

## Role of Infrastructure and Institutional Services in Socio-Economic Development of Rural People in Southern Ethiopia

Genene Tsegaye Mekonnen

Socio-Economic Researcher, South Agricultural Research Institute  
P.O. Box 06, Hawassa, Ethiopia.

### Abstract

*The highest aspiration of government and development practitioners within a given country is towards achieving economic development. To achieve economic development and benefit communities with its output, infrastructure and institutional development is instrumental. This study was conducted to identify determinants and trends of rural infrastructure and social service development in four rural communities. The result revealed that all the study areas have full access to extension service, input, education services including adult literacy program, while out of the four only two have access to rural road and transportation facilities. During the survey, all the villages had no access to bank, public telephone and postal service rather the inhabitants travel long distance to nearby towns for accessing the services. Similarly all the villages considered in the study have no access to nearby schools and low access to health service forced to travel long distance from 18 to 61 km. The findings recommended that decision makers and development practitioners working in government and NGOs have to give high priority in developing and strengthening infrastructure and institutional services to improve the living standard of people. Lastly high empowerment should be given to the involvement of local communities in infrastructure and institutional service availability of their locality.*

**Key Words:** Infrastructure, Institutional Services, Southern Ethiopia

### Introduction

The highest aspiration of government and any development practitioners within a given country be it is in developed or developing world is towards achieving economic development. Economic growth is the growth in economic variables such as national income, gross domestic product, per capita GNP, change in saving and investment, while economic development employs not only economic growth but all round progress of the whole economy (Barro and Martin, 2004). It is the increase in value of the goods and services produced by an economy. The achievements of economic growth can be captured and/ or gained by implementing and practicing various strategies. Among these, infrastructure and institutional services are of paramount importance in improving the livelihood and well-being of both urban and rural communities. In a rural areas access to infrastructure and institutional services such as drinking water, health services, veterinary service, rural roads, transportation services, school, electric power, agricultural extension services, credit and saving, agricultural cooperatives and unions, market and information are vital socio-economic development and growth interventions.

The socio-economic growth of rural communities are largely expressed by the growth of their main occupation i.e., agricultural growth. Agricultural growth, in turn is crucial for

alleviating rural poverty. It provides higher farm income, agricultural wages, agricultural employment and lower agricultural prices (Faruqee and Carey, 1996) where all have contributions in reducing rural poverty. Growth in agriculture enables agricultural income to rise faster than population growth of rural area. Conversely, poor institutional services and infrastructure developments in rural areas can be reflected both in substantially higher rural poverty and poor agricultural growth. In Ethiopian case generally and in the study area particularly, since majority of the economy is highly depend on subsistence agriculture, it demands highly effective and efficient institutional services and infrastructure development. Rural infrastructure and basic social services are appropriate measures enabling in transforming the subsistence agriculture to modern and market oriented one. Access to each social and institutional service make farmers to boost agricultural production which creates surplus of agricultural products both for home consumption and export. The surplus of agricultural production contributes for the overall development of all sectors, resulting in rising the material and economic well-being of a given country citizens. It contributes to labour productivity by lowering prices of food grains, it supplies excess agricultural raw materials for agro-industries, increases the foreign exchange earning income, it saves foreign currency by producing import substituting products and it largely contributes to labour employment.

Similar to other parts of the country, in the South Nation Nationalities and Peoples' Region (SNNPR) the regional government has given due emphasis to speed-up agricultural growth in the rural area. To support the mega strategy of the region, several development works have been implemented to increase the basic social services and infrastructure availability, such as health services, schools, pure and potable water, telecommunication, electricity, agricultural extension, social capital establishment such as cooperatives and credit associations, rural road, market, agricultural input and so on. The interventions play vital role in poverty reduction by minimizing illiteracy, illness, mortality, migration, vulnerability and shocks, unemployment and most importantly in improving the living standard of the rural people. Moreover the development intervention in infrastructures enabled small farmers to get agricultural inputs and services easily, timely and adequately.

On other hands, the alarming growth rate of both urban and rural population of the country as a whole and that of the southern region in particular is now becoming one of the concerns of policy makers, development practitioners and researchers. Population growth has to be at least in balance with growth rate of the economy. Hence, the growing tension towards the demand of people towards food grains and basic necessities on one side and its steady supply on the other side call due attention in realizing the comparative advantage of local infrastructure and social services development. Thus assessing and understanding the role of infrastructure and social institutions is significant and crucial for any development intervention in the study area.

## Objectives

The overall goal of this research was to contribute in improving livelihoods of rural communities through assessing the availability of rural infrastructure and social services in the Southern Nation Nationalities and Peoples' Region (SNNPR) generally and at project sites specifically.

The specific objectives of the study were to:

- Study the basic determinants of rural infrastructure and social services development in four rural communities of the region
- Assessing the trends and magnitude of infrastructure and social service availability across the four communities of the region and
- Drawing possible policy implications and recommendations

## Research Methodology

**Description of the study area:** the SNNPR is one of the nine regional states of Ethiopia located in the south and south-western part. Astronomically it is situated between the coordinates of  $4^{\circ} 27'$  and  $8^{\circ} 30'$  North and  $34^{\circ} 21'$  and  $39^{\circ} 11'$  East with altitude ranging from 376 to 4207 m above sea level and with mean annual temperature ranging from  $15^{\circ}\text{C}$  to  $30^{\circ}\text{C}$  (BoSP, 2004). SNNPR is bordered with countries like Kenya and Republic of Sudan in south and south west directions respectively. It covers approximately a total area of 110931.9 km<sup>2</sup> (about 9.82% of the country) divided into 14 administrative zones.

The study was implemented in four rural communities of SNNPRs. The four rural peasant associations selected for the study were Imdiber from Chaha district (Guraghe), Aze Debo'a from Kedida Gamela (Kembata Tembaro), Adado from Bule (Gedio) and Gara Godo from Boloso Sorie (Walaita zone). All of the study areas were included in the Ethiopian Rural Household Survey (ERHS). Except Imdiber, three of the study areas are known by their most highest population density in the country. Adado is located in Gedio zone, one of the UNESCO's registered world natural places known by its unique traditional agro forestry system.

**Type and source of data:** data collected by Ethiopian Rural Household Survey in round 4 and 6 in 2004 was used as community data set for the analysis. Data on rural roads connecting the peasant Associations (PAs) with nearest town, water and electricity accessibility, telecommunication and post services, bank, agricultural extension services, social capital like agricultural credit and producers' cooperatives, agricultural technology availability such as improved seeds, livestock veterinary services, accessibility in terms of walking distance to health services such as government hospital, private hospitals, government and private health clinics, number and level of schools, student enrollment, stakeholder involvement in school construction and market in and outside the area for all of the four PAs were used as data.

**Method of data analysis:** With regard to method of data analysis, simple descriptive statistics was employed. Software called Statistical Package for Social Science (SPSS-20) was employed for the analysis. The result of the analysis was presented in table form and interpretation for each table is given.

### **Result and Discussion**

Institutional services and infrastructure development such as health services, education, clean potable water, telecommunication facilities, electric power, agricultural extension, cooperatives, credit, rural road, market, improved seed and inputs are of paramount importance for growth of agricultural sector. Household access to infrastructure and services such as roads and rural institutions (example, credit and saving services) and community social capital such as community organizations (for example cooperatives) largely determine the return to alternative livelihood strategies (Berhanu and Pender, 2004). Adequate infrastructure and services are crucial to achieve sustained agricultural growth and development. Infrastructure like rural road is needed to get agricultural produce to markets and farm inputs to farm gate with low cost.

As indicated in table 1 below, Adado from Bule and Gara Goda from Boloso Sore district have access to farmers' cooperative while the others Aze Debo'a and Imdibir had no access to cooperative during the survey time. Cooperatives take the lions' share in speeding up agricultural transformation that they provide credit to farmers. Agricultural credit enable the rural asset-poor to exploit the untapped potentials of agricultural sector with a view of reducing the cost of agricultural production, increasing agricultural production, increasing farmers' income and output in a sustainable way (Siah *et al.*, 2003).

All of the PAs included in ERHS in SNNPR have full access to agricultural extension services, improved seeds and other inputs, educational services including adult literacy program and two of the study areas have been provided with rural road and transportation facilities (Table 1). Access to effective and reliant extension as a whole is very crucial for improving agricultural productivity, rural farm income and asset building of rural communities. Inaccessibility to basic social services is the main indicator of poverty (Belayneh, 2004). This inaccessibility is captured in various ways such as education status, number of children attending school, episode, illness of family members, distance to basic social services, etc. Similar findings reported that, inadequate access of rural households to infrastructure and services is often one of the major bottlenecks that hinders or retards agricultural development in many developing countries calling for sustained public investment to improve household access to them (Berhanu and Pender, 2004).

**Table 1: Infrastructure and institutional service accessibility status (n=400)**

Infrastructure/social service type	Adado		Aze Debo'a		Gara Godo		Imdibir		Total	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Producers' cooperative	--	100	100	--	--	100	100	--	200	200
Extension service	--	100	--	100	--	100	--	100	---	400
Agricultural technology	--	100	--	100	--	100	--	100	---	400
Pipe water	100	--	100	---	100	--	100	---	400	---
Schools	--	100	--	100	--	100	--	100	---	400
Electric power	100	--	100	--	100	--	100	---	400	---
Better road	100	--	--	100	--	100	100	---	200	200
Transport facilities	100	--	100	--	100	--	--	100	200	200
Public telephone	100	--	100	--	100	--	100	--	400	--
Post Service	100	--	100	--	100	--	100	--	400	--
Bank	100	--	100	--	100	--	100	--	400	--

Source: Ethiopian Rural Household Survey, 2004 round 4 and 6

Farmers with full access to market places and nearest town have a comparative advantage of gaining better prices for their agricultural products. Marketing is a social and managerial process by which individuals and groups obtain what they need and want through creating and exchanging products and value with others (Kotler and Armstrong, 2003). In a market, farmers sell what they produce in reasonably better prices and purchase other non- food items and agricultural inputs. In some cases, some commercial farmers seek higher prices for their produces, transact and/ or sell their agricultural products in a particular market like national, wholesale and grain market. When farmers in the rural area sell their produces in better prices, they tend to increase their farm income which has positive impact and direct contribution for agricultural growth. Conversely, where there is lack of adequate and nearby markets, rural communities incur high transportation costs of agricultural outputs and inputs. As shown in table 2, Adado and Gara Godo have access to market within the PA while Aze Debo'a and Imdibir have no access within the PA. The two PAs *i.e.*, Imdibir and Aze Dabo'a use the nearest town at an average distance of 2 km and 4.5 km respectively. In line with market, transportation facilities help farmers to transport agricultural produces and procured non-food items and agricultural inputs to and from market and nearest town aimed at improving their farm productivity.

Among infrastructure facilities and services; market, electricity, telecommunication, post and banking services are the most important development interventions in transforming agriculture. Since Ethiopian economy is highly dependent on agriculture, telecommunication services plays vital role for its development. It increases awareness of farmers by providing information on buyers and seller's concentration, supply, demand and prices of farmers' produce and available agricultural inputs. In the rural area, farmers can easily access information on price, supply and demand of their crop produce, livestock and their by products, improved seeds,

fertilizer, pesticides and insecticides, improved feed, animal breeds, veterinary services and other agricultural information all enable farmers to reduce transaction costs. The result showed that all the PAs included in the survey have no access to public telephone, post office and banking service, rather the inhabitants travel long distance to the nearest town to get such services (Table 2) calling an immediate response to the infrastructural and institutional development.

Education is the level of grades or schooling years attained by the dwellers of rural community. It is an important determinant of economic development that educated farmers have a better chance of using modern agricultural technologies and practices, agricultural information and institutional services which increases and improves agricultural productivity and rural household income. On the other hand, educated farmers pre-assume production risk condition and they adjust mechanisms to cope risk. Many hypotheses stated that education has a strong positive impact on rural household agricultural growth. Enrollment in each level of school depends heavily on availability of school in or nearby towns. The availability of schools at each PA depends on frequent investment made by government, Non-Government Organizations (NGOs), private investors and community. As shown in table 3 below, all PAs included in the survey have no access to nearby schools rather students were enrolled at a distant schools which contributed for high illiteracy rate of rural communities.

**Table 2: Number and average distance to the nearest town of infrastructure and services**

Infrastructure/service status **	Unit	Adado	Aze Debo'a	Gara Godo	Imdibir
Nearest telephone outside PA	km	11	4.5	13	2
Nearest post offices outside PA	''	11	4.5	13	2
Nearest bank outside PA	''	22	4.5	27	35
Agricultural extension office within PA	No.	-	-	1	1
Nearest agri. extension office outside PA	km	11	2	-	-
Nearest agri. cooperative outside PA	''	-	2	-	-
Number of daily market within PA	No.	1	-	1	-
Nearest market outside PA	km	-	4.5	-	2
Number of Veterinarians within PA	No.	-	-	-	-
Nearest Veterinarians outside PA	km	11	4.5	13	2
Number of NGOs within PA	No.	-	-	-	1
Nearest NGOs office outside PA	km	17	4.5	13	-

Source: ERHS, 2004 round 4 and 6

\*\*Indicate walking distance to institutional service outside the PA

**Table 3: Education services and enrolment**

Education level and enrolment	Unit	Adado	Aze Deboa	Gara Godo	Imdibir	Total
Number of primary schools in 2004	No.	-	-	1	1	2
Nearest primary school **	km	2	2	-	-	
Total enrolment in primary school	No.	352	NA	595	1099	2046
Number of junior schools within PA	"	-	-	1	-	1
Number of junior schools outside PA	"	1	3	-	1	4
Nearest junior school **	km	5	2	-	2	
Total enrolment in nearest junior school	No.	635	NA	129	570	1334
Number of high schools within PA	"	-	-	-	-	-
Number of high schools outside PA	"	1	1	1	1	4
Nearest high school **	km	22	4.5	13	22	
Total enrolment in nearest high school	No.	NA	NA	1450	1081	2531
Number of other school within PA	"	-	-	-	-	-
Number of other school outside PA	"	-	-	-	-	-
Number of literacy program offered	"	-	-	-	-	-
Number of literacy program outside PA	"	-	-	-	-	-
School built by the PA since 1984	"	-	-	-	-	-
School built by government since 1984	"	-	-	-	-	-
School built by NGO since 1984	"	-	-	1	-	1
School built by private since 1984	"	-	NA	-	-	-
School built by other institution since 1984	"	-	-	-	-	-

Source: ERHS, 2004 round 4 and 6

\*\*Indicate walking distance to schools outside the PA

Health institutions, be it is public or private are of paramount importance in achieving economic development. Access to health services is vital to protect and minimize diseases, decreases mortality, builds up productivity of labour and generally it increases life expectancy. The result revealed that communities in all PAs had low access to hospitals and clinics (Table 4). Communities in the study area are expected to travel 18 km (Imdibir) to 61 km (Aze Debo'a) to get hospital. Hence low access to health service led to low labour productivity. Moreover, the result suggested that there is high need of government and private investment so as to improve accessibility of health service rendered by private and government health institutions.

**Table 4: Availability of health services**

Health services	Unit	Adado	Aze Debo'a	Gara Godo	Imdibir	Total
Number of Gov. hospital within PA	No.	-	-	-	-	-
Nearest Gov. hospital accessed	"	1	3	1	1	6
Distance to nearest Gov. hospital **	km	22	61	27	18	
Number of private hospital within PA	No.	-	-	-	-	-
Nearest private hospital usually accessed	"	-	-	-	-	-
Number of Gov. clinic within PA	"	-	1	1	-	2
Nearest Gov clinic usually accessed	"	1	1	-	1	3
Distance to nearest Gov. clinic **	km	11	4.5	NA	2	
Number of private clinic within PA	No.	-	-	-	-	-
Nearest private clinic usually accessed	"	-	7	-	-	7
Distance to nearest private clinic **	km	-	4.5	-	-	
Number of doctors within PA	No.	-	-	-	-	-
Distance to nearest doctor outside PA **	km	22	4.5	27	2	
Number of nurses in the PA	No.	-	-	-	-	-
Distance to nearest nurse outside PA **	km	22	4.5	27	NA	

Source: ERHS, 2004 round 4 and 6

NA: implies data was not available

### Conclusion and Recommendation

Infrastructure and institutional services development are crucial socio-economic interventions for economic development and growth. Among these, access to agricultural technology, agricultural extension, producers' cooperative, credit, pure water, rural road, transportation facilities, health services, both formal and informal schools, telecommunication and postal services, bank, electricity are of paramount importance for rural communities endowed in subsistence agriculture. For countries like Ethiopia in which the major dominant source of the economy and means of employment is agriculture, the contribution of agriculture to economic development and growth is highly linked with availability of rural infrastructure and institutional services. On the other hand, rural infrastructure and institutional services are pre-requisite for transforming subsistence agriculture in to productive and competitive sector. From macro economics point of view, developed infrastructure and institutional services not only aimed to employment creation but also attracts overseas investors to involve in economic and commercial activity of a country.

The result of descriptive analysis revealed that the four rural communities included in the study namely Adado of Bule, Aze Debo'a of Kedida Gamela, Gara Goda of Boloso Sore and Imdibir of Chaha districts were not generally well provided and equipped with infrastructure and social services. Rather, people living in these PAs travel long distance to the nearest town or others in search of the services they demand. These in turn lowers the labour productivity of



rural communities, incur high production costs for their farm products, decreases the farm income of rural people and generally it poses a treat to farm productivity, profitability and the competitiveness of the agricultural sector.

Public and private investment, enrolment of rural people in infrastructure and institutional services development, potentiality of the PAs in terms of agricultural production and income source, NGOs involvement and community development works are the major determinants of infrastructure and institutional social service availability in the rural areas. Improving these factors are sufficient conditions for infrastructure and services availability and accessibility in the study areas. The result of the survey implies that, policy makers, development practitioners, local leaders, community as a whole and NGOs in the areas must give attention and higher priority in improving, strengthening up rural infrastructure and institutional services and improving its easily and equitable accessibility to each inhabitants of the rural communities.

### **References**

- Barro, R. J., and X. S.i. Martin, 2004. Economic Growth, 2<sup>nd</sup> edition. MIT Press, Cambridge, MA, USA.
- Belayeneh B., 2004. Local Perspectives on Poverty and Development. Paper presented on 2<sup>nd</sup> International Conference of the Ethiopian Economy, Ethiopian Economic Association, Addis Ababa.
- Berhanu, G., and J. Pender, 2004. Income Strategies, Access to Infrastructure and Services and Welfare in the Highlands of Northern Ethiopia. 13<sup>th</sup> Annual Conference of the Ethiopian Economic Association, June 3-5, 2004.
- BoSP, 2004. Demographic Statistical Abstract. Southern Nation Nationalities and Peoples' Region, Awassa.
- Faruqee, R., and K.Carey, 1996. Agricultural Growth and Poverty in Pakistan. Human Capital Development, Working paper 16033, Pakistan.
- Kotler, P. and Armstrong, 2003. Principle of Marketing. 10<sup>th</sup> ed. Prentice, hall of India Private limited, New Delhi.
- Siah, T., L. Russel and D. Cameron, 2003. Acceptance and Repayment of Agricultural Credit in Lombok Indonesia –Farmers' Perspectives. International farm Management, Indonesia.