

Impact of New Road on Rural livelihood in Bangladesh

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Abstract:- The study aims to understand the impact of new road on the inhabitants in rural area. A new road dramatically change people's lifestyle with local economy and socio-cultural environs, trade & commerce, transport development, infrastructural expansion, establishment of small to medium scale industries and urbanization occurs due to establishment of new highway. 76% respondent said that a new road have too much impact on occurring urbanization, 74% said that transport development too much in the study area and 65% new small scale industry developed in the rural area with the help of new highway. Women participation increased in the study area and surprisingly 31% people related with trade. After completing the road in 2002, 31.12% population increased in the locality within one year according to BBS report. So we should make more highways to improve our economic condition. New road means new trade, industries and urbanization.

Keyword:- Impact, livelihood, Road, Rural area, Socio-culture Scenario

I. INTRODUCTION

Human civilizations flourish with transport network or connectivity, such as road, highway, waterway etc. In the early world waterways were common and possible means of communication. But, since last 6000 years civilizations start constructing land based transport network or road. Single Roman empires have 78,000 km of stoned road throughout their empire [1]. Following, in medieval Europe, road development has strong socio-economic influence through which the people's lifestyle changes dramatically within a short period of time [2]. After WWII the world experienced exponential growth of land based transport route, besides water ways.

Road development helps USA to renovate its urban areas [3]. In consequences new investment opportunities create an increase in economic growth. New entrepreneurs prefer to establish their business next to newly connected area [4]. Thus those new roads influenced economic development and changed their life.

Connectivity, cohesion and easement in transportation are the most important aspects of road development. African regions are trying to establish Tran's boundary transport network for economic growth. Without cohesion and integration of regions balanced development remains impossible [6].

In the age of globalization both economic activity and traffic demands help each other to grow. Road or transport network helps those actions to take place [7]. Likewise, redevelopment and expansion of road also increase economic activity through which a place urbanized more [8]. Road development in an area has some negative impacts too. Such as, loss of habitat, displacement of living area, demolition of exiting infrastructures, shift in land use pattern and more significantly negative environmental impacts [9]. Road accident cause many deaths every year. Only in EU on an average 40,000 people died by road accident each year [10]. In capitalist world road development is the major factor of economic development [11]. Urbanization, industrialization and improvement in quality life occur by road development [12]. According to Organization for Economic Co-operation and Development (OECD),

"Road is a line of communication using a stabilized base other than rails or air strips open to public traffic, primarily for the use of road motor vehicles running on their own wheels".

Road includes "bridges, tunnels, supporting structures, junctions, crossings, interchanges and toll roads, but not cycle paths". In ancient time roads refers to a tract or route without any human intervention [14]. But in modern time roads are especially built or prepared to permit different mode of transport. *Nalka-Hatikamrul-Banpara Highway* is one of the important highways, bridge between *Nalka to Banpara* through '*Chalan Beel*'. This highway has connected the western part of Bangladesh with the capital Dhaka in more efficient manner. It is 55

kilometers long goes from East to West. It has a unique character which is it has two lane separate lane, one lane is for heavy vehicles and another lane is for ordinary vehicles. This highway is also included in Asian highway and it is the third route of Bangladesh which started from *Mongla* sea port through *Jessore-Banpara-Dhaka* to '*Tama Beel*' route. It is the only highway of Bangladesh has given toll by the vehicles ownership. Average 2500 vehicles use this highway per days. This highway has a great impact on three port of Bangladesh as like as "*Benapole*" and "*Sona Masjid*" land port and *Mongla* sea port. The study aims at understand the socio-economic condition, transport system and the impact of new highways on the livelihood of the dweller in the study area.

II. METHODOLOGY

The study is explorative and to some extent descriptive in nature that enforces to adopt mixed with qualitative and quantitative data as well as secondary and primary data. The primary data were collected from a structured questionnaires, interviews, focus group discussion and observation. The secondary data were collected from different sources. The questionnaire survey was conducted based on purposive sampling which includes 100 respondents. The primary data were analyzed using various statistical software. Such as SPSS, MS Excel. We use spatial software ARCGIS to produce map.

1.1. Study Area

Banpara municipals are located on the southern part of the *Natore* district. It is situated 18 Km south from *Natore* town. *Banpara* municipals are the central point between two union named *Majgoan* and *Juari*. *Banpara* municipals are the middle point *Nalka-Hatikamrul-Banpara* highway and *Rajshahi-Natore-Pabna* highway. *Banpara* is connected among *Natore*, *Siraganj*, *Pabna*, and *Kustia* district. As a transport network *Banpara* is known to a node and it has a great accessibility for transportation.

Banpara municipal is youngest municipals of Bangladesh. This municipal has grown up impact of *Nalka-Hatikamrul-Banpara* highway. *Banpara* municipals establishment in 2002. The total area of *Banpara* municipals is 6.92square kilometers. It has also 9 wards and the total population of *Banpara* municipals is 22,349[15]. *Banpara* municipality highway located between two highways and one of them recently developed. That's why we select it as study area.

III. RESULT AND DISCUSSION

1.2. Economic Benefits

This Highway has a great importance to develop the region economically. It is easy to communicate to the capital of the country with very less transportation cost, because of the road. There is been a revolutionary progress in marketing raw goods countrywide. Non-durable goods like milk, vegetables, different types of fruits can be quickly marketed. As a result farmers are paved road and some are in unpaved condition. There are two Bus-stands in the study area, one of them is *Banpara* bypass bus-stand and another is Bazar bus stand. Local people used these bus stands to communicate countrywide. There are also some tempo stands on the study area. This vehicles are used as a means of transportation for human and different kinds of goods. Locally people used van, rickshaw, Bi-cycle, auto-rickshaw, and motor cycle for their daily transport.

1.2.1. Infrastructural Development

This highway system has a great significant role to establish infrastructure. Some modern building is established in *Banpara*. Although majority percent infrastructure of *Banpara* is made by tin shade building. Some are built using by straw made. Recently some high rise building has been established in *Banpara*. These buildings are used for market center, office and department store. Some buildings are used in residential purpose. Tin shaded buildings are used for trade and commerce as a store house. Poor peoples are lived in straw made house. At this time infrastructures are changing day by day by the impact of this highway. A table is given below different types of infrastructures of *Banpara*.

Table 1 Infrastructural Development

House types	Percent
Straw made	22
Tin shade	68
Building	10

The Table 1 shows the infrastructural development in *Banpara*. About 68%. of infrastructure is made by tin shaded infrastructures which is used for commercial and residential purpose. Mostly middle class and lower middle class family are living tine shaded building. Only 10% building is made by bricks is used for official purpose and some are in market center. Some rich people are living in this types of buildings too. About 22% house made by straw. The poor people are living in this types of houses. Here we saw that tin shade infrastructure is popular in the study area.

1.2.2. Trade and Transport Development

Mostly agricultural with some industrial products have circulating the local market. Medium sized whole selling business are dominating the market of the study area. So much so it became a market of whole sellers. Even they are coming from different places from Bangladesh. Different types of agriculture products, fruits are exchanging in these markets. Many garments products are also sell in whole sells. Whole sellers buying different types of agricultural crops like Banana, Eggplant, Onion, Mango, Dal and various kinds of sweets. There are also market places for livestock's such as hen, duck, cows, buffalo, goat etc. Businessman's are collecting livestock's from local market to send them to capital city. From there these livestock's are distributed throughout the country.

Table 2 Market Development of the Study Area

Name	Percent
Agricultural	72
Industrial	16
Others	12

The following Table 2 describes market extend in *Banpara*. Mostly agricultural product are expend quickly because it is located agricultural region. About 72% agricultural product cover of the total market and only 16% commodity covered by industrial product some others product covered a little area which is only 12% of the total.

1.2.3. Transport Development

The new national highway generates many new sets of vehicles available there. Now the study area has a Tempo (a vehicle) stand, Microbus service, bus stoppage. Many people of the area earn livelihood through Tempo driving. Buses are used for long journey.

Table 3 Total Number of Vehicles

Types	Percent
Tempo	54
Micro bus	18
CNG	14
Bus	8
Truck	6

The Table 3 mentioned that different types of transport development in *Banpara* mostly local vehicles are developing here. About 54% covered by tempo, CNG 14%, micro bus 18%, Bus 8%, and only 6% covered by truck. As result so that tempo is higher and track is lower develops in transport sector. All kinds of vehicles are establishing the development of this highway system. One of the respondents, Md. Biplob Hossain, aged 35, was a unemployed person. That economic condition of Biplob's family was poor. The road construction authority compensated them for some of their land taken to build the highway. They got total 50,000 BDT from that purpose. He invests that money for fruits business. His business grows and now his monthly income is over ten 10,000 BDT. His poor condition change to much better position. Now he own house, vehicle and more than one business. Alike him many people have change their economic condition through this road development. The road has a great influence to change their economic condition.

1.2.4. Establishment of Industry

Some small scale industry has also developed in the study area such as rice mill, saw mill, lathe factory, sanitary goods making factory, different furniture industries, bakery industry etc. Some hatchery produced quality fish fry and supplied throughout the region. There are also an auto bricks industry build in the study area. In the study area some nursery is producing plant seeds in commercial basis. A lots of people works in these sectors. All these economic activities directly or indirectly connect to the new highway.

Table 4 Industrial Construction

Types	Percent
Cottage industry	62
Medium industry	32
Heavy industry	6

The Table 4 reveals that the establishment of different types of industry in study area about 62% industry covered by cottage or small scale industry and 32% develop medium scale industry. Heavy industries

cover only 6% only of the total industries. It is a new municipalities area and cottage industry expanding rapidly. Although it is a suitable place for establishing medium scale industry. One of the respondents, Md Abdul Malak was a poor man. He lived under the poverty line before the development of the highway. But after the highway opened he bought a small vehicle (local name tempo) for port service. Now his daily income is approximately 350 BDT. He got his family out of poverty and developed his residence too. Alike Malak many people change their economic and social life after the highway opened.

1.2.5. Urbanization

Banpara Municipality has some urban residential area. Mostly urbanization is occurred in Banorupa residential area. Banorupa residential area is built for high society. There are also some residential areas located in Banpara. Such as Banorupa, Sharda para, Madha para and Shaheb para. Every urban area has some facilities like security, education, better communication etc. The total population of Banpara is 23249 thousand.

Table 5 Urbanization Population of Banpara

Year	Population	Population increase rate based on previous year
2001	8195	
2002	8972	9.48%
2003	11764	31.12%
2004	12810	8.89%
2005	14183	10.72%
2006	15328	8.07%
2007	17670	15.28%
2008	19256	8.98%
2009	21990	14.20%
2010	23249	5.73%

Source: Banpara Municipal Authority

The Table 5 shows the trend of urbanization of Banpara is increasing day by day. People migrating here from near villages. The urbanization rate of the study area is approximately 22%. So many businessmen are setting their office in the study area for official purposes such as, private banks, insurance companies and NGOs etc. Those who work there stay there too for residential purpose. Trade and education facilities are another pull factor to attract people to live in the study area. Even business class people from Comilla, Noakhali, Pabna etc. also lived here for economic reason. One of our respondents, Md. Kader Ali, aged 48, lived in Banpara bypass area. Around 4 Katha (local indicator of land) of land has been taken from him by the road construction authority. He compensated with a well amount of money and starts business with it. He starts a confectionery shop in bypass area which has a lot of customers. His business runs good and can enjoy a healthy monthly income. Earlier he was a poor farmer but now he became a solvent person because of the consequences of the new highway.

Table 6 Development Related to Highway

Degree of Impact for a new highway (Based on Likert Scale [12])	Development factors					
	Transport System	Infrastructure development	Trade and transport development	Mode of transport development	Establishment of small scale industry	Urbanization
Too much	69	71	31	74	65	76
Much	27	21	28	20	32	14
A little	2	0	33	3	0	6
Very little	0	5	5	1	0	3
No comment	2	3	2	2	3	1

The Table 6 shows the various factors in Likert scale demonstrating the degree of impact. Urbanization is influenced most. Mode of transport change significantly with recent development. New infrastructures and small to medium scale industries emerge and spread in the region.

1.3. Socio-cultural impact

1.3.1. Educational development

The study area was a populated with a large numbers of potential students. So few educational institutes started there for primary education. For comparatively wealthier family there are few coaching center. An agricultural and technical collage established to teach excess number of interested students. There are also a fathers training institute in *Banpara* which is operating by the Christian missionary. So huge number of student study here as a result the better quality of educational institutes of the study area. Most of them flourished after the transport road development. In result of that education rate is higher than other municipal area.

1.3.2. Cultural change

Every year the region observing several national and international festivals. Such as international mother language day, book fair and concerts etc. Dance club culture also new in the area. Most of the children are engaged in learning dancing.

Drug availability is a negative consequence of the route development. Mostly young people and student are Seriously Dug addicted. As a result they lose their ability to work and engaged different types of crime.

1.3.3. Women Participation

This high way system has played an important role to create women employment. They works in beauty parlor, hospital, nursery, departmental store, rice mill and auto bricks factory etc. Along with this the social view of women workforce is also changing. Their engagement as a workforce is changing the social structure of the study area. The change is highly correlated with the road network development.

1.3.4. Source of employment and poverty alleviation

In the study area directly or indirectly a lots of people are being engaged in newly evolved commercial activities. Most of the people engaged in some sorts of transportation business. The agricultural products along with other industrial finished products of the region moves countrywide through the recently developed transportation system. New hotel, restaurant and pharmacy generates some jobs. Many people are involve in trade and business. Many people work dairy farm, poultry, nursery etc. There are numerous educational institutes. The employment opportunity is increasing since the road development. Income level of the inhabitants are increasing.

Table 7 Types of Occupation

Types	Percent
Agriculture	28
Trade	36
Service	16
Labor	12
Others	8

The Table 7 reveals the occupation types of *Banpara* municipals area. The peoples of *Banpara* municipals are engaged different kinds of occupation. About 28% peoples are directly depends on Agriculture. Majority people of *Banpara* are depends on trade which covered 36% of the total *Banpara* is a municipals area so it has a large number service holder about 12% peoples depends on service. Although it is a municipals area but it has some day labor about 8% people are day labor. Some people are engaged with others sector which covered 8% of the total.

1.4. Rehabilitation

During the road development many land been grabbed due to it. The affected people got compensation money. People used that money rehabilitated as well as many of them started new business. Many of those business are now producing money. Besides new economic opportunity helped them to restore their initial displacement.

Table 8 Condition of Rehabilittee People

Types	Percent
Very much development	68
Much development	32

This chart mentioned that the scale of development of *Banpara* municipals area. Those people are rehabilittee, are developing day by day. We saw that about 68% people are doing very much development and 32% people are much development in various way. They change their economic condition and leads happy family.

IV. CONCLUSION

This new road changed everything in this area. Every local sector has improved day by day especially, in socio economic sectors. It has played vital role to improve trade, industrialization and urbanization. This high way has occurred a revolution for transport. For easy transport system it has good accessibility to communicate others part of Bangladesh this network generates new income source of this area. Now *Banpara* is well known to a business center of Bangladesh so *Banpara* municipal authority or Bangladesh Government need a master plan for its proper management.

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