

An Exploration of the Role of Non-Conventional Mechanized Transport in the Northern Bangladesh: A Supply Side Analysis

MD. NASIR UDDIN GONI*

A N K NOMAN**

MD. ABDUR RASHID SARKER***

Abstract *In the absence of adequate investment in rural motorized transportation sector, rural people have innovated Non-Conventional Mechanized Transport (NCMT) with their indigenous knowledge and own resources, which has become a mainstay of their earnings, and consequently of the rural economy. This paper explores the key socio-economic issues regarding NCMT. In doing so, a survey was conducted with the suppliers such as drivers and owners of NCMT using a structured questionnaire with face to face interview method. Six Upazillas from Rajshahi and Bogra districts were selected purposively as the study area. Findings show that there exist three kinds of NCMT such as Framed body, Plain body and Steering in the study region. The study also reveals that NCMT has attracted people from many different occupations and has been significantly contributing to rural as well as national economic growth by generating employment and investment. The diversity of its use has established it as the nucleus of all economic and social activities in rural Bangladesh. To widen the contribution of the sector the Bangladesh government could adopt some supportive measures such as forming a local regulatory body, improving mechanical devices, initiating training program for the drivers and so on. The findings also lead to the conclusion that there are ample opportunities to exploit the potentials of this emerging transport network to push the frontier of our economic development further.*

Keywords: Rural Transport, Supply Side analysis, Northern Bangladesh

* Assistant Professor in Economics, OSD, DSHE and Ph.D Fellow, IBS, Rajshahi University.
** Ph.D., Professor, Dept. of Economics, Rajshahi University
*** Ph.D., Associate Professor, Dept. of Economics, Rajshahi University

1. Introduction

Rural economy in Bangladesh still occupies a key position and the performance of the economy largely depends on the performance of rural economy. The Bangladesh economy has been growing consistently over the last three decades and the rural economy has been remaining at the centre of this growth process. The key of this robust performance of rural economy is rural transport system and the nucleus of this rural transport system is (NCMT)⁴. It was introduced to meet the growing demand for faster movement of goods and passengers. Rural road network was developing with a gradual shrinkage of water transport as well as the incapacity of conventional transport to meet the demand for rural economy. The local people have innovated it with their local knowledge and resources. Now all of the economic activities are circled around this non- conventional transport vehicle. It is playing the crucial role to generate income, to increase agricultural production and production diversification, human development such as health, nutrition and education, reducing isolation of the rural people. As many people are involved in this sphere directly and/or indirectly it is said now-a-days that NCMT plays a proactive role to enhance the welfare of rural people.

The overall objective of this paper is to assess the role of NCMT in economic development of rural Bangladesh.

The specific objectives of this paper are set out as follows.

- To describe the types and operational modes of NCMT;
- To explore the socio-demographic information about the owner and driver of NCMT; and
- To analyze the role of NCMT in socioeconomic development of rural economy.

⁴ NCMT stands for Non-Conventional Mechanized Transport and is locally known as “Nosimon”, “Korimon”, “Votvoti”, “Alomshadhu” etc in the different parts of the country. There are basically two types of NCMT, nosimon and korimon. It was introduced by a person named Rafique from Boraigram of Bogra district during 1980s. He was a bicycle maker. Firstly he made it combining a low horse power shallow engine and a rickshaw van. Since its introduction in 1980s, it has gone through a process of development on trial and error basis without any official research. It has now reached a phase of maturity and has been expanding very fast. Now it is available in alternative designs and models based on the demand for different types of transports. These innovative people are constantly upgrading the design and mechanical devices and this will remain at the centre of rural economic activities for decades to come in Bangladesh. It becomes the lifeline of almost all the people in rural Bangladesh.

2. Methodology

2.1 The data

The methodology of this study includes selection of study area, sample size, selection of respondents, and data analysis tools for the impact of NCMT in the economic activities of the rural people. Primary data were collected from the owners and drivers of this transport in the rural areas using a structured questionnaire. Face to face interview method was followed for collection of data.

Study Area

It is observed that the NCMT is widely used all around the country except in hills and haors. Though it is used around the country, the concentration and intensity of use is much higher in the Northern Bangladesh. In this context, two districts from Northern Bangladesh, Rajshahi and Bogra were selected purposively. The district of Bogra is the principal manufacturing area for this type of transport while Rajshahi is one of those areas where NCMTs are used extensively. Three Upazillas were selected purposively from each district and a simple random sampling technique was then used to select the respondents. Total sample size is 78.

3. Findings and Discussions

3.1 Types of NCMT

Based on the structure of body, NCMT could be classified in three broad categories. These are Framed body, Plain Body and Steering as illustrated in Table 3.1. A brief overview of these types is presented below.

Framed body

Framed body is characterized by its body structure. Structurally this kind of NCMT is covered by some rods and irons across half of the body of NCMT. This type is covered with rods and some steel plates. These NCMTs are very common in all the six study areas. Any kind of goods and people of most walks of life are being transported easily by this transport. This flexibility and easiness of use is the reason for the existence of these kinds of transport in all upazilas of the study areas. The concentration of Framed body is highest in Dhunot, while Sherpur, Shibgonj, Paba and Puthia contain nearly about 50 percent of NCMT as Khacha. Mohanpur has the least concentration of Khacha among the upazillas.

Plain Body

The second type of NCMT is known as plain body. It looks like just rickshaw van. A shallow engine is placed on it instead of peddle. This is the justification for its name as plain body. This kind of NCMTs is available mostly in Rajshahi District. The drivers and the people of Bogra district are not familiar with this type of transport. Their purpose is served by the Framed and Steering type of NCMT.

Table 3.1 : Types of NCMT

Area	Number per route	Framed body (%)	Plain Body (%)	Steering (%)	Total (%)
Dhunot	57	90	0	10	100
Sherpur	81	67	0	33	100
Shibgonj	80	78	0	22	100
Mohanpur	71	27	48	24	100
Paba	71	37	40	31	100
Puthia	102	50	45	5	100

Source: Questionnaire survey, 2013

Steering

All of the six study areas contain Steering type of NCMT. It is well known as Steering because of its handling system. This is driven and controlled by a steering. This type of NCMTs mostly use high capacity shallow engine, powered by 18 Horse Power (HP) to 32 HP. This contains 4 to 6 gears within it, and a heavy braking system and other modern technical devices.

3.2 Socio-Demographic Information of the Owner of NCMT

Some of the basic information regarding age, education and training of the owners and drivers as well as the mode of operation according to the types of the vehicles are presented in Table 3.2. It is found that the range of age of the drivers of the NCMT is from 16 to 55 years. The average age of the people who drive the NCMT in the study area is about 33 years. Besides driving, the drivers also perform the duty of loading and unloading. The cost of loading and unloading is inclusive in the cost of freight. So only the strong and physically fit people are generally the drivers of NCMT. Those people, with the ability of doing any hard work, are able to drive these vehicles.

Information regarding education and training are presented in columns 3, 4 and 5 of Table 3.2. Most of the people involved in NCMT are literate and on an average they have received 6 years of education. Only 8 to 10 percent of the respondents in the study area have completed Higher Secondary Certificate (HSC) or Graduate level education. Whether literate or illiterate, it does not make any difference in terms of their earning in this profession.

Training for learning driving and training of drivers about the technical issues regarding vehicles is important for safety and security of the passenger and drivers. However, almost all the drivers of NCMT have no institutional training to drive NCMT as a professional driver. For the people who want to get the job of NCMT, 3/4 days' field practice is enough to drive NCMT. These people do not feel any problem in driving without any training. About 75 percent drivers have expressed that they have no institutional training to drive NCMT. Table 3.2 column 4 and 5 provide information regarding training of the drivers.

Table 3.2 : Socio-demographic Information of the Owner of NCMT

Area	Average age	Average year of Education	Training		Type of Occupation		Average hours of work per day
			Yes	No	Full time	Part time	
1	2	3	4	5	6	7	8
Dhunot	32	5	23	77	100	00	10
Sherpur	38	6	23	77	100	00	11
Shibgonj	33	5	23	77	100	00	8
Mohanpur	34	5	15	85	100	00	10
Poba	33	7	15	85	100	00	9
Puthia	30	8	15	85	100	00	7
Average	33	6	19	81	100	00	9

Source: Questionnaire survey, 2013

About 25 percent respondents who was involved in Steering informed that they have received 3 to 4 months' informal training.

3.2.1 Occupation before Involvement with and Dependency on NCMT

This sector has attracted people from 15 different types of occupation. They are van puller, rickshaw puller, cart pusher, agricultural and other labor, mason, carpenter, grill and lead workers, petty business, construction worker, cycle/rickshaw maker, transport labor, grocery trader, new comers, or students,

aqua culture, employee of shop and hotel, wood trader, CT driver, and garment worker as shown in Table 3.3. Those who were involved in illegal activities also came to this business. It is found that twenty three percent of the drivers were from agricultural labours. This has given them better opportunity to earn more and get job round the year.

Table 3.3 : Percentage Distribution of Occupation before Involvement with NCMT

Occupations	%	Occupations	%	Occupations	%
Agricultural labours	23	Petty businessmen	9	Grocers	5
Rickshaw and van pullers	17	Mason, carpenter, metal workers	8	Shop keepers, waiters	4
New comers	13	Transport worker, drivers	6	Illegal workers	3

Source: Questionnaire survey, 2013

Seventeen percent of the respondents were from van and rickshaw pullers while thirteen percent have come as newcomers in this occupation. Nine percent of the total respondents were the petty businessmen. Eight percent of the total respondents have come from the occupation of mason, carpenter, and grill and metalworker. Among the total respondents six percent was transport workers and conventional transport drivers. The rest came from occupations like grocery, shop keeping and illegal activities.

It is found from the field survey that people depend on NCMT in two ways. Firstly, some people directly depend on it and the farming people transport their agricultural product through NCMT.

3.2.2 People's Dependency

Within the six study areas it is found that the total number of NCMT is about 6046. Among these, 5755 persons are the owner of those NCMT. Column 2 in Table 3.4 shows the total number of NCMT in the study areas. So it can be said that almost one NCMT belongs to one household. In the study area, according to respondents' opinion, an average household consists of about 4 members whereas the average household size in the country is about 4.4 persons and in Rajshahi Division it is 4.1 person (BBS, 2011). Table 3.4 column 5 shows the total number of population engaged in NCMT in the six study areas.

Table 3.4 : Nature of Direct Dependencies on NCMT

Area	No. of NCMT	No of owner	Family size (Average)	No of Direct dependents on NCMT
1	2	3	4	5
Dhunot	740	670	4	2960
Sherpur	1134	1035	5	5670
Shibgonj	960	925	4	3840
Mohanpur	923	920	4	3692
Poba	1065	935	5	5325
Puthia	1224	1270	4	4896
Total	6046	5755	4	24184

Source: Questionnaire survey, 2013

Among the family members of the respondents, there are 114 school going students in the study area. In addition to direct dependents there are a significant number of people involved in forward and backward linkage activities. These activities include the petroleum supply, maker/repairer, spare parts shops as forward linkage and shallow engine supply, body construction, wheel supply and other mechanical device supply as backward linkage.

4. Agricultural Dependency

It is reported that most agricultural commodities are transported by NCMT. The figures are presented in table 3.5. The table shows that the conventional transport system carries only 26 percent of the agricultural products whereas in an average 74 percent are carried by the non-conventional vehicles. The figures would be much higher if the NCMTs were not forced to operate outside the district headquarters. This is the case for the study areas in Sherpur, Poba and Puthia. The upazillas are located in district headquarters and the movement of NCMTs is restricted by law enforcing agencies.

Table 3.5 : Transportation of Agricultural Commodity by NCMT and CT (in percentage)

Area	Dhunot	Sherpur	Shibgonj	Mohanpur	Poba	Puthia	Average
1	2	3	4	5	6	7	8
CT	22	30	24	25	29	28	26
NCMT	78	70	76	75	71	72	74
TOTAL	100	100	100	100	100	100	100

Source: Questionnaire survey - 2013

One of the striking features of transporting agricultural commodities is that it has significantly reduced the post harvest loss in the field. The harvested crops are immediately transported to safety.

The respondents also expressed their opinion on the suitability of using the NCMT as their first option to transport agricultural goods. Some important reasons are as follows. Firstly, rural agrarian people can minimize their transport costs as NCMT charges very small fare as compared to conventional transport. Secondly, NCMT possesses the feature of carrying any amount of goods which makes it user-friendly particularly to small and medium farmers. Thirdly, NCMT is time-saving as compared to other rural transport such as rickshaw van, bullock cart, push cart etc that ply simultaneously on the rural roads. Fourthly, availability of NCMT in rural areas is very high. People can get NCMT anytime. Finally, the accessibility of NCMT is completely hassle-free. People can have easy access with low fare to NCMT.

Because of these unique characteristics of NCMT, farmers prefer it to carry their goods. Other conventional transports cannot give this type of services in the rural areas, which is why rural people depend on it. Most of the respondents said the students, teachers and others persons engaged with educational institutions used to go to their institutions by this mode of transport. This transport charges low cost than that of others, said the respondents. It is available anywhere and anytime, easy to reserve in any time and it is more comfortable than other transports available in the rural area. For these types of facilities the school and college going people depend upon NCMT instead of CT.

4. Investment in NCMT sector

Total investment and efficiency of employment generation of NCMT is presented and compared with that of the conventional transport in the following sections. Total investment in the study areas and the volume of employment generation by the NCMT are presented in Table 4.1. Ratio of employment generated to volume of investment is also presented in that Table.

The purchasing price of NCMT is considered here as the total investment. The operating cost mentioned in Table 4.1 includes local thana police bribery cost, traffic police bribery cost, local mastan (muscle man), municipality cost, chain master cost etc on the monthly basis in addition to fuel and maintenance.

It is evident in Table 4.1 that there exist more than six thousand NCMT in the study areas. One person drives and operates one NCMT, so total employment generated in this sector is about six thousand persons per year. These created

Table 4.1 : Employment Investment (E-I) Scenario by NCMT Sector

Area	Yearly working man-hour	Total Employment 5 (person/y.	Average Income Tk person/ month	TI6 (100 thousand taka)	TOC7 (100 thousand taka)	E-I Ratio by TI	E-I Ratio by TI (without Steering)
Dhunot	450240	740	12615	1127.14100	1.70385	0.5944	0.8496
Sherpur	608580	1134	12769	1335.93660	1.36450	0.7747	1.3736
Shibgonj	699300	960	13308	1424.50000	1.67700	0.6493	1.3493
Mohanpur	618240	923	16077	1278.09160	1.42900	0.7198	0.8593
Poba	628320	1065	10131	1543.46060	2.01600	0.6057	0.8108
Puthia	719040	1224	14000	1692.02100	1.28250	0.7505	0.9632
Total	3723720	6046		8401.15080	9.47285	0.6850	1.0343

Source: Field Survey, 2013

nearly 40 hundred thousand working man-hour yearly in the job market. Table-4.1 also shows the total investment which is over 8400 hundred thousand taka. The total operating cost is also a considerable amount which is just over 9 hundred thousand taka. It reflects the unusual costs of this sector.

The E-I ratio indicates the number of yearly employment per one hundred thousand taka investment. The average E-I ratio is 0.685, the highest ratio being in sherpur and the lowest in Dhunot. Tables 4.1, 4.2 and 4.3 and Figures 4.1(A of B) compare the E-9 ratio of different mechanized modes of rural transport with that of NCMT. Among the NCMTs, khacha and Plain body types are more than 80 percent. So employment generation is the highest in Khacha and Plain body type NCMT. If we consider employment generation without Steering type NCMT, we get the E-I ratio about 1.0343, which is illustrated in the last column of Table-4.1.

Table-4.2 indicates the performance of the conventional transport, CNG. In the study areas CNG employed nearly 7 hundred persons with total investment of 2488 hundred thousand taka. The E-I ratio is about 0.27, which is lower than that of NCMT. The E-I ratio of bus is also lower than that of NCMT which is shown in Table-4.3. Figures 4.1(A) and 4.1 (B) show the E-I ratios among the different

5. Total employment: In the study area, one NCMT employed one person. So total employment includes the total number of NCMT in each study area.
6. Total Investment (TI): Total investment has been calculated by the initial purchasing cost of each NCMT. So TI is calculated by the initial purchasing cost of NCMT multiplied by the Total number of NCMT.
7. Total Operating Cost (TOC): Operating cost includes maintenance cost of NCMT, fuel cost of NCMT and other costs such as local police, municipality, local mastan (muscle man) at transport sector, traffic police, chain master and so on. It has been calculated for one month.

Table 4.2 : E-I Ratio for CT (CNG)

Area	Total Employment (person)	TI per CNG (100 thousand taka)	TOC per CNG (100 thousand taka)	TI (100 thousand taka)	E-I Ratio
Dhunot	216	3.63750	0.09738	785.70000	0.2749
Sherpur	200	3.63750	0.11189	727.50000	0.2749
Shibgonj	206	3.51875	0.11788	724.86250	0.2842
Puthia	50	5.00000	0.09000	250.00000	0.2000
Total	672			2488.06250	0.2700

Source: Field Survey, 2014

Table 4.3 : E-I Ratio for CT (Bus)

Area	Total Employment (Person)	TI per Bus (100 thousand taka)	TOC per Bus (100 thousand taka)	TI (100 thousand taka)	E-I Ratio
Dhunat	36	12.14567	0.51559	145.74804	0.2470
Sherpur	48	11.66667	0.49166	186.66672	0.2571
Total	84			332.41476	0.2527

Source: Field Survey, 2014

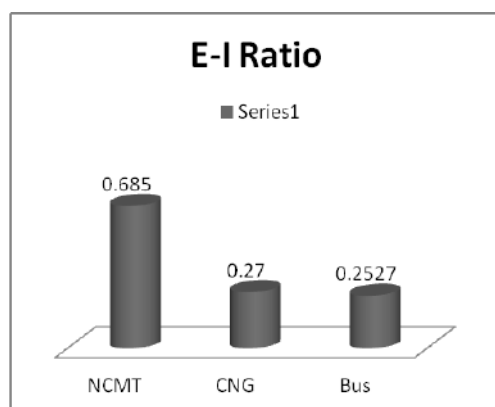


Figure: 4.1(A) - E-I Ratio of different mechanized rural transport mode with NCMT

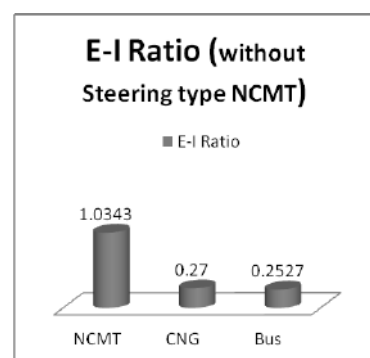


Figure: 4.1(B) - E-I Ratio of different mechanized rural transport modes with NCMT except steering type NCMT

Source: Field Survey, 2014

modes of transport. It appears that the E-I ratio of NCMTS is of other motorized transport.

5. General Observations

The survey report shows that the daily movement of these vehicles are within 50-55 km. NCMTs with 6 to 10 HP engine move locally within 5 to 15 km. route with 3 or 4 trips per day. NCMTs with the heavy duty engines like 25-35 HP move 100 km to 160 km per day. These NCMTs move in different routes daily, but these are not generally used, rather used as reserve transport. On the other hand, NCMT with low HP engine moves as a passenger or freight transport within the locality as a general transport. The owner or driver of those NCMT drives these transport 75 percent daily in one route. But only the bigger one which is about 25 percent of the total NCMT runs in different routes daily. All of these drive 7 days a week. This is because NCMT profession is their main profession and their family depends on it. About 10 to 12 passengers can be carried with the NCMT of 6 to 12 HP engines. Almost 16 and above passengers could be carried through the NCMT with 15 to 25 HP engine (Table 5.1, column 8 to 11).

In the case of freight transport, these are able to carry from 187 to 5598 kg in one trip. This depends on the engine power of the NCMT. Table 5.1 column 12 shows the carrying capacity of the NCMT in the study area. According to the respondents, longevity of the NCMT depends upon its use and care. Some have been seen to live up to 25 years with a bare minimum cost of maintenance.

Table 5.1 : Route Wise Movement System in the Study Area

Area	Average Daily Travel (km)	Type of Movement in %				Movement in a week	Trip wise Passenger (%)				Goods per Trip in kg('00)	Longevity of NCMT in year
		Daily	Often	Sometimes	Different		10 to 12	12 to 14	14 to 16	16 and above		
1	2	3	4	5	6	7	8	9	10	11	12	13
Dhunot	52	77	0	0	23	7	15	0	8	54	31.72	12
Sherpur	55	15	38	8	38	7	38	23	8	0	22.76	14
Shibgonj	53	8	69	0	23	6	23	31	15	15	23.13	14
Mohanpur	55	0	85	0	15	7	8	23	38	15	22.76	15
Poba	51	38	38	0	24	7	8	0	38	23	28.73	19
Puthia	50	8	77	0	15	7	15	38	31	0	18.66	13

Source: Questionnaire Survey – 2013

6. Other Usage of NCMT: The Life Line of Rural Economic Activities

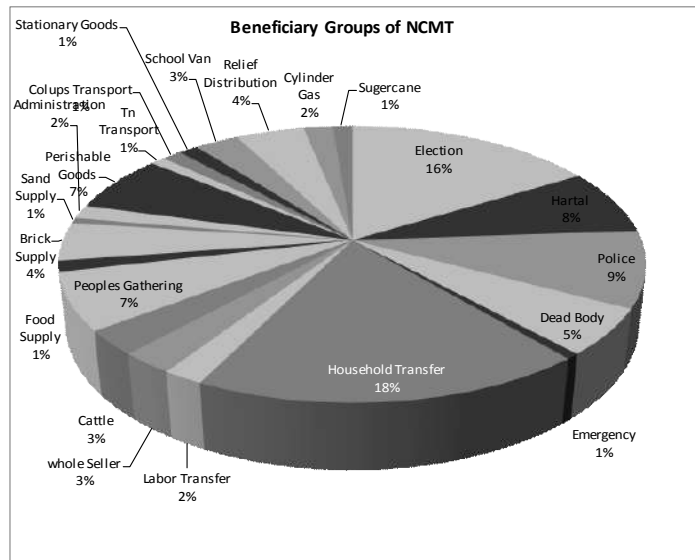
The NCMT types of transport are used in various kinds of business and work in the rural areas of Bangladesh. Government and non-government organizations use these transports daily or in emergency times. The use of these transports can be

divided in three parts, firstly, personal usage: The people of rural areas of Bangladesh use it in celebrations of marriage and other personal celebrations. They also use it in cases of emergency. Bangladesh has the culture of figment hartals and strikes at times of political demonstration. During hartal all kinds of transport are seen to be non-operating but the NCMT never shuts down its operation. The political activists consider it out of the scope of hartal. In the rural areas of Bangladesh these types of NCMT are used in the case of house transfer. Even people carry the dead body to the grave yard. Farmers transport their perishable goods from the field to the market place daily within the shortest possible time. The political person carries the people to the political meetings and demonstrations. People use it to transfer bricks from the brick field to their house. Farmers of the Rajshahi district have been seen to carry their sugarcane to the sugar mills. Owners of the brick fields use these transports to bring wood and coal to the brick field. Early in the morning these transports are used to bring fish to the wholesale market.

Secondly, various non-government organizations use these transports. The gas companies carry the cylinder gas from town to the rural area where the pipeline gas is absent. The whole sale companies transport their goods to the dealers in rural areas. In the rural areas of Bangladesh lots of kinder garten schools har been established. They use this transport as a school van in different study areas.

Thirdly, in the study areas the respondents said the local government organizations use these NCMTs for different purposes. For example, Police use it in their daily duty during night because of the shortage of their own transport. During election time local election commissions use it to transport their election goods to remote areas. Local administrations use it to transfer relief goods, local thana police use it to carry the dead body to the hospital for post mortem. Figure 6.1 shows the different kinds of beneficiaries of NCMT in the rural areas of Bangladesh.

From Figure 6.1 it is clear that the NCMT is mostly used in the rural areas to transfer their house. Local election commission also uses it to transfer the election materials to the poling center and vice versa. Local police use it in their regular night duty in the rural areas. There are no blockades to move the NCMT during hartal day on the rural road. Activists of the political parties consider the NCMT out of the scope of hartal. Political parties also use it for gathering in their meetings. Besides, different types of usage of the NCMT are shown in the Figure 6.1.

Figure 6.1 : Beneficiary Groups of NCMT

Source: field survey, 2013

7. Conclusion

This paper explored the overall livelihood dimension of the NCMT and the livelihood pattern of the people involved with NCMT. A survey was conducted with the owner and driver of the NCMT in the selected areas of two districts. The major findings from the survey are: three kinds of NCMT exist in the study areas; average age of the driver is 33 years; the drivers have no institutional training to drive NCMT; this occupation is their only occupation to maintain their family expenses; total number of 23,020 people and 114 school going children depend on NCMT in the study areas; and about 74 percent agricultural products are transported using these vehicles. These findings have potential to invite appropriate policy measures in this sector. This paper attempts to redress NCMT seeking to change the mindset of the policy makers to think about its importance and role in promotion of transport services in the rural areas of Bangladesh. This paper raises the key issues of the transport in the rural areas statistically. People of the rural areas are able to meet the demand of transport. They proved it through the creation of NCMT by their indigenous knowledge. Policy implications can be made as follow that may be derived from these findings are, among other, the following:

- A rural transport regulatory authority can be formed to institutionalize the NCMT
- Policy should be developed to modernize the NCMT as complementary to existing conventional transport in the rural areas of Bangladesh.
- Huge research is necessary in this sphere. So government should take necessary steps to encourage researches in this sector.
- Initiative should be taken to improve the mechanical device of NCMT.
- Local rural training authority could be formed to train up the drivers and so on.

If these can be done, government of Bangladesh can earn a significant amount of revenue. Rural people will find a diversified and legal sector of employment.

8. Special Remarks

NCMT has already drawn attention both positively and negatively of the people of the country. It has made its presence felt by the mass people. It has been generating huge employment in the informal rural sector and moving the economy by carrying the heavy burden of the rural economy. The robust growth of Bangladesh economy during last decades also originated from this informal sector. One of the striking features of Bangladesh economy is that investment in official statistics has remained stagnant for many years but economic growth is increasing, leaving many of the “in-house Economists” in puzzle to find out the sources of economic growth in the country. This sub- sector is one of the many other informal sectors which has attracted huge investment during the last decades as presented in Table 4.1. This information is not accounted for in official national statistics. This is one of the many internal strengths of Bangladesh on which this economy is flourishing. This could give those “Economists” the clue to get appropriate answer to the puzzle.

9. For the Policy Makers

NCMT has already made its presence felt and will remain present in decades to come in Bangladesh. It has now become the part and parcel of our economy as well as everyday life of almost hundred percent of rural people. There is no way one can ignore or undermine its role. We wish to draw attention of the policy makers for immediate action for the sake of better performance of our economy.

1. The government should recognize it as the most efficient and flexible transport system for rural Bangladesh and should introduce registration procedure to institutionalize this transport system.

2. There is ample opportunity to generate huge revenue from this sector, which could be further invested for the up-gradation and betterment of this transport system. The owners have expressed their interest to pay taxes to the government if they become registered. They informed that they have been paying bribes to the police men, and are forced to pay money to the Mastans and other power groups. So there is huge potential to generate revenue from NCMT if government recognizes this sector as significantly contributing to the economy.

3. The nature of this transport is mostly complementary to the conventional transport rather than substitute to it, barring some exceptions. So those who are campaigning against this transport, calling strikes and filing petitions in High Courts are actually acting against the interest of the nation as a whole. Recently two strikes were called by conventional transport owners in Southwestern and Northwestern districts to ban the NCMT as inter-district transport. This will create anarchy, promote inefficiency and hinder growth of the rural as well as the national economy. It is now high time to act for the government to recognize these realities regarding NCMT.

References

1. World Bank, (2013), *Rural Transport Improvement Project, Implementation Completion and Results Report*, (IDA-37910 IDA-37911), Report No: ICR2480
2. Donnges, C.(2001), “Rural Transport and Local Government Units. How to Improve Rural Transport for the Rural Poor?”, *Transport and Communications Bulletin for Asia and the Pacific* , ILO Regional Office, Thailand. Vol. No.71.p 19
3. Justice, S. (2004). A Not So Quiet Transport Revolution in Bangladesh :A case study on rural motorized three-wheelers in Bangladesh, *NAEF*,p. 1 <http://www/naef-nepal.org>
4. Gannon, C. and Liu, Z. (1997) Poverty and Transport, *World Bank, (Discussion Paper No. TWU-30) Washington D.C.* [Also available online at <http://www.worldbank.org/transport/publicat/twu-30.pdf>]
5. Tarrent, J.(1979), Rural Transport and Development in Bangladesh, Bangladesh Institute of Development Studies, Vol. 7, No. 4 (Autumn 1979), p.118
6. *Bangladesh Economic Review*, (2013), Paved Road Developed by LGED
7. Ministry of Environment and Forest, (2012), Modal Share of three modes in total Transport Sector.