



## **Chinese Involvement in Nigeria's Infrastructural Development for Poverty Reduction: The Case of Idundu Bridge, Cross River State**

**Rosemary I. Eneji and Xiaoyun Li**

*College of Humanities and Development, China Agricultural University,  
Beijing, China*

*Email: rieneji@yahoo.co.uk*

### **ABSTRACT**

This study aimed to determine the socio-economic impact of Chinese involvement in village road construction at the community level in Nigeria. We specifically examined the impact of the rural road project on access to economic opportunities, household income, health, Education and employment. The study was carried out at Idundu, a rural village located at the southeastern city of Calabar, Nigeria. A combination of qualitative and quantitative methodology, including informal interviews as well as structured and semi-structured questionnaires was used. We found that 82% of beneficiary respondents had a difficult experience transporting their farm produce and other goods to markets before the road was constructed but most respondents (78%) held that construction of the road brought new jobs to the community. Even more people (96%) believed that the road improved how they connect with neighboring communities and 82% of respondents agreed that the new road reduced their traveling time. Of the 50 respondents surveyed, 21 (42%) believed the project improved their income very much, 34% had moderate improvement in income while 24% did not have an increase in income. On the environmental impact of the project, 72% of the respondents did not consider that it damaged the environment; only 8% believed so while 20% did not know. Majority of the respondents (84%) generally had very positive perception of the Chinese, while 82% believed the project improved their lives and that of the community. All non-beneficiaries of the road project complained of bad roads and were pessimistic of any chances of improvement in access roads to their community. Eighty percent of the respondents were of the opinion that the bad road hindered their economic activities. Our overall conclusion is that Chinese involvement in Nigeria's road construction is a significant positive contribution to people's welfare at the community level.

### **INTRODUCTION**

Nigeria/China mutually friendly disposition blossomed into the establishment of relations at ambassadorial level in 1971. Thus, a mutually reinforcing and

### *Chinese Involvement in Nigeria's Infrastructural Development*

rewarding relationship between both countries began in earnest. This relationship has grown in the last decade from the limited and intermittent contact to an increasingly complex and expansive engagement (Business Times march 26, 2007, P.42). Chinese are involve in various sectors such as trade, oil and gas, power, rail transport, construction, communications, manufacturing and retail, free trade zones, and finance .

In the construction sector, the largest Chinese construction company in Nigeria is the China Civil Engineering Construction Corporation (CCECC). The CCECC has several projects in Nigeria, some of which have been completed and others at various stages of completion. One of CCECC's first Nigerian projects was a \$4.8 million, 71 kilometre rehabilitation of the Papalanto–Lagos expressway in 2000, which was followed by a much more substantial contract, a \$50.5 million, 5 000 unit athletes' village for the eighth annual All-Africa Games in Abuja, which was completed in August 2003, (Alli W. O. 2007). CCECC rehabilitated the Ikot Akpaden–Okoroette road in 2003 for \$5.7 million, built a new \$16.7 million corporate headquarters for the Nigerian Communications Commission in Abuja in 2003 and is the main construction company at the Lekki Free Trade Zone near Lagos. Chinese Civil Engineering Construction Corporation (CCECC) has been awarded the contract for the modernization of the Nigeria's one-track rail line to standard gauge rail project. The project's first phase is worth \$8.3 billion, China has loaned the Nigerian government \$2.5 billion to finance refurbishment of the railway system (Business Times march 26, 2007, P.42). The railway is estimated to be 7,800 km in distance, and it will connect all the 36 states and major cities of Nigeria.

Another prominent Chinese construction company in Nigeria is the China Geo-Engineering Corporation (CGC). The company has been in the country since 1980s digging boreholes. It has been involved in numerous projects, including Kebbi Airport, a major water supply project in Gombe, the road from Kano to Maduguri and many other smaller routes, and the construction of the Sabke Dam (Alli W. O. 2007). CGC has no formal corporate social responsibility programme, but does apparently drill boreholes free of charge in impoverished communities at the behest of the government, and has started a model farm in Kebi State. Like CCECC, CGC's main selling point in Nigeria is price, but the company has aspirations to raise its quality and service provision levels so that it can compete on level terms with Nigeria's most powerful construction company, Germany's Julius Berger. In addition to CCECC and CGC are a host of smaller Chinese companies, including Huwei, North China Construction and Zon How, all competing vigorously for federal and state government tenders

Nigeria has relatively bad road networks; most of its highways are pot-hole stricken, unpaved and a good percentage of it is not tarred. Such appalling conditions have caused many road accidents and claim thousands of lives on a yearly basis. The condition of rural roads in Nigeria is particularly very pathetic. More than 70% of the rural road network is in deplorable condition; these roads are seasonal, and particularly during the

wet season, they become unmotorable (Ogunsanya, 1987). Their seasonality is due mainly to deterioration occasioned by inadequate maintenance. Continuous rural road deterioration due to poor maintenance has tremendous negative impact on their utility for enhanced rural development.

Rural roads are very vital to the socio-economic and political development of rural communities or the rural population in Nigeria. Various studies have shown the importance role of rural roads in socio-economic development of the rural economy. Ahmed and Hossain (1990) found in Bangladesh that rural road development was associated with a 33% increase in household income and 24% rise in agricultural production. Similarly, rural roads promote access to educational facilities through increased enrolment rates and improved class attendance (Levy, 1996). For instance, Lebo and schelling (2001) found in Bhutan that the enrolment of girls in primary schools was three times as high in connected villages compared to unconnected ones. In Andhra Pradesh, India, the female literacy rate was 60% higher in villages with all season road access compared to those with unreliable access. In the same vein, reliable access to health services (clinics and hospital) contributes directly to human capital that is very important to sustainable rural development. Musa (1999) found in Darfur Region of Sudan that improvements in feeder roads increased the flow of medicine into the area, with the health centers becoming busier and more effective. Child immunization went up by 70%. Where as in the village of Koga that is still inaccessible, child immunization had appalling success rate of 13%. Rural roads are not only important to agriculture, health and education; they are also very essential for marketing. Mead (1984) observed that good infrastructure in the form of rural access is essential if non-farm enterprises are to break away from and orient their marketing to the outside world. Similarly, Bryd and Zhui (1990) in a survey of rural firms in four counties in china observed that a large majority of the firms sold more than 60% of their output outside their home province as a result of good roads. Also in India, the placement of bank branches in the rural areas tends to follow the availability of good access.

Good roads provide access to schools, clinics, farms, markets, neighboring rural communities among others. They link rural areas to the higher order road network. They also provide links between the rural areas and urban centers, and facilitate the movement of people, goods and service between the rural communities and other villages. Chambers (1983) noted that poor accessibility in rural areas often slows down the diffusion of new technologies and techniques, increases production and marketing costs, reduces spatial interaction and limits access to education and health facilities. It also constrains mobility and aggravates isolation. In spite of the contribution of rural roads to rural economy, the state of rural roads in Nigeria is very pathetic. This situation calls for drastic and urgent measures to be taken since the importance of the road network to the socio-economic development of any nation cannot be overemphasized.

In order to transform the poor condition of rural roads in Nigeria, the

## ***Chinese Involvement in Nigeria's Infrastructural Development***

Chinese Civil Engineering Construction Corporation (CCECC) and the Nigerian Government signed agreements to construct and repair several rural roads include building of bridges in Nigeria. Examples of CCECC rural roads projects in Nigeria are construction/rehabilitation of Ugep, Ikom, Ogoja and Obudu Urban roads and Idundu Bridge in Cross River State, (Michael Faloseyi, Punch 28 Aug 2006). Our research was focused on the Idundu Bridge in Cross River State which links Nigeria with Cameroon. The bridge, which collapsed on March 25, 2004 under the weight of a haulage vehicle, was built in 1962. The Federal Government is expected to provide N1.9 billion of the contract sum, while the Cross River State government would provide N3.6 million as counterpart fund. Before its collapse, Idundu Bridge provided access to Akpabuyo, Bakassi and Akamkpa council areas of Cross River. The new bridge is expected to take a dual carriage form, 240 metres long and 112 metres wide, according to the agreement.

The objective of this study was to determine the impacts of the Idundu bridge construction and road rehabilitation on access to economic opportunities, Education, household income, health, marketing and employment of local people.

### **METHODOLOGY**

#### **The Study Area**

The study was carried out in Idundu village at the outskirts of Calabar in Cross River state, South-eastern Nigeria. This village was chosen because of its location within the immediate vicinity of the village and the benefits of the road construction and bridge repair were potentially very high, especially as Bridge links Nigeria with Cameroon (Fig 1). The Bridge provided access to Akpabuyo, Bakassi and Akamkpa council areas of Cross River. It also helps in connection with input/output supply and delivery for a major cement factory (UNICEMENT) in the nearby city of Calabar.

#### **Data Collection**

The study adopted a combination of qualitative and quantitative methodology, including informal interviews with some citizens. Structured and semi-structured questionnaires were used to collect data from beneficiaries and non-beneficiaries. Desk and Internet Research was conducted. Fifty questionnaires were administered to randomly selected direct beneficiaries of the road project, while 20 each were assigned to non-beneficiaries. Focused group discussions (FGDs) were held with heads of households or their representatives.



**Figure 1:** The author (center) with Chinese construction workers (above) and the road under construction at Idundu, near Calabar (below).

### **Data Analysis**

The questionnaires had several closed ended questions with appropriate rating scales hence, SPSS software was used in the analysis. Simple frequencies and percentages generated from the analysis are presented in tables and figures to discuss data and information on various issues addressed by the study objectives. Furthermore, the FGDs and informal interviews were carefully content analysed and used to complement the qualitative data.

## **RESULTS**

### **Beneficiaries**

The socio-demographic background, covering sex, age, marital status, religion and education of the respondents for the road construction project is

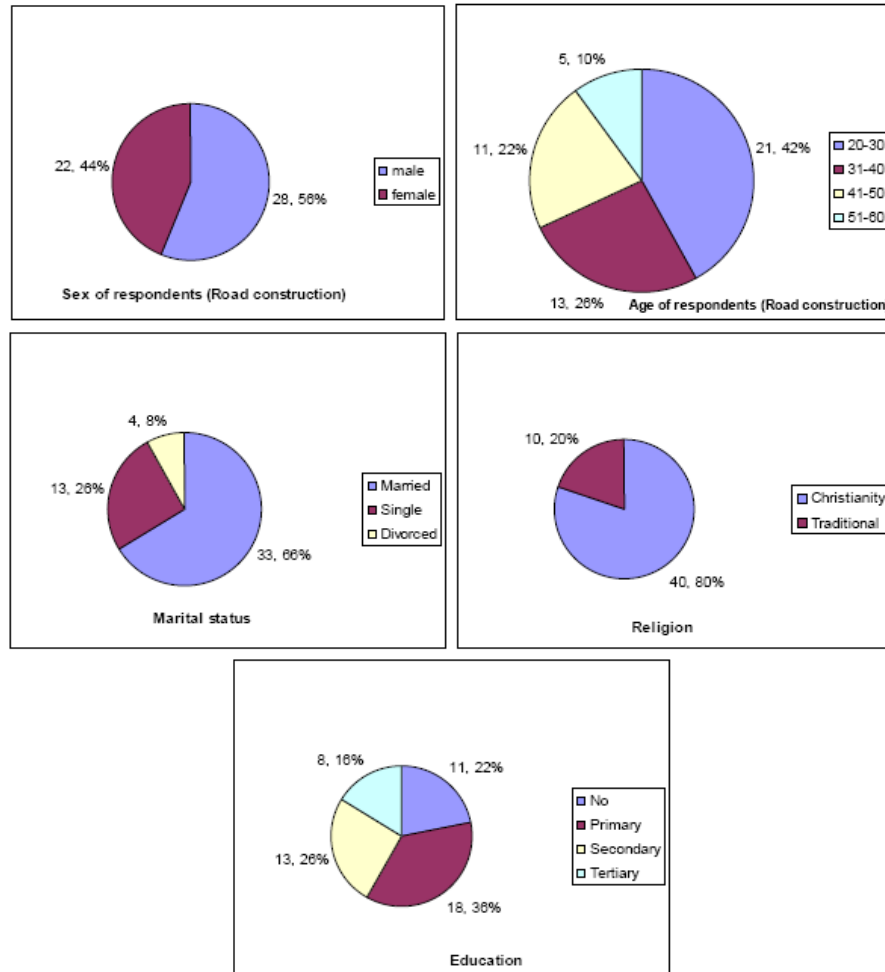
### *Chinese Involvement in Nigeria's Infrastructural Development*

shown in Figure 2. Of the 50 respondents interviewed, 22 (44%) were females while 28 (56%) were males. The modal age was 21-30 years with 21 respondents (42%), followed by 31-40 years with 26% of respondents. Only 10% of the respondents were aged 5-60. Among the respondents, 33 (66%) were married, 13 (26%) were single and 4 (8%) were divorced. Eighty percent of the respondents were Christians while 20% considered themselves under traditional religion. In terms of education, 11 respondents (22%) had no formal education, 18 (36%) had primary education, 13 (26%) had secondary education and 8 (16%) had tertiary education.

All the respondents agreed to using the new road constructed by the Chinese Company (Table 1). About 82% of them had a difficult experience transporting their farm produce and other goods to markets before the road was constructed but most respondents (78%) held that construction of the road brought new jobs to the community. Even more people (96%) believed that the road improved how they connect with neighboring communities and 82% of respondents agreed that the new road reduced their traveling time. When questioned whether the road has increased their access to life saving providers such as ambulances, emergency police and clinics, 76% of the respondents answered yes and all the respondents, were of the opinion that their business activities also improved. Table 1 also showed that 76% of the surveyed population considered the new road to have met their need for infrastructural development, 10% did not and 14% believed it partly met the community needs. Of the 50 respondents surveyed, 21 (42%) believed the project improved their income very much, 34% had moderate improvement in income while 24% did not have an increase in income. On the environmental impact of the project, 72% of the respondents did not consider that it damaged the environment; only 8% believed so while 20% did not know. Majority of the respondents (84%) generally had very positive perception of the Chinese, while 82% believed the project improved their lives and that of the community (Table 1).

#### Non-beneficiaries

Eighty percent of the non-beneficiary respondents were males and their modal age was 31-40 years (Table 2). Forty five percent of respondents were married, 35% single, 15% divorced and 5% widowed. Most (55%) had secondary education and all reported no improvement in their means of transporting farm produce with 80% suggesting that the bad road hindered business activities in the area or makes calls for help difficult during emergencies. They also believed that the poor state of roads contributed to unemployment and reduction in income. Therefore 75% of respondents expected their incomes to stay the same in the coming year. Some 30% expected their income to even decline.



**Figure 2:** Background information on respondents (beneficiaries) for the road construction project at Idundu village, Cross River state, Nigeria.

### Livelihood change among project beneficiaries

Compared with the situation before, the road construction project created job opportunities as suggested by 78% of the beneficiaries (Figure 3). Most were employed directly at the construction sites or indirectly as suppliers of construction materials, with considerably better income. Before the road

***Chinese Involvement in Nigeria's Infrastructural Development***

construction, 82% of beneficiaries had difficulty transporting farm produce and other goods to the market; only 33% had such difficulty after the road construction. Overall, the low personal income experienced by 80% of respondents before the road project was experienced by only 53% of people after the project. As a result of increased personal incomes of beneficiaries of, they were able to improve their life style by purchasing more household supplies and even electronic items like mobile phones, televisions and motorbikes. Most were able to pay children's school fees promptly and afford their health bills and taxes.

**Table 1: Responses of beneficiaries.**

S/N				
1.	Have you been using the new road constructed by the Chinese?	Yes: 50 (100%)	No: 0	
2.	Before this road construction, your experience in transporting produce to the market has been?	Difficult: 41 (82%)	Same: 6 (12%)	Easy: 3 (6%)
3.	Has the road constructed created jobs in the community?	Yes: 39 (78%)	No: 11 (22%)	
4.	Has the road improved method of connection of people to other villages or states?	Yes: 48 (96%)	No: 2 (%)	
5.	Has the new road reduced your traveling time?	Yes: 41 (82%)	No: 9 (18%)	
6.	Has new road improved access to life saving providers?	Yes: 38 (76%)	No: 12 (24%)	
7.	Has business activities increased by the new road?	Yes: 50 (100%)	No: 0	
8.	Has project met needs of community in terms of infrastructures?	Yes: 38 (76%)	No: 5 (10%)	Partly: 7 (14%)
9.	How has your household income increased by the road construction	Very much: 21 (42%)	Moderate: 17 (34%)	No: 12 (24%)
10.	Has the road construction damaged the environment?	Yes: 4 (8%)	No: 36 (72%)	Don't know: 10 (20%)
11.	Perception of people about Chinese	Positive: 42 (84%)	Negative: 8 (16%)	
12.	Has new road improved your life or life of the community?	Yes: 41 (82%)	No: 9 (18%)	



**Table 2:** Background information and responses of the non-beneficiaries.

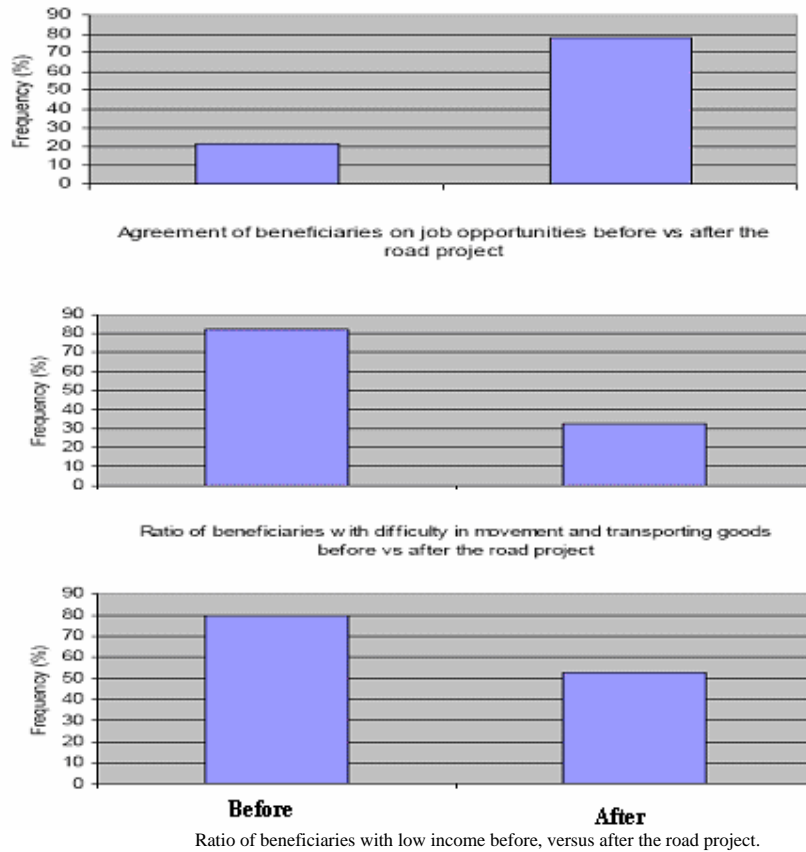
S/N					
1.	Sex	Male: 12 (60%)	Female: 8 (40%)		
2.	Age	20-30: 2 (10%)	31-40: 6 (30%)	41-50: 4 (20%)	60-70: 3 (15%)
3.	Marital status	Married: 9 (45%)	Single: 7 (35%)	Divorced: 3 (15%)	Widowed: 1 (5%)
4.	Religion	Christianity: 20 (100%)			
5.	Education	No: 4 (20%)	Primary: 4 (20%)	Secondary: 11 (55%)	Tertiary: 1 (5%)
6.	Bad road in the community	Yes: 20 (100%)			
7.	Improvement in method of transporting farm produce this year	No: 20 (100%)			
8.	Bad road hinders business	Yes: 16 (80%)	No: 1 (5%)	Don't know: 3 (15%)	
9.	Bad road impedes access to hospitals and police	Yes: 20 (100%)			
10.	Nature of road impedes movement to other villages	Yes: 15 (75%)	No: 2 (10%)	Don't know: 3 (15%)	
11.	Reduction in time spent in moving to other villages over the years	No: 14 (70%)	Don't know: 6 (30%)		
12.	State of road affects or cases unemployment	Yes: 10 (50%)	No: 4 (20%)	Don't know: 6 (30%)	
13.	Bad road leads to lack of infrastructure	Yes: 15 (75%)	No: 2 (10%)	Don't know: 3 (15%)	
14.	Bad road affects income	Yes: 9 (45%)	No: 3 (15%)	Don't know: 8 (40%)	
15.	Change in income over the last two years	Higher: 3 (15%)	Lower: 6 (30%)	The same: 11 (55%)	
16.	Expected income for next year	Higher: 2 (10%)	Lower: 3 (15%)	The same: 15 (75%)	

## DISCUSSION

Rural roads are very vital to the socio-economic and political development of rural communities or the rural population in Nigeria. These roads provide access to schools, clinics, farms, markets, neighboring rural communities, etc. They also link rural areas to the higher order road networks, providing links between the rural areas and urban centres, and facilitating the movement of people, goods and service between the rural communities and other villages. Chambers (1983) noted that poor accessibility in rural areas often slows down the diffusion of new technologies and techniques, increases production

### *Chinese Involvement in Nigeria's Infrastructural Development*

and marketing costs, reduces spatial interaction and limits access to education and health facilities. It also constrains mobility and aggravates isolation. In spite of the contribution of rural roads to rural economy, the state of rural roads in Nigeria is very pathetic.



**Figure 3:** Livelihood change of beneficiaries as measured by changes in job opportunities, ease of transportation and income.

Chinese involvement in rural road is having positive outcomes and effects on rural communities as shown by our data. All the beneficiaries of the road project in Idundu village agreed to enjoying the new road constructed by the Chinese Company. Before this road, about 82% of them had a difficult experience transporting their farm produce and other goods to markets. However, the new road not only eased movement but provided new jobs and

economic opportunities for the community. Even more people (96%) believed that the road improved how they connect with neighboring communities and 82% of respondents agreed that the new road reduced their traveling time. Other social benefits included access to life saving providers such as ambulances, emergency police and clinics. The road also met the need of the community for infrastructure and indirectly or directly improved people's income. Through our verbal interview, the school enrollment rate was higher in villages with all season road access compared to those with unreliable access. Thus, rural roads promote access to educational facilities through increased enrolment rates and improved class attendance.

Majority (72%) of the beneficiaries did not consider that the road project damaged the environment while 20% were unconcerned. One major outcome of our survey was the positive perception of the Chinese by local people within the project site evaluated. This perception has far-reaching diplomatic goodwill in the China-Nigeria cooperation and exchange.

### **SUMMARY AND CONCLUSION**

The study was carried out in the rural community located at the southeastern city of Calabar, Nigeria. Road construction by Chinese companies was considered a positive change in the affected community as most (82%) of the beneficiary respondents had difficulty transporting their farm produce and other goods to markets before the road was constructed. The road construction created new jobs, expanded economic opportunities and reduced significantly the time for moving from one community to the other. It also increased access to life-saving services such as ambulances, police and clinics. Majority of the respondents generally had very positive perception of the Chinese, and believed the projects improved their lives and that of their communities. This field work has shown that Chinese involvement in infrastructural development is having huge socio-economic benefits to rural welfare in local government areas in Nigeria. The impacts are manifest especially in the areas of livelihood, high productivity and income. For an even greater benefit, we recommend that the Chinese companies should employ some more Nigerians in their companies for effective training on the maintenance of the road. Our overall conclusion is that Chinese involvement in Nigeria's key sectors such as road construction is a significant positive contribution to people's welfare at the community level.

### **REFERENCES**

- Ahmed, R and M. Hossain (1990). Development Impact of Rural Infrastructure in Bangladesh. Washington DC: IFPRI.

### ***Chinese Involvement in Nigeria's Infrastructural Development***

- Alli W. O. (2007). China-African relations and the increasing competition for access to Africa's natural resources. Paper presented at the International Conference on the New Scramble for Africa, Banquet Hall, State House, Abuja, p.6.
- Byrd, W and N. Zhui (1990). Market Interactions and Industrial Structures; in W. Byrd and Q. Lin (eds.), *China Rural Industry: Structure Development and Reforms*. New York: Oxford University Press.
- Chambers, R. (1983). *Rural Development, Putting the Last First*. London: Longman.
- Lebo, J. and D. Schelling (2001). *Design and Appraisal of Rural Transport Infrastructure: Ensuring Basic Access for Rural Communities*. World Bank Technical Paper No. 496. Washington DC: The World Bank.
- Levy, H. (1996). *Kingdom of Morocco – Evaluation Report- Socio-economic Influence of Rural Roads Operation Evaluation Department*. Washington DC: The World Bank.
- Mead, D. (1984). Of Contracts and Subcontracts: Small Firms in Vertically Disintegrated Production/ Distribution Systems in LDC. *World Development* 12(11&12): 1095-1106.
- Musa, M. S. (1999). Impact of Feeder Roads in Jebel Si, Rural Council Area on Food Security Balancing The Load. *Proceedings Nigeria. A Ten-year plan of development and welfare for Nigeria*. Lagos: Government Printer.
- Nigeria Business times (2007). Nigeria-China Relations in perspective: 1999-2006, *Business Times* March26-April 2007, P.42.
- Ogunsanya, A. A. (1987). Rural Accessibility Problems and Human Resources Development: Case study from Nigeria. *Journal of Rural Studies* 3(1): 31-42.