PATTERN AND EXTENT OF DISPARITIES IN THE DEVELOPMENT OF RURAL SERVICES IN THE NON FARM SECTOR ACROSS MAJOR INDIAN STATES

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ABSTRACT

The regionalised nature of development processes is linked to the emergence of inequalities in development levels across the states as only a limited set of activities show the capability to spur economic growth, while the rest seems to stagnate or decline. This makes development no longer a linear but a multidimensional process by affecting structure, absorptive capacity and the capability to develop the services sector. This paper brings out the presence of an inter-state disparity in the pattern of development of the Rural Services in the non fram sector using the NSSO data from the 2009-10 round. It was found that the mean share of employment in the Rural Services is nearly 50% of total nonfarm employment with Assam having the largest share and Rajasthan and Jharkhand the lowest. Further, it was also observed that Rural Services sector was more progressed and symmetrically developed in the southern and coastal states.

*Keywords: Employment Potential, Interstate variations, NSSO, Nonfarm employment, Rural Services.*

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INTRODUCTION

India's economic growth and development to a large extent is predicated upon the development of its Services sector. It has side stepped the manufacturing sector and made a big leap straight from agriculture into services. Services sector is the largest contributor to the gross domestic product but its share in employment lags behind considerably. The primary sector still holds the maximum labour force. The constancy of workforce structure is a serious concern for economist and policy makers in India. This widening disparity calls for the restructuring of the economy in terms of the changes in the relative shares of the sectors in employment. In a land scarce economy, where the gap in agriculture and non-agriculture incomes is widening, coupled with the actuality that

there may not be enough work for the existing and the growing labour force in the farm sector, the non-farm sector may hold the key to generating more employment in the rural areas .The Rural services are an integral part of rural non-farm employment. The development of the Rural Services sector is synonymous with the occupational diversification of rural economy or nonfarm employment emphasized by economists time and again. So in the context of occupational diversification of Rural Non-farm employment the overall development of the Rural Services sector assumes even more significance. To study the level of development of any sector the foremost requirement is to ascertain the size of that sector. The measurement of development of the Rural Services sector can be done either by its contribution to the NSDP or the extent of workforce absorption in the sector. As the data for NSDP originating in the Rural Services alone is not available, its contribution to employment is considered a better indicator of the development of Rural Services sector. The significance of the Rural Services sector as a key contributor of Non-farm sector as can be exemplified by Diagram 1.1. The pie-diagrams show that out of 32% persons employed in non-farm activities 45.90% are employed in the Rural Services sector. This signifies that rural services form a major segment of the total non-farm employment. Thus, there is an urgent need to develop focused and specialized services in the rural areas as these will create a win-win situation for both industry and the rural economy.

DIAGRAM NO.1.1
PATTERN OF EMPLOYMENT IN THE NON-FARM SECTOR IN INDIA
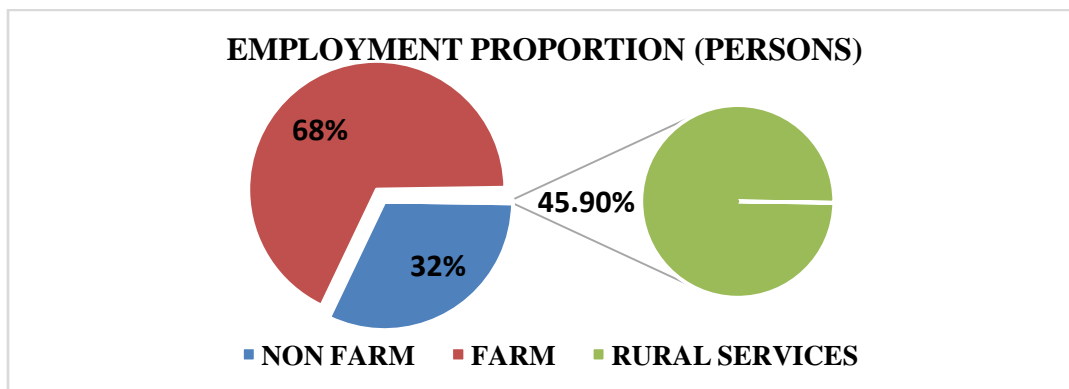
The dynamics of political, economic and social change in rural India are complex and have been gaining prominence. In this context, this study aims to understand these diverse forces and explore what can spur growth and development of rural services in non-farm sector at a disaggregated state level. The thrust of this study is to explore the development of the Rural Services sector across the 20 major states. The groundwork done on the international and national studies highlighting the development of the Rural Services sector in India, suggests that most of these are concerned with different aspects and different time periods of development of the non farm sector. A comprehensive and, systematic empirical analysis of the growth of Rural Services sector share in

employment is lacking and is needed. The role of augmenting the workforce participation in explaining the growth of Rural Services sector in India has also not been systematically explored and needs to be fittingly investigated. Thus, in the absence of a conducive study on the pattern of inter-state variations in the rural services, this research is an attempt to delineate the emerging model of the Rural Services sector in India, searching for areas of viable economic growth and development cooperation and identify some broad causal factors in an attempt to explain the changes observed.

DATA AND METHODOLOGY

This study is a cross sectional analysis for the 20 major Indian states. The heterogeneity in the size and development of the Rural Services sector could be studied either by its contribution to national income or employment as mentioned earlier; both being adequate indicators of the development of rural services sector. Data was not available for the Net State Domestic product (NSDP) originating from the Rural Services sector as a whole thus, in this study the latest employment data on rural services has been used to measure development of Rural Services sector in terms of its contribution to employment for 20 major Indian states from the NSSO 2009-2010 round along with CSO and Census 2011 data.

The Rural Services employment comprises the total number of persons employed in following subsectors as per the descriptions of the sections of NIC 2004: Wholesale and Retail trade, Hotels and Restaurants, Transport, Storage and Communications, Financial Intermediation, Real estate, renting and business activities, Public administration and defence, Education, Health and social work, and Other services. The relative size of the Rural Services sector within rural non-farm employment as a whole is defined as the proportion of persons and males employed in rural services out of total employment in rural non-farm sector as a whole. The data on rural males employed is more reliable given problems in the inter-state comparability of female participation in the workforce. Thus, the number of persons and males employed in the Rural Services sector as a proportion of total persons and males employed in the non-farm sector has been used as an endogenous variable to study the inter-state variations in the development of the Rural Services sector.

DISCUSSION OF RESULTS

PATTERN AND EXTEND OF INTERSTATE VARIATIONS IN THE RURAL SRVICES OF THE NON FARM SECTOR

Rural services account for more than 45% of the total non-farm sector making it a key contributor. The regionalised nature of development processes is linked to the emergence of inequalities in development levels

across the states. The differences in local, social, political and institutional settings determine different interactions between local economic agents, knowledge and innovation activities. This translates into different capacities to trigger economic development processes across space. In other words, physical proximity and co-location between economic agents is not a sufficient condition for augmentation of spillages to be effectively exploited and inclusive development to occur. A particular relevant role is played by the location, cultural and socio-institutional characteristics of regions, which basically drive the economic behaviour and attitudes of economic agents by providing the appropriate structural relational assets to the regional economy.

Thus, there is a good case to compare and analyse the pattern of development of Rural Services sector and its sub-sectors across the states of India. The Table 1.1 brings out the intestate variations in the development potential of Rural Services sector across 20 major states. The states are arranged in the ascending order of the size of the Rural Services sector as a proportion of total Nonfarm sector. This type of tabular comparison is quite helpful in drawing initial and provisional conclusions and as a stepping stone to a more rigorous analysis of the data.

TABLE NO.1.1
PATTERN OF DEVELOPMENT OF RURAL SERVICES SECTOR

States	Persons Employed In Rural Services Sector as a Proportion of Total Persons Employed in Non-Farm Sector
Rajasthan	30.05
Jharkhand	32.01
Madhya Pradesh	35.23
Uttar Pradesh	40.24
Tamil Nadu	40.22
Uttarakhand	43.09
Punjab	44.33
Orissa	44.44
Himachal Pradesh	44.77
West Bengal	47.03
Bihar	45.79
Andhra Pradesh	47.77
Haryana	48.51

Gujarat	51.38
Karnataka	54.32
Kerala	55.52
Chattisgarh	54.97
Jammu & Kashmir	54.50
Maharashtra	56.31
Assam	75.25
Mean	**47.29**
Coeff. of Variation	**21.31**

SOURCE: National Sample Survey Office's NSSO-2009-10 round

A careful perusal of the above table reveals some distinctive features of the level of development of Rural Services across the states. This table denotes the average size of rural services as a proportion of total non-farm sector across the important states of India where Rajasthan has the lowest employment in rural services at 30.05% followed by Jharkhand at 32.01%, Madhya Pradesh at 35.23% and Uttar Pradesh at 40.24%. Coinciding with the proportion of males employed, highest employment of persons in rural services is in Assam at 75.25%, preceded by Maharashtra at 56.31%, Jammu and Kashmir at 54.30% and Chhattisgarh at 54.97%. The mean employment share of rural services is 47.29% which indicates that out of total nonfarm employment 47% of males and females are working in the Rural Services sector when average across the states is considered, implying there by that about 53% of the employment is in nonfarm activities other than services sector. The table also reveals that out of the 20 major states 11 states have an employment ratio less than the mean share and 9 states have an employment ratio more than the mean share of rural services employment. The standard deviation recorded in the state wise proportion of employment in rural services is 10.08%. The extent of interstate variations in the size Rural Services sector is clearly captured by coefficient of variation. The coefficient of variation indicates high intestate variations in the development pattern of this sector across the states at 21.31%. The state with the lowest employment is Rajasthan at 30.05% is less than half of the state with highest employment that is Assam at 75.21% as discussed above, which signifies a gap of 45.2 percent points. In other words, the employment in rural services in Rajasthan being the lowest is 40% of Assam being the state with highest employment proportion out of total non-farm employment.

The pattern of inter-state variations in the development of Rural Services sector can be further clearly understood by studying the level of development across various regions. In the next section we aim to bring out

the regional pattern of Rural Services sector across the 20 major states and the casual factors behind the emergence of the prototype.

REGIONALISATION SCHEMES: AN ANALYSIS OF THE CASUAL FACTORS

The objective of the present section is to analytically describe the variations in the level, structure and pattern of development of Rural Services sector and to bring out the casual factors for the interstate variations in the extent and pattern of development of the sector. The relevance of regional, social, spatial and institutional characteristics is discussed by arguing that favourable conditions for employment growth and development are the result of a highly context specific combination of location, topography, size, social relations and extent of development which encourage and facilitate knowledge diffusion and are strongly relevant in shaping local development trajectories in a context of growth and development. Wide diversity is also noticed in the levels of urbanisation and industrialisation among the states. Similarly, the level and pace of agricultural development and degree of commercialisation and mechanisation of agriculture differs considerably among regions of the country. Finally, there are huge differences in the levels of per-capita income, its rate of growth and incidence of poverty among the states. Given these wide similarities across the Indian states, it is very unlikely that Rural Services sector has developed at a uniform pace and pattern throughout the country. The study assesses the pattern of disparities in development at the state level in India. In order to get a clear picture of regional disproportion in India, the level of development and regional disparities among states are assessed separately and the states are classified according to 3 regionalised schemes:

On the basis of location of the 20 major states of India:

    (a) Northern states versus Southern states
    (b) Coastal states versus Non-coastal states

On the basis of level of development of the 20 major states of India:

    (c) States with high per-capita income versus states with low per-capita income.

Whether the mean share is significantly different in two groups can be determined by two techniques:

(a)   Testing for difference in two means using t-test

It is a fundamental aspect of statistical inference and statistical analysis. In many decision making situations, it is important to determine whether the means or proportions of two populations are the same or

different. To do this, we take a random sample from each population and only if the difference in the sample means or proportions can be attributed to chance, we accept the hypothesis that the two populations have equal means or proportions. If the two populations are normally distributed and independent, then the sampling distribution of the difference between the sample means or proportions is also normal or approximately normal with standard error. To carry out the test, we calculate the statistic as follows

$$S = \sqrt{\frac{\sum\left(X_1 - \overline{X_1}\right)^2 + \sum\left(X_2 - \overline{X_2}\right)^2}{n_1 + n_2 - 2}}$$

$$t = \frac{\overline{X_1} - \overline{X_2}}{S} \times \sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

Where, $\overline{X_1}$ is the mean of first proportion,

$\overline{X_2}$ is the mean of second proportion,

n_1 is the number of observations in the first sample,

n_2 is the number of observations in the second sample and,

S is the combined standard deviation

(b)   Using the Dummy variable technique

An alternate to this technique is the use of Dummy variable. They are commonly used as proxies for qualitative factors such as region in our study. Our regression model described by the introduction of Dummy Variable with employment in the Rural Services sector as the dependent variable and regional disparity as an explanatory variable,

$$Y = \alpha + \beta D + u$$

Where, Y is the employment in rural services as a proportion of total non-farm employment,

D is the dummy variable introduced to represent the regional characteristic of the states

β gives the mean size of rural services in a particular region.

The dummy variable technique is superior out of the two as it gives not only the direction and as well as the quantity of the underlying differences in two groups plus it is much easier to use and comprehend.

The following Dummy Variables have been introduced as independent variables to isolate the pure influence of location and level of development of the state on the employment pattern observed in Rural Services sector.

1.   Northern states Dummy

It is a dummy variable taking value one for northern states and zero for the southern states. This dummy variable has been included to analyse the impact of northern location of a state on the employment share of rural services sector in labour force. The coefficient of this variable will indicate whether or not the share of rural services sector in labour force in northern states is significantly different from southern states.

2.   Coastal states Dummy

It is a dummy variable taking value one for coastal states and value zero for the hinterland landlocked states. The purpose of including this dummy variable is to find out if the coastal or non-coastal location disparity plays a significant role in ascertaining the employment pattern of rural services sector. The coefficient of this variable will indicate whether or not the share of Rural Services sector in labour force in northern states is significantly different from southern states.

3.   Less developed states Dummy

It is a dummy variable taking value one for low per capita income states and value zero for high per capita income states. The purpose of dividing the states into low per capita income and high per capita income is to assess whether the share of services sector in rural areas in labour force is significantly different in these high income states compared to other states. It is also used as a control variable to assess the impact of per capita income on the employment of labour force in the Rural Services sector.

To begin with the influence of the dummy variable on the development of the Rural Services sector is explored with Univariate dummy regression model. The regression exercise showed that dummy variable had no statistically significant impact on the inter-state variations in the development of rural services sector even at 10% level of significance, with a low R-square which is quite contrary to our expectation and commonly accepted view about the regional imbalance in the development of Rural Services sector as the mean share, standard deviation and coefficient of variation recorded reiterated the existence of an imbalance. The regression results were disappointing as the preliminary statistics exercise and naked eye view of the diagrams clearly pointed towards the significant impact of dummy variable on the level of development in the Rural Services sector. To further probe this theory semi log model of the following form was used.

$$LogY= \alpha + \beta\ D$$

Where, Log Y is the log of employment in rural services as a proportion of total non-farm employment. It gives the relative change in Y that is the proportion of employment of persons and male labour force in the Rural Services sector is taken as an indicator of the development of the sector and D is the dummy variable introduced to represent the regional characteristic of the state. The results of the semilog dummy variable regression model have been reported after the tabular representation of the inter-state variations in the level of development of the Rural Services sector for each regionalised scheme.

1.   **NORTHERN VERSUS SOUTHERN STATES**

The states are segregated into northern states and southern states according to their geographical location. This demarcation has been done to isolate the pure influence of location to test whether or not the share of Rural Services sector in labour force in northern states is significantly different from southern states. Information of the employment parameter is given in Table 1.3. The total employment is bifurcated into employment of persons (males and females) according to the guidelines of NSSO. A careful look at the proportion of persons employed in the Rural Services sector in northern states given in this table reveals some distinctive features of the level of development across the northern states.

TABLE NO.1.3
RURAL SERVICES SECTOR IN NORTHERN STATES

States	Employment in Rural Services Sector as a Proportion of Total Persons Employed in Non-Farm Sector	
	Persons	**Males**
Rajasthan	30.05	38.37
Jharkhand	32.01	33.13
Madhya Pradesh	35.23	39.50
Uttar Pradesh	40.24	39.23
Uttarakhand	43.09	41.58
Punjab	44.33	40.30
Himachal Pradesh	44.77	42.83
Bihar	45.79	52.71
West Bengal	47.03	52.09
Haryana	48.51	46.94
Gujarat	51.38	52.26
Chattisgarh	54.97	58.16
Jammu & Kashmir	54.50	55.84

Assam	75.25	75.15
Mean	**46.22**	**47.72**
Coeff. of Variation	**24.42**	**22.87**

SOURCE: National Sample Survey Office's NSSO -2009-10 round

It is observed that the share of employment in Rural Service sector as a proportion of total non-farm employment in the northern states is highest in Assam for both persons and males at 75.25% and 75.15% respectively but the general interstate employment pattern differs. Persons employed in the Rural Services sector as a proportion if total non-farm employment is the lowest in Rajasthan at 30.05% followed by Jharkhand at 32.01%, Madhya Pradesh at 35.23% and Uttar Pradesh at 43.09%. Assam ranks as the highest northern state in terms of employment as mentioned earlier followed by Jammu and Kashmir at 54.50%, Chattisgarh at 51.38% and Gujarat at 48.51%. It may also be noted that there was considerable inter-state variation in the level of employment in rural services across the northern states. The mean share of persons employed in rural services in northern states for the 14 northern states is about 46%. In 6 northern states the level of employment was higher than the mean share and in 8 northern states employment in rural services was lower than the mean share. The standard of deviation for persons has been recorded at 11.29%. The coefficient of variation in the employment of labour force in the Rural Services sector as a proportion of total non-farm employment for males and females is 24.42% and the gap between the largest employment share northern state (Assam 75.25) and smallest (Rajasthan 30.05) is of about 45 percent points indicating a considerable interstate variation in the employment pattern of males and females in the Rural Services sector.

As far as the employment pattern of males in rural services across the 14 northern states is concerned, it exhibits a quite similar prototype. It is observed that the share of employment in service sector as a proportion of total non-farm employment in the northern states is as far as males are concerned is highest in Assam at 75.15% and there is no distinction in the sequence of northern states when the general interstate employment pattern is studied. Males employed in Rural Service sector as a proportion if total non-farm employment is the lowest in Jharkhand at 33.13% followed by Rajasthan at 38.37%, Uttar Pradesh at 39.23% and Madhya Pradesh at 39.50%. Assam ranks as the highest northern state in terms of employment of males in rural services as mentioned earlier followed by Chattisgarh at 58.16%, Jammu and Kashmir at 55.84% and Gujarat at 52.26%. It may also be noted that a considerable variation in the level of employment in rural services across the northern states. The mean share of males employed in various sub-sectors in northern states for the 14 northern states is about 48%. In 7 northern states the level of employment of males was higher than the mean share and in 7 northern states employment in rural services was lower than the mean share. The coefficient of variation in the employment of labour force in the Rural Services sector as a proportion of total non-farm employment for males is 22.87% and

the gap between the largest employment share northern state (Assam 75.15) and smallest (Jharkhand 33.13) is of about 42 points indicating a considerable interstate variation in the employment pattern of males in the Rural Services sector.

Information on the level of employment in the Rural Services sector as a proportion of total non-farm employment in the 6 southern states is given in Table 1.4. It is observed that the share of employment in the sector as a proportion of total non-farm employment in the southern states is highest in Maharashtra for both persons and males at 56.31% and 56.36% respectively and there is no distinction in the sequence of southern states when the general interstate employment pattern is studied.

TABLE NO.1.4
RURAL SERVICES SECTOR IN SOUTHERN STATES

States	Employment in Rural Services Sector as a Proportion of Total Persons Employed in Non-Farm Sector	
	Persons	**Males**
Tamil Nadu	40.22	45.77
Orissa	44.44	48.32
Andhra Pradesh	47.77	52.43
Karnataka	54.32	55.47
Kerala	55.52	56.08
Maharashtra	56.31	56.36
Mean	**49.76**	**52.41**
Coeff. of Variation	**13.33**	**8.50**

SOURCE: National Sample Survey Office's (NSSO) 66th round (2009-10) report.

Persons employed in the Rural Services sector as a proportion if total non-farm employment is the lowest in Tamil Nadu at 40.22% followed by Orissa at 44.22%. Maharashtra ranks as the highest southern state in terms of employment as mentioned earlier followed by Kerala at 55.52. It may also be noted that a low variation in the level of employment in rural services across the southern states is evident from the data. The coefficient of variation has captured the essence of low interstate variation in employment pattern of rural services across the southern states. Coefficient of variation has been recorded at 13.33% and the gap between the states with the highest employment share (Maharashtra at 56.31%) and lowest (Tamil Nadu at 40.22%) is of only 16 points. The mean share of persons employed in various sub-sectors in southern states for the 6 northern states is about 50%. In 3 southern states the level of employment of males was higher than the mean share and in 3 southern states employment in rural services was lower than the mean share. The mean share of 50% in the employment of

persons across the southern signifies that about 50% of the total work force in southern states is attributed to the primary and secondary sector.

As far as the employment pattern of males in rural services across the 6 southern states is concerned, it exhibits a quite identical archetype. It is observed that the share of employment in the sector as a proportion of total non-farm employment in the southern states is as far as males are concerned is highest in Maharashtra at 56.36% and there is no evident distinction in the sequence of southern states when the general interstate employment pattern is studied. Males employed in the Rural Services sector as a proportion if total non-farm employment is the lowest in Tamil Nadu at 45.77% followed by Orissa at 48.32%. Maharashtra ranks as the highest southern state in terms of employment followed by Kerala at 56.36%. It may also be noted that a very low variation in the level of employment in rural services across the southern states. The coefficient of variation has been recorded at 8.50% which illustrates low interstate variation in employment pattern of rural services across the southern states. The gap between the states with the highest employment share (Maharashtra at 56.36%) and lowest (Tamil Nadu at 45.77%) is of only 11 points. The mean share of persons employed in various sub-sectors in southern states for the 6 northern states is about 52%. In 4 northern states the level of employment of males was higher than the mean share and in 2 southern states employment in rural services was lower than the mean share. The standard deviation has been recorded at 8.50% which indicates a low extent of dispersion.

The information presented above indicates that mean percent share of the Rural Services sector in employment in the southern states is momentously higher than the mean percent share of the sector in employment in the northern states. The mean share of employment in southern states was registered to be nearly 50% for persons and nearly 52% for males whereas, the mean share of employment in northern states was registered to be nearly 46% for persons and nearly 48% for males. The coefficient of variation across the segregated northern and southern states has captured the essence of higher disparity in the employment structure of rural services sector prevalent in northern states. Thus, it is clear that there is a substantial relevance of the regional, spatial and institutional characteristics for employment growth and development of rural services sector.

These results were further confirmed when we introduced the regional dummy taking value 0 for southern states and 1 for northern states. The results of the dummy variable regression model are given below in Table no. 1.5

TABLE NO 1.5
IMPACT OF LOCATION ON DEVELOPMENT OF RURAL SERVICES

Dependent Variable (Log Form)	Intercept for Southern States (α)	Differential Intercept (β)	Intercept For Northern States ($\alpha+\beta$)	R	R-Square	Adj R-square
Proportion of Persons Employed in Rural Services	3.882 (50.945)	-0.105 (-1.745)[c]	3.777	0.263	0.069	0.017
Proportion of Males Employed In Rural Services	3.951 (59.310)	-0.129 (-1.916)[c]	2.035	0.356	0.127	0.078

Note:

1. This univariate analysis is based on the equation: $\text{Log} y = \alpha + \beta D + u$

2. D is the Dummy variable and D = 1 for northern states and D=0 for southern states

3. Here c stands for 10% level of significance.

4. Number of observations is 20.

A careful perusal of the results in Table 1.5 reveals that there exists a negative and statistically significant relationship between the change in the proportion of workforce employed and the northern state dummy; which indicates that the geographical location of the state is an important factor explaining the inter-state variations in the percent share of development in rural services sector in labour force. The differential intercept coefficient which is negative and statistically significant at 10% level of significance suggests that the percent change in the employment share of the Rural Services sector in labour force in southern states is significantly higher than the percent change in the employment share of the sector in labour force in northern states.

It must be noted that the northern state dummy had no statistically significant impact on the employment in the Rural Services sector as a proportion of total non-farm employment but it has a statistically significant impact on the average change in employment of persons and males in the Rural Services sector as a proportion of total non-farm employment. This indicates that the impact of the regional dummy on the employment potential is being combated by some other factors in the short- run but finally the sturdy influence of regional diversity will surface

and significantly impact the development of rural services sector in the long-run. A trickle down linkage effect is predicted by the present statistical analysis.

2.   COASTAL VERSUS NON-COASTAL STATES

The next regionalised scheme that we used was to segregate into coastal states and landlocked non-coastal states according to their geographical location. This demarcation has been done to isolate the pure influence of location to test whether or not the share of the Rural Services sector in labour force in coastal states is significantly different from non-coastal states. The coefficient of this variable will indicate whether or not the share of the sector in labour is affected by the coastal location of the states.

TABLE 1.6
RURAL SERVICES IN COASTAL STATES

States	Employment in Rural Services Sector as a Proportion of Total Persons Employed in Non-Farm Sector	
	Persons	**Males**
Tamil Nadu	40.22	45.77
Orissa	44.44	48.32
West Bengal	47.03	52.09
Andhra Pradesh	47.77	52.43
Gujarat	51.38	52.26
Karnataka	54.32	55.47
Kerala	55.52	56.08
Maharashtra	56.31	56.36
Mean	**49.62**	**52.35**
Coeff. of Variation	**11.55**	**7.19**

SOURCE: National Sample Survey Office's (NSSO) 66th round (2009-10) report.

A careful perusal of the above table reveals some diverse features of the level of development of the Rural Services across the coastal states. The rural services are a substantial constituent of nonfarm employments across the coastal states. This table denotes the average size of rural services as a proportion of total non-farm employment across the important states of India where Tamil Nadu has the lowest employment at 40.22% followed by Orissa at 44.44%, and West Bengal at 47.03%. Coinciding with the proportion of males employed, highest employment of persons in the sector across coastal states is Maharashtra at 56.31%, preceded by Kerala at 55.52%, and Karnataka at 54.32%. The mean employment share of the sector across coastal states is 49.62% which indicates that out of total nonfarm employment 50% of persons are working in the Rural Services sector

when average across the states is considered, implying there by that about 50% of the employment is in nonfarm activities other than the Rural Services sector. The table also reveals that out of the 8 coastal states 4 states have an employment ratio higher than the mean share and 4 states have an employment ratio less than the mean share of rural services employment. The standard deviation recorded in the state wise proportion of employment in rural services is 5.73%. The coefficient of variation indicates low intestate variations in the employment potential of this sector across the states at 11.55%. The state with the lowest employment is Tamil Nadu at 40.22% is approximately 70% the state with highest employment that is Maharashtra at 56.31%. Let us now examine the outline of employment of males in the Rural Service sector across the non-coastal states and check if it bears the same pattern of inter-state variations in rural services employment.

As far as the employment pattern of males in rural services across the 8 coastal states is concerned, it exhibits a quite identical pattern. It is observed that the share of employment in the Rural Services sector as a proportion of total non-farm employment in the coastal states for males is highest in Maharashtra at 56.36% and there is no distinction in the sequence of coastal states when the interstate variations in the employment pattern in general is studied. Males employed in the sector are the lowest in Tamil Nadu at 45.77% followed by Orissa at 48.32%. Maharashtra ranks as the highest southern state in terms of employment as mentioned earlier followed by Kerala at 56.36%. It may also be noted that a very low variation in the level of employment in rural services across the coastal states. Coefficient of variation has been recorded at 7.19% and the gap between the states with the highest employment share (Maharashtra at 56.36%) and lowest (Tamil Nadu at 45.77%) is of only 11 points. The mean share of males employed in the sector in coastal states for the 8 coastal states is about 52%. In 5 coastal states the level of employment of males was higher than the mean share and in 3 coastal states employment in rural services was lower than the mean share. The mean share of 52% in the employment of persons across the coastal states signifies that about 48% of the total work force in coastal states is attributed to the primary and secondary sector. The standard deviation has been recorded at 3.77% which indicates a low extent of dispersion. Information on the level of employment in the Rural Services sector as a proportion of total non-farm employment in the 12 landlocked non-coastal states is given in Table no.1.7.

TABLE NO.1.7
RURAL SERVICES SECTOR IN NON-COASTAL STATES

States	Employment In Rural Services Sector as a Proportion of Total Persons Employed in Non-Farm Sector	
	Persons	Males
Rajasthan	30.05	38.37
Jharkhand	32.01	33.13
Madhya Pradesh	35.23	39.50
Uttar Pradesh	40.24	39.23
Uttarakhand	43.09	41.58
Punjab	44.33	40.30
Himachal Pradesh	44.77	42.83
Bihar	45.79	52.71
Haryana	48.51	46.94
Chattisgarh	54.97	58.16
Jammu & Kashmir	54.50	55.84
Assam	75.25	75.15
Mean	**45.73**	**46.98**
Coeff of Variation	**26.59**	**24.88**

SOURCE: National Sample Survey Office's (NSSO) 66th round (2009-10) report.

It is observed that the share of employment in the sector for the non-coastal states is highest in Assam for both persons and males at 75.25% and 75.15% respectively with nominal distinction in the sequence of southern states when the general interstate employment pattern is studied. Persons employed in the Rural Services sector as a proportion if total non-farm employment is the lowest in Rajasthan at 30.05% followed by Jharkhand at 32.01% and Madhya Pradesh at 35.23%. Assam ranks as the highest non-coastal state in terms of employment as mentioned earlier followed by Jammu and Kashmir at 54.50% and Chattisgarh at 54.97%. It may also be noted that a moderate variation in the level of employment in rural services across the non-coastal states is observed. The coefficient of variation has captured the essence of moderate interstate variation in employment pattern of rural services across the non-coastal states. Coefficient of variation has been recorded at 26.59% and the gap between the states with the highest employment share (Assam at 75.25%) and lowest (Rajasthan at 30.05) is of 45 points which points out a vast disparity. The mean share of persons employed in the non-coastal states is about 46%. In 5 landlocked non-coastal the level of employment of persons was higher than the mean share and in 7 non-coastal states employment in rural services was lower than the mean share. The mean share of 46% in the employment of persons across the non-coastal states signifies that about 54% of the total work force in southern states is attributed to the primary and secondary sector.

As far as the employment pattern of males in the Rural Services sector across the 12 landlocked non-coastal is concerned, it also exhibits a quite identical archetype. It is observed that the share of employment in the rural services as a proportion of total non-farm employment in the non-coastal states for males is highest in Assam at 75.15% as seen in the employment pattern of persons in non-coastal states. Males employed in the Rural Services sector as a proportion if total non-farm employment is the lowest in Jharkhand at 33.13% followed by Rajasthan at 38.13%. Assam ranks as the highest non-coastal state in terms of employment as mentioned earlier followed by Chattisgarh at 58.16% and Jammu and Kashmir at 55.84%.. It may also be noted that a considerable variation in the level of employment in rural services across the non-coastal states. The coefficient of variation illustrates sizeable interstate variation in employment pattern of rural services across the non-coastal states. Coefficient of variation has been recorded at 24.88% and the gap between the states with the highest employment share (Assam at 75.15%) and lowest (Jharkhand at 33.13%) is as high as 42 percent points. The mean share of males employed in the sector in non-coastal states for the 12 non-coastal is about 47%. In 4 non-coastal states the level of employment of males was higher than the mean share and in 8 non-coastal states employment in rural services was lower. The mean share of 47% in the employment of persons across the non-coastal states signifies that about 53% of the total work force in these states is attributed to other sectors. The standard deviation has been recorded at 11.69% which indicates the extent of dispersion.

An evaluation of the impact of spatial diversity and geographical location on employment in the Rural Services sector has been done in the above tables. The information presented above indicates that mean percent share of the Rural Services sector in employment in the coastal states is notably higher than the mean percent share of the sector in employment in the non-coastal states. The mean share of employment in coastal states was registered to be nearly 50% for persons and nearly 53% for males. Whereas, the mean share of employment in non-coastal states was registered to be nearly 46% for persons and nearly 47% for males. It signifies that labour force in non-coastal states is more inclined to participate in other non-farm or farm activities as compared to the coastal states where more than 50% of the labour force has been absorbed by the Rural Services sector. Thus, it is clear that there is a substantial relevance of the regional, spatial and geographical characteristics for employment growth and development of the Rural Services sector.

To check whether the results were significantly different for the coastal and non-coastal regionalised pattern we used the dummy variable technique as in the previous regionalised scheme by introducing regional dummy taking value 0 for non-coastal states and 1 for coastal states. The results of the regression model are given in Table no. 1.8.

TABLE NO. 1.8

IMPACT OF LOCATION ON DEVELOPMENT OF RURAL SERVICES

Dependent Variable (Log Form)	Intercept for Non-Coastal States (α)	Differential Intercept (β)	Intercept For Coastal States ($\alpha+\beta$)	R	R-Square	Adj R-square
Proportion of Persons Employed in Rural Services	3.762 (70.794)	0.115 (1.769)[c]	3.877	0.307	0.094	0.044
Proportion of Males Employed in Rural Services	3.803 (83.416)	0.144 (2.202)[b]	3.947	0.427	0.182	0.137

Note:

1. This univariate analysis is based on the equation: $\text{Log} y = \alpha + \beta D + u$

2. D is the Dummy variable and D = 1 for coastal states and D=0 for non-coastal states

3. Here b stands for 5 % level of significance.

4. Number of observations is 20.

A heedful scrutiny of the results in table no. 1.8 reveals that there exists a positive and statistically significant relationship between the change in the proportion of workforce employed and the coastal state dummy; which indicates that the geographical location of the state is an important factor explaining the inter-state variations in the percent share of development in the Rural Services sector in labour force. The differential intercept coefficient which is positive and statistically significant at 5% level of significance for males and at 10% for persons suggesting that the percent change in the employment share of the Rural Services sector in labour force in coastal states is significantly higher than the percent change in the employment share of the sector in labour force in non-coastal states.

It must be noted that the coastal state dummy had no statistically significant impact on the development of the Rural Services sector as a proportion of total non-farm employment but it has a statistically significant impact

on the average change in employment in the sector. This indicates that the impact of the regional dummy on the employment potential is being diluted by some other factors in the short- run but finally the strong influence of regional diversity will surface and significantly impact the development of rural services sector in the long-run.

3.   LOW PER CAPITA INCOME STATES VERSUS HIGH PER CAPITA INCOME STATES

The states are segregated into states with low per capita income and states with high per capita income according to their level of development. This demarcation has been done to separate the untainted influence of level of per capita income to test whether or not the share of the Rural Services sector in states with low per capita income in labour force is significantly different from the states with high per capita income. The per capita income used as an independent variable in this study is a 3-yearly average of per capita income (at constant 2004-05 prices) of 2007-08, 2008-09 and 2009-10. The year average is taken to eliminate the short run fluctuations in it. The data has been derived from RBI's database of Indian economy. This variable is the main indicator of the level of development of a state and is expected to have a positive influence on the development of services sector. The coefficient of this variable will indicate whether or not the share of rural services sector in labour is affected by the level of development of the states.

TABLE NO. 1.9
RURAL SERVICES SECTOR IN LESS DEVELOPED STATES

States	Employment in Rural Services Sector as a Proportion of Total Persons Employed In Non-Farm Sector	
	Persons	**Males**
Rajasthan	30.05	38.37
Jharkhand	32.01	33.13
Madhya Pradesh	35.23	39.50
Uttar Pradesh	40.24	39.23
Orissa	44.44	48.32
West Bengal	47.03	52.09
Bihar	45.79	52.71
Chattisgarh	54.97	58.16
Jammu & Kashmir	54.50	55.84
Assam	75.25	75.15
Mean	**45.95**	**49.25**
Coeff of Variation	**29.12**	**25.21**

SOURCE: National Sample Survey Office's (NSSO) 66th round (2009-10) report.

Information of the employment parameter is given in Table 1.9. A careful look at the proportion of persons employed in the Rural Services sector in states with low per capita income given in this table reveals some distinctive characteristics predicated by the level of development across these states. It is observed that the share of employment in the Rural Services sector as a proportion of total non-farm employment in these states is highest in Assam for both persons and males at 75.25% and 75.15% respectively. Persons employed in the sector are the lowest in Rajasthan at 30.05% followed by Jharkhand at 32.01% and Madhya Pradesh at 35.23%. Assam ranks as the highest state in terms of employment as mentioned earlier followed by Jammu and Kashmir at 54.50% and Chattisgarh at 54.97%. It may also be noted that there was considerable variation in the level of employment in the Rural Services sector across the states with low per capita income. The mean share of persons employed in the sector in these 10 states is about 46%. In 4 states with low per capita income the level of employment was higher than the mean share and in 6 states employment was lower than the mean share. The mean share signifies that about 54% of the rural labour force is engaged in activities other that the rural services. The standard of deviation for persons has been recorded at 13.38%. The coefficient of variation in the employment of labour force in the Rural Services sector as a proportion of total non-farm employment is 29.21% and the gap between the largest employment share northern state (Assam 75.25) and smallest (Rajasthan 30.05) is of about 45 points indicating a considerable interstate variation in the employment pattern of the Rural Services sector.

As far as the employment pattern of males in the Rural Services sector across the 10 states with low per capita income is concerned, it exhibits a quite similar outline. It is observed that the share of employment in rural services as a proportion of total non-farm employment in the states with low per capita income for males is highest in Assam at 75.15% and the lowest in Jharkhand at 33.13% followed by Rajasthan at 38.37%, Uttar Pradesh at 39.23% and Madhya Pradesh at 39.50%. Assam ranks as the highest state in terms of employment of males in rural services as mentioned earlier followed by Chattisgarh at 58.16% and Jammu and Kashmir at 55.84%. It may also be noted that a considerable variation in the level of employment in the Rural Services across the states with low per capita income. The mean share of males employed in the sector in these 10 states is about 49%. In 5 states with low per capita income the level of employment of males was higher than the mean share and in 5 states with low per capita income employment was lower than the mean share. The mean share signifies that about 51% of the rural labour force is engaged in activities other that the rural services. The standard of deviation for persons has been recorded at 12.42%. The coefficient of variation in the employment of labour force in the sector as a proportion of total non-farm employment for males is 25.12% and the gap between the largest

employment share northern state (Assam 75.15) and smallest (Jharkhand 33.13) is of about 42 percent points indicating a considerable interstate variation in the employment pattern of males in rural services sector.

Information on the level of employment in the Rural Services sector as a proportion of total non-farm employment for persons in the 10 economically developed states characterised by high per capita income is given in Table no.1.10. It is observed that the share of employment in rural services as a proportion of total non-farm employment in the high per capita income states is highest in Maharashtra for both persons and males at 56.31% and 56.36% respectively and there is not much distinction in the sequence of inter-state variations in high per capita income states. Persons employed in the sector are the lowest in Tamil Nadu at 40.22% followed by Uttarakhand at 43.09%. Maharashtra ranks as the highest state in terms of employment as mentioned earlier followed by Kerala at 55.52. It may also be noted that a low variation in the level of employment in rural services across the high per capita income states is evident from the data. The coefficient of variation has captured the essence of low interstate variation in employment pattern of rural services across the more developed states. Coefficient of variation has been recorded at 11.51% and the gap between the states with the highest employment share (Maharashtra at 56.31%) and lowest (Tamil Nadu at 40.22%) is of only 16 points. The mean share of persons employed in various sub-sectors in these states is about 49%. In 4 high per capita income states the level of employment of males was higher than the mean share and in 3 high per capita income states employment in rural services was lower than the mean share. The mean share of 49% in the employment of persons across the high per capita income states signifies that about 51% of the total work force in these states is attributed to other sectors.

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TABLE NO. 1.10
RURAL SERVICES SECTOR IN MORE DEVELOPED STATES

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State	Employment in Rural Services Sector as a Proportion of Total Persons Employed in Non-Farm Sector	
	Persons	**Males**
Tamil Nadu	40.22	45.77
Uttarakhand	43.09	41.58
Punjab	44.33	40.30
Himachal Pradesh	44.77	42.83
Andhra Pradesh	47.77	52.43
Haryana	48.51	46.94
Gujarat	51.38	52.26
Karnataka	54.32	55.47
Kerala	55.52	56.08
Maharashtra	56.31	56.36

Mean	48.62	49.00
Coeff of Variation	11.51	12.76

SOURCE: National Sample Survey Office's (NSSO) 66th round (2009-10) report.

The standard of deviation is registered at a rate of 5.60% which illustrates a low degree of dispersion in the data.

As far as the employment pattern of males in the Rural Services sector across the 10 high per capita income states is concerned, it is observed that the share of employment in the sector as a proportion of total non-farm employment in the high per capita income states is as far as males are concerned is highest in Maharashtra at 56.36% and the states follow the same sequence of interstate variations in the employment pattern. Males employed in the sector are the lowest in Punjab at 40.30% followed by Uttarakhand at 41.58%. Maharashtra ranks as the highest state in terms of employment as mentioned earlier followed by Kerala at 56.36%. It may also be noted that a very low variation in the level of employment in rural services across the economically developed states. Coefficient of variation is low and has been recorded at 12.76% as the gap between the states with the highest employment share (Maharashtra at 56.36%) and lowest (Punjab at 40.30) is of only 16 points. The mean share of persons employed in the sector in high per capita income states is about 59%. In 4 high per capita income states the level of employment of males was higher than the mean share and in 6 of these states employment in rural services was lower than the mean share. The standard deviation has been recorded at 12.76% which indicates a low extent of dispersion.

The information presented above indicates that mean percent share of the Rural Services sector in employment in the less economically developed states is momentously higher than the mean percent share of rural services sector in employment in the more developed states. The mean share of employment in high per capita income states was registered to be nearly 46% for persons and nearly 50% for males. Whereas, the mean share of employment in low per capita income states was registered to be nearly 48% for persons and nearly 49% for males. It signifies that labour force in high per capita income states is more inclined to participate in other non-farm or farm activities as compared to the less economically developed states where more than 46% of the labour force has been absorbed by the rural services sector. The coefficient of variation across the segregated level of development has captured the essence of low disparity in the employment structure of rural services sector prevalent in high per capita income states. Thus, it is clear that there is a weak relevance of the distinguished regional development levels characteristics for employment growth and development of rural services sector.

Clearly the conclusions that can be drawn are that there are very low inter-state variations in the less developed and highly developed states. Further, we plan to study the magnitude of the level of development and explore the pattern of inter-state variations in the share of rural services sector in the labour force participation as a proportion of total non-farm employment. Then we tested for the significant differences in two mean shares of the two groups to ascertain the impact of level of development on the development of rural services sector by using a regional dummy taking value 0 for high income states and 1 for low income states. The results of the regression model are given in Table no. 1.11

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TABLE NO. 1.11

IMPACT OF LEVEL OF DEVELOPMENT ON DEVELOPMENT OF RURAL SERVICES

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Dependent Variable (Log Form)	Intercept for States with High Per-Capita (α)	Differential Intercept (β)	Intercept for States With Low Per-Capita ($\alpha+\beta$)	R	R-Square	Adj R-square
Proportion of Persons Employed in Rural Services	48.622 (14.993)	-2.671 (-0.582)	45.951	0.275	0.075	0.024
Proportion of Males Employed in Rural Services	49.002 (15.760)	0.248 (0.056)	49.25	0.112	0.012	-0.042

Note:

1. This univariate analysis is based on the equation: $Log y = \alpha + \beta D + u$

2. D is the Dummy variable and D = 1 for low income states and D=0 for high income states

3. Number of observations is 20.

A careful perusal of the results in table no. 1.11 reveals that there exists no statistically significant relationship between the change in the proportion of workforce employed and the regional development dummy; which indicates that the level of economic development of the state is not an important factor explaining the inter-state variations in the percent share of employment in rural services sector in labour force. The differential intercept coefficient which is not statistically significant even at 10% level of significance suggests that the percent change in the employment share of the Rural Services sector in labour force in more efficiently developed

states is nearly similar to the percent change in the employment share of rural services sector in labour force in less efficiently developed states.

It must be noted that the level of economic development dummy had no statistically significant impact on the development of the Rural Services sector as a proportion of total non-farm employment also. This indicates that the impact of the regional development dummy on the employment potential is being nullified by some other factors in the short- run and the long-run which is quite disappointing given the general paradigm.

CONCLUSIONS AND POLICY IMPLICATIONS

This paper was an attempt to delineate the emerging model of the Rural Services sector in India and searching for areas of economic growth and development cooperation. The main findings of this paper are:

1.   A careful inspection of the data revealed some distinctive features of the level of development of Rural Services sector across the states. The mean size of the sector across the 20 major states is around 48% which indicates that out of the total non-farm sector nearly 48% of the workforce is absorbed in the Rural Services sector and 52% is being absorbed by the other non-farm activities.

2.   Out of the 20 major states analyzed, the mean share of development of the Rural Services sector as a proportion of non-farm sector is more than 50% in 7 states, making Rural Services sector the highest contributor in the rural non-farm sector.

3.   The extent of inter-state variations in the size of rural services is clearly captured by the coefficient of variations estimated in the analysis indicating high inter-state variations in the level of development of the Rural Services sector.

4.   The Rural Services sector is highly developed in the state of Assam where more than 75% of the total labour force available for non-farm sector is engaged in the Rural Services sector. However, the rural services sector is least developed in the states of Jharkhand and Rajasthan giving them a window to perform better.

5.   The inter-state variations in the share of the Rural Services sector in the labour force are quite startling. The degree of disproportionality between the labour force participation shares points towards the existence of a regional pattern in the development of rural services which was probed further.

6.   The location of a state is a major factor impacting the development of rural services in the non farm sector . The results show that India's Southern region is far more progressed and symmetrically developed in terms of rural services in comparison to Northern region.Further there are wide disparities in the level of

development exist among Coastal and non-coastal regions also. The mean percent share of the Rural Services sector in states situated on the coast is momentously higher than the mean percent share of landlocked non-coastal states.

7. The level of development of a state exhibited an insignificant association with the overall development of Rural Services sector .The level of development of this sector in low income states was not found to be different from the high income states as indicated by the insignificant differential intercept in the third regionalisation scheme.

The analysis suggests that states with a less developed Rural Services sector require improvement in majority of indicators for enhancing their level of overall economic development. By and large, the heterogeneity in the level and share of Rural Services sector across the states is strongly linked with its location and level of economic development. These findings have hint at some important implications for the diversification of rural non farm sector.Thus, expansion of the Rural Services sector provides many opportunities for Rural India to find niches where they can be successful. The findings of this chapter revisit the known **'Christaller's Central Place Theory'** which attempts to explain the spatial and functional distribution of services in a regional and their linkages. The theory recognizes the importance of demand for services as the driving force behind the emergence of the service centres. In this respect, some evidence has been provided in this chapter about the emergence of spatial inequalities connected to the localised nature of development processes and innovative activities. In this framework, decentralisation represents the capacity of heterogeneous regions and territories to tailor specific development strategies in order to address their particular needs and influence their own destinies.There is a need to acknowledge the regional forces and characteristics as important factors shaping the overall progress of individual states. The extent and pattern of interstate variations in the development of services sector represents the capacity of heterogeneous regions and territories to tailor specific development strategies in order to address their particular needs and influence their own destinies.

REFERENCES

1. Abraham, Vinoj (2009). Employment Growth in Rural India: Distress Driven. EPW, April.

2. Anderson, Dennis and Leiserson, Mark W (1980). Rural Nonfarm Employment in Developing Countries. Economic Development and Cultural Change. January.

3. Basant, R and R Parthasarthy (1991). "Inter-Regional Variations in Rural Non-Agricultural Employment in Gujarat, 1961-81", Working Paper No 36, The Gujarat Institute of Development Research, Ahmedabad.

4. Basu, D.N. and Kashyap, S.P. (1882). Rural Non-agricultural Employment in India: Role of Development Process and Rural-Urban Employment Linkages. EPW, December.

5. Bhalla, A.S., "Role of Services in employment expansion". International Labour Review, May 1970.

6. Bhattacharya, B.B. and Mitra, Arup, "Changing composition of employment in Tertiary sector: A cross country analysis". Economic and Political Weekly, March 15, 1997

7. D'Souza, Errol, "What explains Services sector growth", The Indian Journal of Labour Economics, 2000.

8. Dutt, A. K. and Lee, K. (1993). "The Service Sector and Economic Growth: Some Cross-Section Evidence", International Review of Applied Economics, 7(3):311-29.

9. Eapen, Mridul. Rural Non-agricultural Employment in Kerala: Some Emerging Trends.. Economic and Political Weekly, May 1994

10. Fisher, A.G.B., "Production, Primary, Secondary and Tertiary", The Economic Record, 19

11. Kaldor, N (1966). Causes of the Slow Rate of Economic Growth of the United Kingdom, Cambridge University Press.

12. Kuznets, S (1959). Six Lectures on Economic Growth. New York: The Free Press of Glencoe.

13. SankarnarayananV, (1980). 'Inter-State Variations in Rural Non-Agricultural Employment: Some Tentative Results', Working Paper No 104, Centre for Development Studies, Trivandrum.

14. Shukla, Vibhooti (1992). Rural Non-farm Employment in India: Issues and Policy. Economic and Political Weekly, July 1992.

15. Wanmali. Sudhir and Islam, Yassir (1995). Rural Services, Rural Infrastructure and Regional Development in India. Royal Geographical Society. July.