590	0.997
	Manipur	93.61	99.79	100.06	99.28	98.50	99.23	97.96	0.370	2.936	0.817
	Meghalaya	99.82	99.66	98.90	98.25	98.28	98.15	97.84	-0.342	2.385	0.881
	Mizoram	96.04	99.54	100.00	99.92	99.97	99.94	99.98	0.450	3.254	0.776
	Nagaland	99.97	99.87	99.86	99.58	99.78	99.27	99.11	-0.138	2.986	0.811
	Sikkim	97.93	99.06	96.98	94.24	96.96	97.41	95.96	-0.330	1.557	0.956

	Tripura	99.94	99.85	99.07	98.18	98.29	98.44	96.61	-0.485	2.331	0.887

Source: MGNREGS Official Website

The highest negative growth of -3.872 is found in Bihar followed by Jharkhand with a growth of -3.669, which belongs to the East zone of India. The two Central Indian States namely Chhattisgarh and Madhya Pradesh come in the third and fifth positions respectively with regard to the negative growth in employment coverage. Haryana in the Northern zone and Gujarat in the Western zone are the other States which recorded high negative growth. On the other hand, highest employment coverage is found among the three Northeastern States such as Arunachal Pradesh, Mizoram and Manipur. The linear slopes of coverage of employment in these States are 0.833, 0.450 and 0.370 respectively. Tamil Nadu and Nagaland are the other States which recorded high employment coverage.

Perusal of the above table revealed that a comparatively better performance in terms of employment coverage is seen in the Northeastern States followed by Southern States. Bihar, Jharkhand, Chhattisgarh and Madhya Pradesh were at the bottom in this respect. Therefore, it can be inferred that Eastern and Central States of India are found to be lagging behind in terms of employment coverage. It is to be noted that employment coverage is one of the factors which indicate the performance of MGNREGS. One cannot generalize the performance of individual States solely on the basis of employment coverage. However, it is observed that States which have recorded highest negative growth in employment coverage are detected for the concentration of the majority of the poor in India. For instance, Bihar is one of the poorest and densely populated third largest States in India (Dutta, Murgai, Ravallion, & Walle, 2014). On the other hand, States which have recorded high employment coverage are relatively small in size and have favourable literacy rate, with the possible exception of Tamil Nadu. Thus, it may be said that MGNREGS is not much effective in those States where it is needed, since unmet demand is higher in these States. These findings of the present study are consistent with the study result of (Dutta P., Murgai, Ravallion, & Walle, 2012).

However, from the foregoing analysis of employment coverage, it is to be noted that Kerala's coverage of employment is not in tune with the aforementioned characteristics of specific States. Kerala attained only 15th position with respect to employment coverage. Similarly, other better off States such as Punjab, Haryana, Maharashtra, Himachal Pradesh etc. have shown dismal performance in this regard. It is worth mentioning that worker's demand also shows a decreasing trend in Kerala. The nature of unemployment in Kerala may prevent people from actively seeking employment through MGNREGS. Nonetheless, it may be inferred that apart from the efficiency of individual States, several other factors could reduce the coverage of employment under MGNREGS. Administrative rationing, political economy, delayed payments etc. are some of the factors which determine efficacy of employment generation possible through MGNREGS (Narayanan, Das, Liu, & Barrett, 2016). The above analysis revealed that the negative growth of employment coverage under MGNREGS in Kerala as well as in other States can neither be attributed to the additional employment opportunities made available through the scheme nor to effective targeting of the scheme. On the contrary, employment coverage in these States signalled huge unmet demand for work arising from the aforesaid factors and ended with workers' dissatisfaction (Himanshu, Mukhopadhyay, & Sharan, 2015). This will end up in creating a supply-driven nature of employment through MGNREGS.

Regional variation in the extent of employment generation in Kerala

The analysis done in the first section of this chapter indicates that there is marked negative growth with respect to employment demand as well as in employment provided in Kerala. The comparison of employment coverage with other States also revealed that the performance of Kerala is not much encouraging. Hence, it is pertinent to analyse the regional variation in the extent of employment coverage. An attempt is also made to assess individual Districts' picture in terms of employment coverage under MGNREGS in Kerala. Employment coverage of households through MGNREGS in different Districts of Kerala along with the linear slope of coverage and the result of the Chi-Square test worked out is presented in Table 6.

Table 6 Coverage of employment to households during 2011-12 to 2017-18 in different districts of Kerala

Region	Districts	Years							Linear Slope	Chi-square	Sig.
		2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18			
KERALA		99.89	90.11	90.77	88.19	90.44	90.74	89.23	-1.109		
North	Kannur	99.90	85.82	89.71	85.14	90.28	89.91	88.77	-0.880	0.1696	0.9999
	Kasaragod	99.97	87.94	88.67	84.75	88.11	87.52	87.44	-1.393	0.2262	0.9998
	Kozhikode	99.84	90.50	91.91	90.30	90.29	90.02	88.77	-1.278	0.0371	1.0000
	Malappuram	99.80	89.68	89.85	86.93	88.76	89.01	85.58	-1.610	0.1234	1.0000
	Wayanad	99.90	91.06	91.78	87.80	88.84	90.33	88.55	-1.373	0.0292	1.0000
Centre	Ernakulam	99.94	89.16	88.40	87.40	90.55	90.48	87.31	-1.182	0.0613	1.0000
	Idukki	99.97	94.81	94.26	92.13	94.31	93.65	91.68	-0.969	0.4316	0.9986
	Palakkad	99.96	94.23	93.22	89.24	91.31	91.98	90.94	-1.195	0.1598	0.9999
	Thrissur	99.74	86.14	84.79	81.44	85.37	89.01	88.44	-0.985	0.7282	0.9939
South	Alappuzha	99.88	94.97	95.40	93.52	96.18	96.34	95.26	-0.369	0.9404	0.9878
	Kollam	99.80	87.64	87.00	84.01	86.03	86.92	85.13	-1.658	0.5045	0.9978
	Kottayam	99.84	87.97	88.97	86.69	88.72	85.90	84.94	-1.753	0.3114	0.9994
	Pathanamthitta	99.96	85.75	89.25	90.34	92.72	92.97	91.10	-0.310	0.2217	0.9998
	Thiruvananthapuram	99.95	90.76	93.35	90.76	92.50	92.14	90.78	-0.914	0.1227	1.0000

Source: MGNREGS Official Website

From the table, it can be seen that the linear slope of growth of coverage of employment in all the 14 districts of Kerala is found to be negative. The result reveals that employment coverage through MGNREGS in Kerala diminishes over the years. The highest negative growth of -1.753 is found in Kottayam, followed by Kollam with a value of -1.658. Malappuram also exhibited a higher negative growth of -1.610. Comparatively, better coverage is recorded in Pathanamthitta, Alappuzha, Kannur and Thiruvananthapuram. The linear slope of coverage of employment corresponding to these districts are -0.310, -0.369, -0.880 and -0.914 respectively.

It is significant to note that, the Southern districts exhibit a diverse performance in terms of employment coverage. Both the best performing Districts and the least performing Districts belong to this region. Similar variation is also evident in the Northern region too. As far as the Central region is concerned, the coverage of employment between the Districts is more or less the same. From the analysis, it can be concluded that large inter-district and inter-region variation persists in Kerala with respect to the coverage of employment under MGNREGS.

Conclusion

The discussions in this study reveal that compared to the initial years of the study period, the coverage of employment in Kerala as well as in India shows a decreasing trend throughout the study period. Though a sudden decline is not evident, both the extent of employment demand by the wage seekers and the extent of employment provided by the implementing authorities fluctuates downward over the years. As opined by some scholars, the decline in the level of employment demand by the wage seekers cannot be fully attributed to the success of the MGNREGS. This is evident from the decline in employment provided by the authorities. The performance of Kerala in employment coverage under MGNREGS is not encouraging compared to other States in India. MGNREGS in Kerala has all the favourable factors to utilize the scheme to its full extent. Hence, a revisit into the official process of planning and execution of works and work allocation is to be made to cover all the employment seekers in a time bound manner.

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