



Role of rural infrastructural development in alleviating poverty in Ghana: A case of Jukwa, Central Region

K. Adu-Boahen ^{1*}, K.B. Antwi ², E.A. Mensah ², G. Atampugre ², A. Osman ², K.N. Osei ², A.O. Adu-Boahen ³

¹ Department of Geography Education, University of Education, Winneba-Ghana

² Department of Geography and Regional Planning, University of Cape Coast, Ghana

³ Department of History Education, University of Education, Winneba-Ghana

Abstract

Rural infrastructure provides essential production conditions such as telecommunication, roads, medical services and educational facilities which enhances development in a rural setting. It is therefore pertinent to assess the state of infrastructural development on the quality of life of the inhabitants of Jukwa. The study employed a descriptive survey design and 600 house hold heads were targeted. Questionnaire/interview schedule, focus group discussion and observation checklist were used to collect data. The data obtained from the field was analyzed using SPSS (version 16). It was noted that a huge infrastructural gap exists within the Jukwa community which serves as a contributing factor to the socio-economic woes of the inhabitants. It is recommended that, the District Assembly see to the supervision and possible completion of all on-going and stalled projects captured in the District Assembly's Medium Term Development Plan (DMTD 2010-2013). This will ensure accountability and rural development and will serve as a catalyst for taking the people from the poverty cycle. The completion of these stalled projects will help reduce the infrastructural gap that exist in the area.

Keywords: Infrastructure; Poverty; Livelihood; Jukwa; Ghana

Published by ISDS LLC, Japan | Copyright © 2014 by the Author(s) | This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



Cite this article as: Adu-Boahen, K., Antwi, K.B., Mensah, E.A., Atampugre, G., Osman, A., Osei, K.N. and Adu-Boahen, A.O. (2014), "Role of rural infrastructural development in alleviating poverty in Ghana: A case of Jukwa, Central Region", *International Journal of Development and Sustainability*, Vol. 3 No. 4, pp. 737-748.

1. Introduction

The impact of growth on poverty reduction varies across nations, regions and even at the household level. Cord and Verissimo (2002) argue that poverty reduction benefits from rural sector growth especially when there are initial factors, such as the distribution of assets, access to social and physical goods and services, and geographic dimensions. The authors are of the view that, growth alone is insufficient to reduce rural poverty and therefore there is a need for strategies that redress the weak initial conditions facing many poor households. On the other hand, Ravallion and Martin (2002), suggest strategies such as raising agricultural productivity, expanding infrastructure and social spending in poor rural areas, to help reduce poverty in those areas.

Rural development means sustained improvement in the well-being of rural people and a strategy designed to improve the economic and social life of a group of people thus the rural poor. It involves the extension of benefits of development to the poorest among those seeking livelihood in the rural areas and this group may include small scale farmers, tenants and the landless (Dixon, 1990) and to this many efforts have been made to develop infrastructure in rural areas in Ghana and one of such efforts is the Ghana- village infrastructure project introduced by the then government and the world bank in 1998.

This project aimed to support government's effort to reduce poverty and increase the quality of life of the rural poor. The major components of the project were building: rural water infrastructure- comprising integrated development and water resource management including catchment management and other water conservation practices, rural transport infrastructure which includes selectively rehabilitating and improving degraded feeder roads, rural post-harvest infrastructure which aims at developing on-farm and village level drying facilities to reduce post-harvest losses, and finally strengthening institutions. The World Development Report 1994 published by the World Bank under the title "Infrastructure for Development" rightly mentions that "the adequacy of infrastructure helps determine one country's success and another's failure-in diversifying production, expanding trade, coping with population growth, reducing poverty, or improving environmental conditions" (World Bank 1994:2).

The district assembly has in its development plan for 2010-2013 that even though a lot of infrastructure for education were executed under the District Assembly Medium-Term Development Plan (DMTDP 2006-2009), the district could not achieve its target of infrastructure development. This partly accounts for the huge infrastructural gap that exists within the Jukwa community and is a contributing factor to the socio-economic woes of the people. It is therefore pertinent to undertake the study to assess the state of infrastructural development and its impact on the quality of lives (well-being) of the people. The main objective of this study was to assess infrastructural development and its impact on the quality of lives (well-being) of the residents of Jukwa It will specifically; identify the kind/types of infrastructure available, the study examine the state/condition of the facilities available, examine whether the facilities are easily available for use when needed and finally, assess the impact of the available facilities on the residents well-being.

2. Materials and methods

2.1. The profile of Jukwa

Jukwa sometimes called lower Denkyira is located 19 kilometres north of Cape Coast and lies south of the Twifo-Heman Lower Denkyira District in the Central region of Ghana (figure 1). The interplay of heavy rainfall and soil types influences the vegetation cover that surrounds the town. The vegetation cover can be described as semi deciduous forest. However human activities like farming have had serious impact on the sustenance of the populace. The current Population growth rate is 4.1 %. This is higher than the corresponding regional growth rate of 1.8 % and the national growth rate of 2.7%. The relatively high population growth rate is attributed partly to the fertile soils which support the cultivation of crops like palm trees (for palm fruits and oil), cocoa, plantain, cassava, vegetables, and fruits of all kinds and partly to the fact that many migrant farmers and other vocations like “Galamsey” are living in the District. The town is considered as one of the major food baskets in Central Region and supply foodstuffs to surrounding towns like Cape Coast, Abura, Moree and Elmina and other parts of the country.

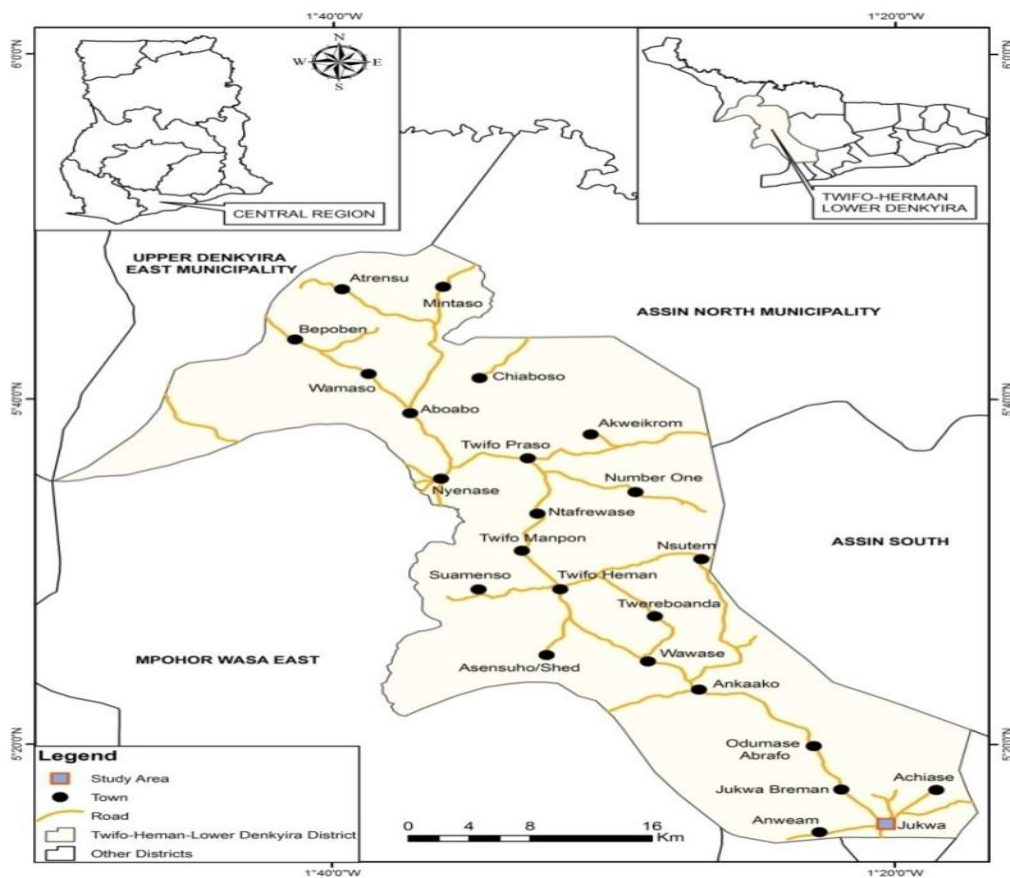


Figure 1. Showing study area in regional and national context

2.1.1. Research method

The survey approach questionnaire/interview schedule, focus group discussion and observation checklist were used to collect data under the descriptive design since it attempts to collect data from particular members of the population to respond to questions regarding the current status of the research problem. The study used a descriptive survey which aims at collecting data in order to describe the social systems, relations and social event of the study area (Sarantakos, 2005:10). The study targeted 600 household heads based on the Ghana population and housing census (in 2000). The data collection took about 14 days and covered the whole of the town.

3. Results and discussion

Though the study is not about the socio demographic characteristics of respondents, it is essential to analyse the background characteristics in order to understand the respondents. According to the 2000 Population and Housing Census (Ghana Statistical Service, 2000), Jukwa had a population of 4502 people. Based on the current population as per the research is estimated to be 5047 which in percentage terms represent an increase of 12.1. The current growth rate of the town based on the research is 0.95% which is much lower than the previous one of 2.6% and is far lower as compared to the district growth rate of 4.1% (Ghana Districts.com). This research finding is an indication that birth rate per the area is gradually declining.

3.1. Sex composition of residents

The sex composition of the respondents are presented as 229 males representing (38.3%) of the total population, whilst 369 were females representing (61.7%). However there were some missing values. These values reflect the population distribution of Ghana which has the female population outnumbering the male counterpart.

Table 1. Sex composition of respondents

| Sex | Frequency | Percentage (%) |
|--------------|------------|----------------|
| Male | 229 | 38.3 |
| Female | 369 | 61.7 |
| Total | 598 | 100 |

3.2. Age category of respondents

Like other socio-demographic characteristics, age structure is vital to the evaluation of every society. Results from the study indicate that majority of the respondents were between age categories of 36-40 and 51 and

above with each having (19.8%) respectively. However the respondents between the ages of 15-20 were in the minority with (3.7) percent. It can therefore be inferred that the age structure at the study area is youthful in nature.

Table 2. Age composition of respondents

| Ages | Frequency | Percentage (%) |
|--------------|------------|----------------|
| 15-20 | 22 | 3.8 |
| 21-25 | 62 | 10.8 |
| 26-30 | 74 | 12.9 |
| 31-35 | 100 | 17.5 |
| 36-40 | 113 | 19.8 |
| 41-45 | 47 | 8.2 |
| 46-50 | 42 | 7.3 |
| 51 and above | 113 | 19.8 |
| Total | 572 | 100 |

3.3. Marital status of respondents

With respondents marital status, 65.5% of the respondents are married, with 21.1% of them being single, 9.2% of them are divorced due to various reasons whilst 4.2% are separated. There was however some missing values. This by implication means that there were more married respondents in the study area than the single and other category.

| Marital | Frequency | Percentage (%) |
|--------------|------------|----------------|
| Married | 391 | 65.5 |
| Single | 126 | 21.1 |
| Divorced | 55 | 9.2 |
| Separated | 25 | 4.2 |
| Total | 597 | 100 |

3.4. Occupation of respondents

From the chart the most dominant occupation in Jukwa is farming representing (48.8%). Petty trading, services, others and craft were the other forms of respondents occupation. This means that the community is rural in nature and the other services are minimal, it is expected that would be infrastructural facilities to cater for the needs of the populace.

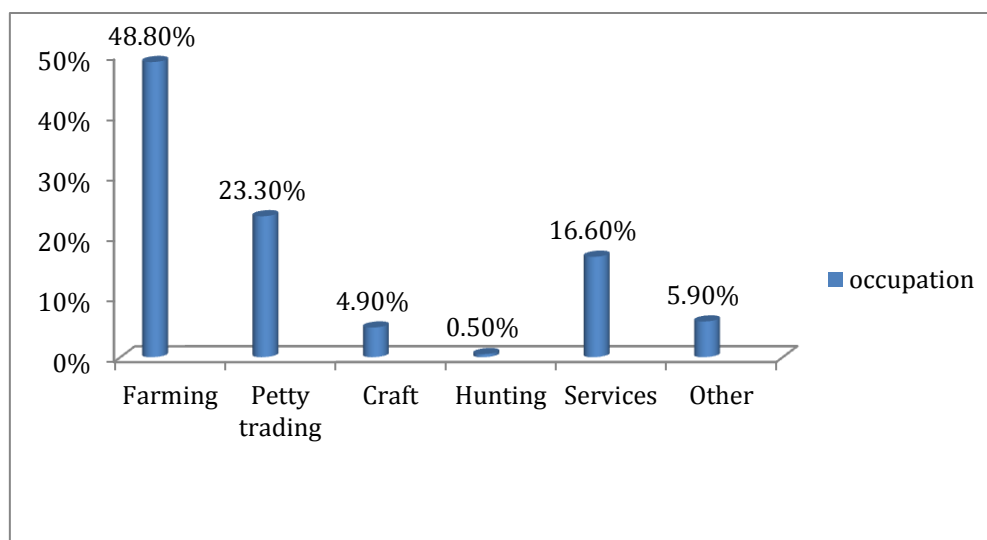


Figure 2. Occupation of respondents

3.5. Appropriate methods of waste disposal

This section involves an analysis of data collected from the field (Jukwa) on the impact of infrastructural development on the quality of lives (well-being) of the people of Jukwa. Tables, charts and photo illustrations are used to present findings. The figure below shows the facilities available in the community. The study revealed the availability of the following infrastructure in the study area schools, road, community centre, market, police station, houses, health centre, communication mast and a rural bank.

As indicted earlier with regards to available infrastructure and concerning school infrastructure, majority of the respondents representing (66.8%) stated that the school facilities were good, while only 4.8% of the respondents disagree and said it was poor. There was however some missing values. With the roads, out of a total of the 579 respondents, (43%.0) of the respondents said the road was poor whilst (37%.0) said the roads were good. This imply that the nature of the road leaves much to be desired as transporting food stuff from the area to the central business district(CBD) is most often difficult and most food crops get spoilt before they are even transported to the cities. In relation to the community centre, there were opinions were divided as to its condition. Out of the 602 responses, more than half (50.2%) were undecided which may

suggest that perhaps they are unaware of the condition of the community centre or its existence do not play any role in their livelihoods.

With those who responded, 26.2% indicated that the condition is good whilst 12.1% were on the contrary view and said it was poor. In the case of the market, majority of the respondents about 71.4% said the market facility was poor, while 15.9% said the market facility was good and 7.3% of respondents said it was fairly good. This result is in consonance with Lankes (2002) argument that exclusive emphasis on subsistence food crop production will not significantly increase rural incomes. Rather, more market-oriented production systems will be pivotal for increasing rural household incomes. In this case the poor nature of the market coupled with the bad or poor nature of the road is a disincentive to the improvement in the livelihood of the rural poor. With the police station, 44.2% respondents said the condition of the police station was poor, 33.4% respondents said the police station facility was good whilst 73 % asserts that it was fairly good. Pertaining to housing, 37.0% said they had good housing facilities, 13.6% agreed that the housing facilities were fairly good while 18.1% of the respondents said their housing facilities were poor. A substantial number of the respondents said the health facility in the community is good. Approximately 41.2% said the facility is good, 14.8% said it was fairly good, while 22.8% said the facility was poor.

Table 4. Available infrastructure and their conditions

| Facilities | Very Good | Good | Fairly Good | Poor | Undecided | Total |
|------------------|-----------|------|-------------|------|-----------|-------|
| Schools | 9.8 | 66.8 | 13.5 | 4.8 | 1.3 | 96.2% |
| Roads | 0.8 | 37.0 | 14.3 | 43.0 | 1.0 | 96.1% |
| Community Centre | 4.0 | 26.2 | 7.5 | 12.1 | 50.2 | 100% |
| Market | 0.5 | 15.9 | 7.3 | 71.4 | 0.3 | 95.5% |
| Police Station | 1.8 | 33.4 | 12.1 | 44.2 | 2.8 | 94.4% |
| Housing | 3.5 | 37.0 | 13.6 | 18.1 | 4.2 | 76.4% |
| Health Centre | 2.8 | 41.2 | 14.8 | 22.8 | 0.8 | 82.4% |

The market serves as the main trading centre for the community and its surrounding areas especially on market days (Tuesdays and Fridays). Contrary to its importance, residents have mixed feelings about its state. A participant of the Focus Group Discussion asserted that:

“The market is not good at all. The sellers are also not helping. They prefer to transact business on the roadside instead of the market which is very risky and can result in fatalities. The refuse dump site is located just around the market as such when it rains we face several problems. Also there is no place of convenience in the market”.



Plate 2. The condition of the School



Plate 3. Section of the main road with people selling

3.6. Availability and accessibility of infrastructure and their impact on resident's well-being

The World Development Report (1994a: 2) opined that “the adequacy of infrastructure helps determine one country’s success and another’s. Again in Mody (1997: xii) “Infrastructure plays pivotal role in determining the overall productivity and development of a country’s economy, as well as the quality of life of its citizens”. As a result, the availability and the accessibility to infrastructure become fundamental in any attempt to reduce rural poverty and accelerate rural development. Results from our study indicate that out of the 590 respondents, 475 (80.5%) contend that the available infrastructure is not easily available and its impact on their life is very minimal, while 115 (19.5%) respondents stated that they are better off as a result of the existing infrastructure.

Based on the research carried out, several infrastructures were identified in Jukwa. These include schools, road, health centre, market, community centres, police station as well as their housing facilities. The research showed that most of the facilities besides the road and the market are in a fairly good state or conditions. Each infrastructure in the community also plays a vital role in the improvement in the wellbeing of the people in the communities.

The table below gives credence to the impact of infrastructure on the livelihood of the respondents. It revealed that (40.2%) of the respondents claimed the availability of the police station in the area has reduced

the incidence of crime. With regards to improvement in health status and economic activities the respondents stated that the impact was not encouraging and recorded 9.2 and 1.7 percent respectively. This implies that the availability of infrastructure has not impacted on the lives of the residents in their quest to reduce poverty and improve their standard of living.

Table 5. Impact of infrastructure on the well being residence

| IMPACTS | Frequency | Percentage (%) |
|------------------------------|-----------|----------------|
| Reduction of crime rate | 237 | 40.2 |
| Education of Children | 278 | 47.1 |
| Improved health status | 54 | 9.2 |
| Improved economic activities | 10 | 1.7 |
| Information dissemination | 11 | 1.9 |

Below shows some of the views expressed by some of the senior high schools students through a focus group discussion on the impact of the available infrastructure on their lives.

The schools play an important role in educating the people. Most of the school facilities are in a fairly good condition, while a few are not. According to the information provided by a secondary school student who was among the participants of the in-school Focus Group Discussion (FGD) organized in their school (Jukwa Senior High School).

The senior high school helps a lot but for the primary schools its condition is very deplorable and so is the JSS. I believe some students are doing well especially the JHS and Jukwa SHS whilst others are due to lack of facilities in the government schools.

From the view point of the researchers, quite a number of the schools are in very bad states and require some level of renovation, while some private schools were operating in wooden structures. This is because classes are distorted whenever it rains copiously and students and teachers have to run for their safety.

On the accessibility and availability with regard to daily usage of the road, this was what one of the discussant said:

Transportation is at times good and sometimes very deplorable. Sometimes you don't feel comfortable when you are in a car due to the bad nature of the road. Sometimes getting transport is very difficult. Transport fares are high as such we spend much of our money on fares. So we hope something is done about it. The transport fares charged are somehow good considering the bad nature of the road. There are lots of potholes on the road especially from

Jukwa to Praso. The government should try and rehabilitate the road. Some of us come all the way from Cape Coast to school and sometimes we find it difficult to get transport.

Also, on the available health facility which is basically a clinic its condition is manageable and serves as the first point of call for most residents. From some section of the respondents, the availability of the health facility has helped improve their health status. However the quality of services provided at the clinic according to most residents is very poor.

According one discussant who participated in the FGD:

The quality of services mostly delivered by the resident Doctor is very poor. He shows apathy and lack commitment when called to duty in cases of emergencies". And this has put a lot of lives in jeopardy.

The market serves as the main trading centre for the community and its surrounding areas especially on market days (Tuesdays and Fridays). Contrary to its importance, residents have mixed feelings about its state. A discussant asserted that:

The condition at the market is not good at all and the sellers are also not helping. They prefer to transact business on the lorry road instead of the market which is very risky and can result in fatalities. The refuse dump site is located just around the market as such when it rains we face several problems and also there is no place of convenience in the market.



Plate. Showing the condition of the police station and the market respectively

From the ongoing discussions, it could be noted that although a lot of the available infrastructures are not in their best conditions, they contribute significantly to the well-being of the people of Jukwa as the residence reiterated that increase in school enrolment, reduction in crime rate, improved health status, improved economic activity, and information dissemination altogether have brought about some sort of improvement in their well being.

4. Conclusions

The study revealed that there is the existence of some basic infrastructures required for human development. This was schools, roads, market, police station, health centre, community centre as well as their housing facilities. Besides the road, market and police station which were in deplorable conditions, the other facilities listed above were in a fairly good state.

The study discovered that, the facilities available in the community were accessible to the people. Irrespective of one's social class and income does not hinder their accessibility to the use of facilities. On the contrary the study revealed that certain key infrastructure like portable water, good roads, vibrant markets, public places of convenience were inadequate to support the people in their urge of reducing rural poverty and achieving the millennium development goals as established by the United Nations and ratified and endorsed by Ghana.

5. Recommendation

The local authorities comprising the chief and assembly members of Jukwa should regularly organize communal labour. This will help in the maintenance of the few available infrastructures within the town.

The district assembly should support in the reconstruction of some schools to prevent the incidence of wooden structures serving as schools in the locality. Also loan facilities can be provided by the rural banks to the private schools to enable them to develop their schools. This has the potential to improve effective teaching and learning while also complementing governments efforts to make education accessible and for all.

Again, the District Assembly should encourage private sector investment into projects that would create employment and empower the people in the area especially in citrus and palm oil production which are the major crops cultivated in the area. This could be channeled through the rural bank to help educate the people on the need for savings. This can be done by providing incentives and flexible interest rates terms to the rural poor as investments in the form of savings have the potential of breaking the vicious cycle of poverty which exists within most households in Jukwa.

Finally, government should see to the supervision and possible completion of all on-going and stalled projects captured in the District Assembly's Medium Term Development Plan (DMTD 2010-2013). This will ensure accountability and rural development and will serve as a catalyst of taking the people from the

poverty cycle. The completion of this stalled project will help reduce the infrastructural gap that exists in the area.

Acknowledgement

This paper is one of the outcomes of a community based study undertaken by the Department of Geography and Regional Planning. Special thanks go to the Bsc. Geography and Regional Planning student year group 2012/2013 for their immense contribution towards this paper. We are also grateful to the Cartography section of the Department of Geography and Regional Planning (University of Cape Coast) for providing the map of the study areas. To the Assembly member, Chiefs, and the people of Jukwa for their cooperation and support during the field study.

References

- Cord, L. and Verissimo, P. (2002), *The coverage of rural issues in PRSPs: A Review of Preliminary Experience*, World Bank, Washington, D.C. Processed.
- Dixon, C. (1990), *Rural development in the third world*, London: Routledge.
- District (Twifo-Hemang Lower Denkyira), Assembly *Medium term development plan*, (DMTDP 2006-2009).
- Lankes, H.P. (2002), "Market access for developing countries", *Journal of finance and development*, Vol. 39 No. 3.
- Mody, A. (ed.) (1997), *Infrastructure strategies in East Asia-the untold story*, The World Bank, Washington, D.C.
- Ravallion, P, and Martin, S. (2002), *Poverty comparisons'*, Harwood Academic Publishers, Church, Switzerland.
- Sarantakos, S. (2005), "Social Research", 3rd edition, published Palgrave Macmillan Urban Environment. *Quarterly Journals of Administration*, Lagos, 15.
- Village Infrastructure Project (1998), "World Bank Project Report", No. PIC3424
- World Bank (1994a), "Sub-Saharan Africa: from crisis to sustainable growth", Washington. <http://www.worldbank.org/poverty/povlit/index.htm>. Retrieved on August 20th 2007.