

## A STUDY ON INFRASTRUCTURE DEVELOPMENT IN RELATION TO LIVELIHOODS OF RURAL PEOPLE IN KALRAYAN HILLS, VILLUPURAM DISTRICT, TAMILNADU

Article Particulars: Received: 12.01.2018 Accepted: 15.01.2018 Published: 20.01.2018

**P.RAMESH BABU**

Ph.D. Scholar, Centre for Rural Development  
Annamalai University, Tamil Nadu, India



**Dr.P.MURUGESAN**

Assistant Professor, Centre for Rural Development  
Annamalai University, Tamil Nadu, India



### Abstract

Infrastructure is one of the main pillars of rural development. Prosperity, progress, employment, standard of living, sustainable livelihoods, often occurs in an environment where there is presence of good quality, accessible, plenty, and long lasting infrastructure. In addition to this infrastructure reduces the inequality in the society. There are clear evidences that rural infrastructure viz. transportation, electricity, water and sanitation, telecommunications, power supply, irrigation, markets etc. strongly contribute in the process of rapid transformation of traditional society and nation. In the world, the developed nations are the most suitable, exact examples of the image and scale of development that they had have invested large capital and huge manpower in the development of infrastructure. That is why, the large portion of population of developed nations are enjoying the fruit of development. The least developing countries in contrast, not been able to invest, manage and initiate the infrastructural development through large interventions in the policy, programme and implementation that could guarantee a happy, prosper and satisfied life of rural people. Rural areas are the isolated areas with less economic, social and physical development, so the poverty is concentrated in rural areas. The main source of income in rural areas is agriculture; many rural residents rely on agricultural and allied activities for their survival, but the agriculture sector is not sufficient to meet even the dietary needs of rural people. There are such factors, that collectively compelling the rural pro poor and landless to the vicious cycle of poverty. These factors are having combine huge negative effect in the living of rural downtrodden people. Lack of infrastructure is the main obstacle for the economic development of the rural area; mass poverty leads to poor health, backwardness, illiteracy, ignorance, and isolation; these social conditions working further as a cycle to encircle the pro poor marginalized people in the strong bound of poverty line. This never ending cycle of poverty continue until we start the comprehensive huge and continuous intervention in terms of infrastructure development that could only break the line wall of poverty and bring the people in the main stream of prosperity, progress, happy, development and welfare. Infrastructure plays a decisive role in reducing the rate of poverty. Therefore it is main duty, responsibility, humanity to start welfare based urgent and utmost developmental activities focuses on rural infrastructural development, so that rural livelihoods can be promoted and protected, as a result of developmental programmes rural areas also play a vital role for the development of whole nation and world. Infrastructure also contributes to inclusive rural development. Rural development also increases opportunities of employment and off-farm activities; simultaneously, increases the purchasing power, market accessibility, access to services and facilities, consumption pattern, and saving power of the people, leading to reduction of poverty.

Keywords: Rural Development, standards of living, Agricultural activities, economic activities, production of foodstuffs, Soft infrastructure

---

Rural Development is generally used to denote the actions and initiations taken to improve the standards of living in non-urban neighbourhoods, countryside, and remote villages. These communities can be exemplified with a low ratio of inhabitants to open space. Agricultural activities may be prominent in this case where as economic activities would relate to the primary sector, production of foodstuffs and raw materials. Rural development is the development of rural economy and rural social setting by enhancing rural infrastructural development. Infrastructures are of two types one soft Infrastructure and the other is hard infrastructure. Soft infrastructure includes education, health facilities, communication, housing, marketing etc. and hard

infrastructure includes transportation, electrification, buildings, canals, bridges, etc. Most of the people of the world are still living in the rural areas but in developing nations the condition of people living in rural areas is worse because of less infrastructural development, poverty, illiteracy, lack of economic activities and less priority to the agriculture sector. It is the main common feature of most developing nation that the quality of life of people in rural areas is low, people are marginalized, deprived by basic necessities and the economic investment in such areas is very low and negligible. The rural sectors are the virgin areas where sustainable development is necessary and immensely should be done in right time for green world and prosperity of every human of this earth. It is also the basic human right of the every man and woman of the world for sound health, sound mind, prosper living and equal harmony and dignity, therefore it is utmost urgency to work for green world and equal prosperity of every person in every nation by ensuring rural development through the participation of local people.

### **Review of Literature and Research Design**

This chapter gives an account of literature available on infrastructure development and its impact on making better livelihoods. Since the area of research is vast, plenty of literature available, and the researcher has delimited to the review to the core literature to identify the knowledge gap in the area of research. This Chapter highlights the various views, application, concepts, trends, and empirical results of various authors regarding rural infrastructure and rural livelihood. The chapter has divided into two Parts. The first parts deals with various concepts and studies related to infrastructure development and rural livelihoods and the lineal part explains the research design of the study which includes the objectives, hypotheses, concepts, and operational definitions, methodology, tools of data collection, data processing and analysis, sampling design, statistical tools and delimitations.

**An issue paper on infrastructure Development and Rural Transformation in Economic Commission for Africa (2013)** concludes that infrastructure is one of the pillars of economic transformation. The book describes that sustainable economic growth often occurs in an environment where there is a meaningful infrastructure, and there is evidence that it reduces inequality in society. This book also points out that development of rural infrastructure (energy, transport, water, ICT, storage facilities, among others) generally contribute significantly to the level and quantity of rural development. The report explains that countries that have developed their rural infrastructure have recorded higher and better quality of rural development than that has failed to do so. The book insists better rural infrastructure allows people to participate in and share the benefits of wider economic growth. It concludes that infrastructure contributes to inclusive rural development in many ways and the overall impact of high quality rural infrastructure on the quality of life of rural population can be substantial.

**Ellis (2000)** concludes that increased awareness of livelihoods and diversity can lead to the better formulated rural poverty reduction policies than those based conventionally on sectors and sub sectors.

**Verma (2010)** gives his point that about more than 70 percent of population in rural areas depend upon land for their livelihood; people in rural areas prefer to invest their surplus earnings in purchasing land.

**Fan and Zhang (2004)** describe that infrastructure affects rural development through many channels such as improved agriculture productivity, increased rural nonfarm employment and rural migration into urban sectors.

**Malik (2010)** highlights the specific and distinctive nature of rural areas as the incidence of unemployment and poverty as well as the potential for development of agriculture and allied activities varied widely from region to region; and therefore necessary to make the programmes area specific and utilise all local endowments for growth with social justice. He describes the 'interdependence of rural and industrial sector as these two are not separate economies having merely buyer-seller relationships. Rather, they are so intertwined and inseparably bound together that one must think of them jointly if there is to be any sound thinking about either one or the other.

**George (2010)** explains that improvements in living standards of rural people that we act only in one field, say education which will automatically create enthusiasm and faith to act in all other fields, providing a cascading effect to all side emancipation of rural people.

**Lam (1999)** advocates that basing irrigation governance and management institutions upon the common understandings in a local community offers the best changes of long term success in Nepal and is key sustainability of rural infrastructure in other developing countries.

**Li and Liu (2009)** describe that rural infrastructure not only provides essential agricultural production conditions such as roads, telecommunications, powers and irrigation systems, but also provides education and medical services related to enhancing the quality of life of rural labors.

**Bulus and Adefila (2014)** explain that the importance of rural infrastructure has been a crucial to promoting economic growth and development. He also suggested that the development of rural infrastructure must be seen as an integral part of the entire economic growth and development.

### **Statement of the Problem**

The one third of the population in this green planet is living in rural area, the areas with poverty, scarcity, ignorance, and marginalized and economically backward. The World's developed nation's rural parts are not characterized by these above problems however remaining developing world is really in state of imbalance injustice and improper management in the respect of rural development and welfare of rural human beings. Apart from these the rural areas are the main sources and centers of agricultural productivity. If we saw a reality the industrial world is being provided lifesaving fuel i.e. food and vegetables by these ignored rural sectors; therefore keeping in mind that the areas are very crucial and important in the sustainable economic development, green and healthy environment and prosperous future every nation, international agencies and whole world must take urgent initiatives and start rural development oriented policies and programmes as far as possible. This study entitled "The infrastructural Development and Livelihoods of Rural People in Kalrayan Hills", somewhat try to find out the situation of rural infrastructure, the status of living conditions of rural people in the study area and the existence of relationship and impact between infrastructure development and rural livelihoods. Kalrayan Hills is one of the underdeveloped nations in the world; it is the least developed country of South Asian region, approximately one third of population living under absolute poverty. Because of its landlocked nature and formation of territory the economy is mainly agriculture based besides this the tourism is the alternative and potential sector for economical growth and livelihood.

### **Objectives of the Study**

- To portray the socio economic and demographic profile of the sample rural study region.
- To evaluate the relationship between basic rural infrastructure and livelihoods of rural areas.
- To suggest suitable policy directions for the successful functioning and development of livelihood in rural areas.

### **Hypotheses**

- There is no association between the Level of education and better standard of living in rural areas.
- Infrastructural development and better standard of living in the study area and Average income of the households do not differ significantly for households of the different villages.

### **Methodology**

This present study is based on both primary and secondary data. The success of a research depends mostly on the methodology on which it is carried out. The appropriate methodology will improve validity and accuracy of the research study, by which a scientific generalization can be made to the whole population based on studied sample. The research is based on both quantitative data and qualitative; the quantitative data are collected by adopting non-probability sampling technique with the help of self-administered interview schedule that contains of

questions related to different areas and background. The interview schedule which contained different segment of socio-economic and physical aspects related questions, distributed to the sample units i.e. selected individuals of population in study area. The filled up interview schedules are collected and proceed ahead for coding, editing, and entries of data into SPSS software package. In analysing, statistical description, tabulation, simple percentage average and testing hypothesis were made by using this SPSS software computer programme.

**Sources of Data**

Primary data is the main source of information in this study. The present study based mainly on primary data which is collected with the help of structured interview schedules in the Kalrayan Hills Block, there are 3979 households in this area. The total numbers of Households in the study area is the universe of this study and out of that 120 HHS were selected using Area and Simple Random Sampling technique procedure is the sample of this study. From each 120 HHs an individual aged between (20-60) years is requested to tap or fill up the interview schedule therefore each House hold (HH) is the sampling unit of the study. The information obtained from this study sample is the primary source of information. Based on this primary source of data all the tables were formulated and analysis is being made and conclusions, findings and summary are drawn.

**Secondary Source of Data**

Secondary source of data are also collected for this study. The study also carried on depending secondary source of data, which are collected from the government offices in villupuram district of Tamilnadu, as well as from the Village Panchayat, of the study area. Some Governmental, Non-governmental sectors and international publications and reports related to study area, are also included, as the source of secondary data.

**Tools of the Study**

The Present study has conducted with help of well-structured interview schedule for data collection. The interview schedules were distributed to 120 HHs and collected data are coded, edited, tabulated, and analysed with SPSS computer package, suitable necessary statistical tools, simple percentage, averages, chi square one way ANOVA and Multiple Regression were used to analyse the infrastructural development and impacts various aspects of economic, social, and impacts on the livelihood status of the sample respondents in the Study area. Programme. A small number of households (9.19%) are privileged by Housing for people project.

**Testing of hypotheses:**

**1. Level of Education is Responsible for Better Standard of Living**

Table 1: Test for Association between Income and Education Level of Sample Respondents

Total Income Rs.	Educational Status of Respondents					Total
	Illiterate	Primary	Secondary	Senior Secondary	Graduate and Above	
<10000 Rs.	6	1	-	-	-	7
11000-20000	1	8	3	1	1	14
21000-50000	6	20	8	10	4	48
51000-100000	5	15	2	4	1	27
100000-500000	2	6	9	4	1	22
500000 above	-	1	1	-	-	2
Total	20	51	23	19	7	120

Source: computed

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.967	20	0.04
Likelihood Ratio	34.453	20	.023
Linear-by-Linear	3.645	1	.056

Association			
No. of Valid Cases	120		

**Description**

H0: There is no association between educational status and income level of

households of the respondents. Table (l) shows the cross tabulation and calculated value of Chi-Square is 40.967. The Tabulated value of chi-Square for a 0.05 probability level with 20 degree of freedom is 31.410

22 cells (73.3%) have expected count less than 5. The minimum expected count is .12.

**Inference**

The computed value of  $\chi^2$  40.967 is greater than the tabulated value of  $\chi^2$ (31.410) at 0.05 significant level with a df of 20, hence rejected the null hypothesis(H0) and accepted alternative hypothesis (Ha). Therefore the result of the thesis is there is an association between educational status and level of income hypo respondents of the study area.

**Average income of the households does not differ significantly for households of the different villages.**

One of the interesting aspects of the present study is to examine whether the mean income of the households differ significantly between the households in different locations. For this purpose the incomes in terms of Indian rupees have been collected. To examine the equality of means income of the households, in the different villages, the null hypothesis taken is

**H0:** The average income of the households does not differ significantly for the households of the different villages. For this purpose the analysis of variance one way (ANOVA) classification procedure has been adopted.

**Influencing Factors on Income Level of Households (Multiple Regression Analysis)**

A number of factors influence income level that the standard of living of households. The interesting aspect of the study is to identify the influence of various independent variables called the regressors on the dependent variable which is total income of each household. The independent variables are given below.

- Y = Dependent variable which is the household income per month
- X1 = Availability of vehicle, a dummy variate, so X1=1, if available, X1=0 otherwise
- X2 = Exposure to Media, a dummy variate, so x2=1, if available, x2=0 otherwise
- X3=Extent of land
- X4=Value of Assets
- X5=Education, a dummy variate, so x5=1, if Educated, x5=0 if uneducated
- X6=Availability of Electricity, a dummy variate, so x6=1, if available,
- X6=0 if not available
- X7=Availability of Irrigation, a dummy variate, so X7=1, if available, if not available

**Table 2: Multiple Regression Analysis for Income Level Descriptive Statistics**

Variables	Mean	Std. Deviation	N
Total Income (Dependent )	4.3708E4	34849.59179	120
Education	.6417	.48152	120
Land Availability	.8333	.37424	120
Vehicle Availability	.2917	.45644	120
Exposure of Media	.6583	.47626	120
Value of Assets	7.59E4	72008.938	120
Availability of Electricity	.7583	.42989	120
Irrigation	3083	.45644	120

Source: Computed

Using the data collected from the informants, the multiple regression analysis has been carried out. It is observed that from the following table that the R Square value which is the coefficient of multiple determination is 0.662 and corresponding F static value is 4.85 the significance value p is equal to 0 which means that the F value is significant hence; the model is a good fit for the data.

**Table 3: Multiple Regression Analysis Model for Income Level Correlations**

The Result of multiple regression analysis shows that there is predictive power of a number of independent variables such as, availability of land, exposure to media, availability of vehicles, education, availability of irrigation, value of assets, and availability of electricity have the influence on the income level of the households of the study area.

**Table 4: Multiple Regression Model for Income Level (R Square value)**

Model	R	Adjusted R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					RSquare Change	Change	df1	df2	Sig. F Change
1	.814a	.662	.641	2.08695E4	.662	31.405	7	112	.000

Source: Computed

Also, the model fit is examined by using the ANOVA procedure, this procedure is used to examine whether, the independent variables put together influence, the dependent variable. So the results of ANOVA are given in the following table.

**Table 5: Multiple Regression Model for Income Level (ANNOVA)**

	Sum of Squares	df	Mean Square		Sig.
Regression	9.574E10	7	1.368E10	31.405	.000 a
Residual	4.878E10	112	4.355E8		
<b>Total</b>	<b>1.445E11</b>	<b>119</b>			

From the table it is seen that the F value is significant because the p value is equal to 0. The following tables gives the values of the regression coefficients of the independent variables and also the 't' statistic values

Source: Computed

**Table 6: Multiple Regression Model for Income Level (Coefficients)**

Variables		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig. (p)
		B	Std. Error			
1.	Total Income	39262.198	6909.241		5.683	.000
2.	Education	19822.179	4514.821	.274	4.390	.000
3.	Availability Of Land	17741.439	5398.061	-.191	-3.287	.001
4.	Availability Of Vehicles	17132.460	4358.578	.224	3.931	.000
5.	Exposure To Media	26425.346	4582.164	.361	5.767	.000
6.	Value Of Assets	.074	.028	.153	2.653	.009
7.	Availability Of Electricity	-15769.898	5670.168	-.195	-2.781	.006
8.	Irrigation	-13468.734	5163.662	-.176	-2.608	.010

Source: Computed a. Dependent Variable: Total Monthly Income.

't' is observed from this table the p values corresponding to each of the variable, are less than 0.05. Hence the regression coefficients are all significant. Hence, it can be concluded that all the independent variables chosen have significant influence on the income of the individual households.

**Conclusion**

The present study concludes that there is intricate relationship between infrastructural development and improvement in the livelihoods of the rural people. Rural areas are isolated and marginalized, there are no proper basic infrastructures, because of these problems, and people are living in deprived, distressed and deteriorated condition. When we start development activities to built infrastructures in the rural areas, certainly it changes the images of the rural areas from underdeveloped nature to prosperous, potential, vibrant, smart and successful

economic regions, resulting the positive changes and dramatically increases in the living standard of rural people. Hence the conclusion of the study is that infrastructure development decreases the rural poverty, and increases the livelihoods of the rural people.

#### References

1. Africa Rural Development Forum (ARDF). (2013). Infrastructure Development and Rural Transformation Economic Commission for Africa Benin.
2. Bulus, J.S., & Adefila, J. O. (2014). The Study of Rural Infrastructure Facilities in Kajura area, Kaduna State of Nigeria. *International Journal Humanities and Social Science*, 4 (2).
3. Verma, A. K. (2012). Rural Infrastructure Availability and Wellbeing. *Journal of Regional Development and Planning*
4. Ellis, F. (2000). *Rural Livelihoods and Diversifying in Developing Countries*. New York: Oxford University Press,.
5. Li & Liu, X. (2009). The Effects of Rural Infrastructure Development on Agricultural Production Technical Efficiency: Evidence from Data of Second National Agricultural Census of China. *International Association of Agricultural Economists Conference*. Beijing.
6. Fan, S., Zhang, L. X., & Zhang, X. (2004). *Economic Change and Cultural Change*, 52 (2).
7. George, T. H. (2010). *Changing Scenario of Rural Labour Market*. (S. B. Verma, Ed.) New Delhi: Deep and Deep Publications Pvt. Ltd.
8. Malik, M. S. (2010). *Rural Management*. (S. B. Verma, Ed.) New Delhi: Deep and Deep Publications.