



AN ASSESSMENT OF PROBLEMS ENCOUNTERED DURING THE FLOW OF COMMODITIES FROM ZARIA TO OTHER CITIES IN NIGERIA

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ABSTRACT

The study attempt an assessment of the problems encountered during the flow of commodities from Zaria to other towns and cities in Nigeria. A questionnaire survey, oral interview, direct observation and relevant literature materials were used to generate the information required. The issues addressed were transport cost, road condition, distribution channel, and respondent's driving and marketing experiences. The results show that actors in the inter regional movement of agricultural commodities from Zaria perceived (i) high transport cost, (ii) poor vehicle maintenance, (iii) Over-loading, (iv) Poor road condition, (v) Lack of efficient storage facilities, (vi) high cost of storage, (vii) armed robbery attacks on the highways and (viii) incessant harassment by law enforcement agents as the major problem they were experiencing. In order to minimize the severity of these problems, therefore, it would be necessary for Local, State and Federal Governments as well as private sectors to invest heavily in road improvement build more storage facilities of better quality and provide more parking spaces for vehicle. In addition, proper training of drivers and law enforcement agencies are also required.

Keywords: Flow of commodity, Transport cost, Road conditions, Distribution channels, Marketing experiences

INTRODUCTION

Transportation is a topic of global significance and interest (Ogwude, 2011). This is because it is an important aspect which assists in National and global distribution systems. Transport is the summary of the complicated relationships that exist between the physical environment, patterns of social and political activities, and levels of economic development (Igbokwe, 2009). It is a vital element in every part of economic development since there is always the continuous need to collect, assemble, transfer and distribute people, goods and services.

Transportation enables goods to be moved from a location where they are in excess or surplus to a location where they are in shortage or non-existent. Transport economists reveal that transportation of goods adds to the value of production by moving goods from their point of least utility to the point of their highest utility. They also revealed that these increase in utility through a change in location represents real value to an economy.

Mobility of goods and people is so essential to the well-being of the economy that it is of fundamental importance to ensure that the transportation network works in the most efficient manner (Michael, 2008). In this vein Filani (2003), used "transport" as a word to describe the material development of Africa. Amole (2011), revealed that "a non-existent or inefficient transport system perpetuates subsistent lifestyle and limits the pace of

transformation and integration of society". Because of this transport remains an indispensable condition in any nation's economic development (Olagunju, 2011).

Transport services link manufacturers to markets and enable individuals to access employment, goods, services and social opportunities. Different modes of transport are used in the transfer of passenger, agricultural commodities and manufactured goods from places of supply or production to areas of scarcity or consumption which are found in different regions in Nigeria; these modes of transport include private cars, motorbikes, public transport like trains, buses and taxis and non-motorized modes like walking and cycling (Awoyemi *et al.*, 2012).

Developing countries, therefore give a lot of attention to transport as a factor/catalyst to development and Governments allocate about twenty to twenty five percent (20 to 25%) of their budget to the development of the transport sector. Nigeria, for example allocated huge sums of money to the transport sector in the National Development plans from 2009-2015.

Study Aim and Objective

The aim of this paper is to analyze the problems associated with the inter-regional movements of commodities from Zaria to other towns and cities in Nigeria. The objective of the study is 1. To assess the problems encountered during the flow of commodities from Zaria to other towns and cities in Nigeria.

METHODOLOGY

Source of Data

A reconnaissance survey of the study area was carried out in order to have a good knowledge of the area and the main roads used, parking places, ticketing points by the road workers union and major markets where the questionnaires were administered. This helped the researcher to be acquainted with the area and gained an insight into the nature of the population and the probable sample size that was used. With this information the researcher used the Educational and Psychological Measurement after Kreijcie and Morgan (1970) which has been used in other studies in urban areas to determine the sample size for questionnaire distribution. The two major sources of data collection used in this research are the primary and secondary data.

Primary Data

A questionnaire survey was employed in this study in order to gather information. The questionnaire has three sections A, B and C, administered to farmers, traders and transporters respectively. The targeted respondents were met at different locations in the study area, that is the major markets selected and the parking places of the drivers. For those respondents that were not literate in English, the direct interview method was used. The issues above which information was sought are methods of transporting crops, personal ownership of transport modes, cost of transportation, time taken to reach destinations, how driver's license was acquired, testing of vehicle for road worthiness and problems encountered in transporting commodities.

Secondary Data

This involved visitations to the Road Safety Commission, Vehicle Inspection Officers, the Police Force, National Drug Enforcement Agency and Union Workers. The officials were interviewed for information like the quality of vehicles to be on the road, the reasons for setting up check points, safety measures to be used etc. Other information were gathered from published and unpublished sources from libraries, newspapers, textbooks, journals, markets, farmers and other relevant sources.

Sampling Method

The purposive sampling method was adopted due to lack of population data of the transporters, traders and farmers. In addition, there is no population data from which to select a random sample. A total of 250 copies of the questionnaire were given to the respondents in Zaria, out of which 238 were returned completed. The following were the sample points

where the questionnaires were distributed for completion: Dan Magaji, Dogarawa, Gwargwaje, Hanwa, Kongo, Kwangila, Palladan, Samaru, Sabon Gari, Tudun Wada, Wusasa and Zaria City.

Data Analysis

The data were summarized using descriptive statistics such as bar chart, percentages, pie chart and tables. The Chi-Square test was used in this study; is a non-parametric technique of hypothesis testing. The Chi-Square may be used to test if there is a significant difference between an observed number of responses in a category and the expected number of that same category which is based on the null hypothesis. In the Chi-Square test, when the calculated value is greater or higher than the tabulated or critical value at 0.05 level of significance, the null hypothesis is rejected and when the calculated value is lower than the tabulated value the null hypothesis is accepted. The Chi-Square test technique was used to test for association between some variables like cost of transportation and mode of transport, type of commodities and mode of transport.

RESULTS

Problems of Marketing Agricultural Commodities

The study shows that price fluctuation is one of the main problems affecting the marketing of Agricultural commodities with a sixty eight (68%); this is caused by the high number of middlemen, high cost of Transport and shortage of the commodities. Also, it is due to unstable and ineffective market policies and regulations. Storage cost is another major problem also faced by the respondents with about twenty percent (20%); the cost is quite high and the storage facilities are lacking in most producing areas; this problem also affects both the prime cost and supplementary cost of the commodities.

The problem of transport is also faced with ten percent (10%) and it caused by shortage of vehicle, mechanical problems, and unplanned expenses at check points and bad roads that prevent free flow of movement. Also insufficient infrastructure affects the marketing of agricultural commodities where by most of the farmers live far away from the main road network and there are few feeder roads that would enable them to evacuate their farm produce. This agreed with the findings of (Ogunsanya, 2002) which stated that for the understanding of the present and future pattern, geographers provide empirical explanation for determining the why, when and how of movements in the urban centres.

Table 1: Problems in Marketing Agricultural Commodities

Problems	Frequency	Percentage
Storage	47	19.7
Transport	24	10.1
Price Fluctuation	162	68.1
Others	5	2.1
Total	238	100

Source: Field Survey, 2010

Lack of credit facilities is also a major problem for those lacking capital, other problems include arm robbery on the road, high and unnecessary charges by union members and area boys at the markets.

The information on table 2 shows that the actions of the law enforcement agencies are perceived as harassment by the respondents, it constitutes about forty four (44%) and this problem was as a result of extortion, detention and increase in the selling price of the commodities as well as the destruction of perishable commodities. This is followed by the mechanical problems with twenty two (22%). High cost (Transport cost, hike in fuel price and high charges due to bad roads) also constitute a major problem in the flow of commodities in the study area with seventeen percent (17%); this problem affects the selling price of the commodities that are taken to the markets. Poor roads and poor road networks are also confirmed to cause flow problems in the movement of agricultural

commodities, it makes it more difficult especially for the farmers to move their agricultural products from farm to the markets place for sale. About thirteen percent (13%) of the respondents have a combination of these problems, while about one percent (1%) reveals that they do not encounter any problem at all, this was due to the very short distance they cover. Only zero point four (0.4%) experiences the problem of damage, the damage is from rain or too much of heat on the products like vegetables, tomato and pepper. This finding confirms the work of (Weijermars, 2008) that urban traffic varies both in time and space and is therefore, generally categorized into temporal and spatial pattern. The temporal pattern relates to timing and is analyzed at different time scales, ranging from minute- to-minute variations to year- to- year variations. The common variations are hourly, daily, weekly, monthly, yearly and seasonally (Weijermars, 2007).

Table 2: Driving and Vehicle Information

Response	Driving School		Vehicle Inspection		Driver's License		Driving Test	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Yes	118	49.6	115	48.3	127	53.3	104	43.7
No	120	50.4	123	51.7	111	46.7	134	56.3
Total	238	100	238	100	238	100	238	100

Source: Field Survey, 2010

Some other problems include pest and spoilage; pests do a lot of damages to Agricultural commodities thereby reducing the yield from the farm and destroying those that are stored. Pesticides are expensive especially in large scale farming. The perishable commodities are likely to spoil when faced with any form of prolonged delays. Lack of storage facilities also causes some of these commodities to spoil especially during rainy season, which is a loss to the farmers and the traders. Provision of storage facilities will reduce the risk of spoilage especially for farmers that hoard their produce. Lack of parking space cause a lot of congestions in the markets especially on market days. Some of the farmers and traders lack capital to expand and continue their business.

Driving and Vehicle Test

Table 2 shows a summary of the respondents that attended driving school and those that their vehicles have been tested and

checked by the vehicle inspection officers. Table 2 shows that about half of the drivers attended driving school and their vehicles have been checked by vehicle inspection officers with a percentages of fifty (50%) and forty eight (48%) and the remaining half did not do either. More than half of the drivers have driver's license and that is how they have been *driving*. Less than half of the drivers have had driving test with about forty four (44%), fifty six (56%) which is more than half have not had any driving test before. This agreed with the findings of Awoyemi *et al* (2012) which states that most drivers that plight our road often time don't pass the driving test but often work their ways to acquire drivers licenses.

Condition of the Road and Vehicle

The pie chart in figure 1 shows the condition of the roads used by the respondents; some of these roads are bad, good or fair in condition.

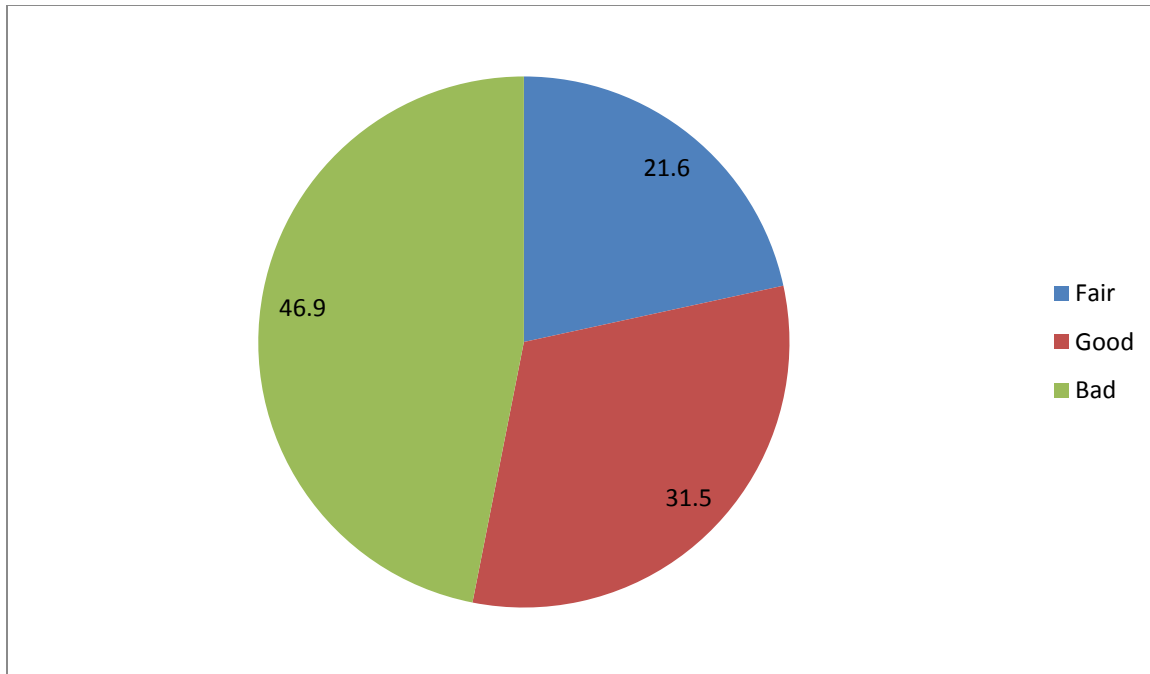


Fig. 1: Condition of the Road

Source: Field Survey, 2010

The diagram shows that the condition of most of the roads used by the respondents are very bad with a percentage of forty seven (47%), this shows that almost half of the respondent travel on bad roads and this bad conditions of the road influences the flow of agricultural commodities negatively. Findings show that about thirty two (32%) of the roads used by the respondents are in good condition; these good roads will experience high flow and transfer of commodities. While about twenty two (22%) of the road is in a fair condition. This agreed with the findings of Weijermars (2007), that most Nigerian roads are in poor condition, which often influence accessibility to other locations. The movement of people and goods in a city, referred as traffic flow, is the joint consequences of land activity and the capability of the transportation system to handle this traffic flow exactly like that of principle of demand and supply.

The pie chart in Figure 2, shows that forty two (42%) of the vehicles that the respondents use are in bad condition, this indicates that majority of the vehicles used are not good and this makes movement more difficult with so much delay due to mechanical breakdown. About thirty three (33%) of the vehicles used by the respondents are in good condition, the vehicles that have fair conditions have a percentage of twenty five (25%) and these vehicles cannot transport commodities to distant towns and cities. This confirms the findings of (Arasan, 2014) which states that most vehicles that plight Nigerian roads are often in bad condition. That makes goods transport accessibility a little difficult because of bad vehicles as well as passenger transportation.

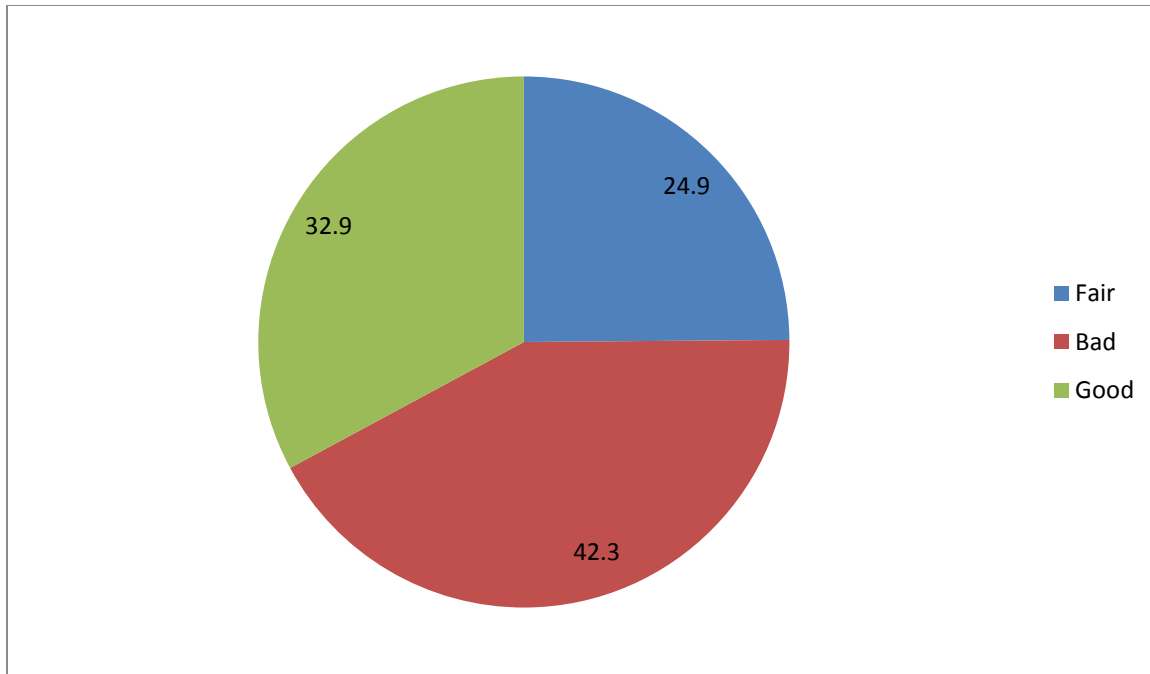


Fig. 2: Condition of the Road
 Source: Field Survey, 2010

Years of Driving Experience

Figure 3: is a bar chart showing how long the transporters have been driving; this indicates their years of experiences. The bar chart shows that drivers with the experience of between 6-10 years have the highest percentage with 37 drivers that have experiences of less than 5 years have 24 percent and the drivers that have been driving between 11-15 years also have 24 percent. Those that have been driving for over 15 years have 14 percent. Despite the years of experiences, about half of the drivers do not have driver’s license and they have never had any driving test by the vehicles inspection officers.

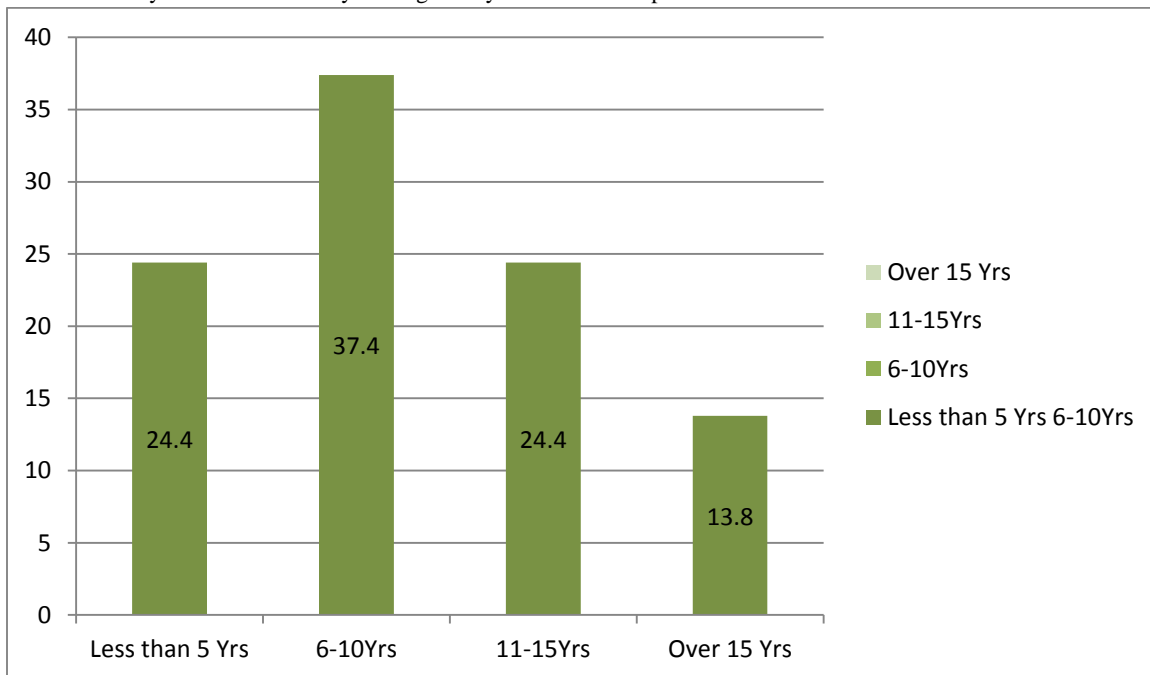


Figure 3: Years in Driving
 Source: Field Survey, 2010

Nature of the Problems

The nature of the problem has to do with the role or contribution of the law enforcement agencies in the flow of commodities from the source area/region to the destination areas. Five major law enforcement agencies were identified and these law enforcement agents play significant roles in the movement, safety, security and delay of goods and people (Table 3).

Table 3: Level of the Problems

Name of Institution	Frequency	Percentage
Police	60	24.9
NDLEA	41	16.9
Union Workers	85	35.9
Road Safety	32	13.8
VIO	14	5.8
Others	6	2.7
Total	238	100

Source: Field Survey, 2010

The result presented on table 3 shows that the National Union of Road Transport Workers cause more problems during the flow of agricultural commodities for the respondents with about 36 percent; the problems include high charges, harassment, delay at check points and extortion of money and goods. It is closely followed by the police with about 25 percent who also caused problems such as detention, extortion and harassment. NDLEA also cause problems of molestation when checking for drugs on the body and harassment to the passengers, in the process of searching for drugs some of the goods are destroyed and damaged. They extort money from the passengers also; NDLEA has a percentage of 17 while Road Safety has a percentage of 14. One of the problems faced also by the respondents is that of an agent doing the job of other agencies. This goes to prove the work of Awoyemi *et al* which states that variations exist in urban traffic over time and space, so also, variations do exist in urban transport problems. Various researches have revealed that in most cases, urban transport problems follow the same pattern in time and space with urban traffic. It is believed that there is more transport problems in areas with a greater congestion of vehicles compared to areas with minimal traffic.

Vehicles and Mechanical Problems

Findings show that there are a number of problems on the part of the vehicles used for the movement of these agricultural commodities; the vehicles are lacking or unavailable for movements. The problem of mechanical fault also causes a lot of difficulties for the respondents during movements. Some of this mechanical faults incurred high amount of expense which in turn affects the movement of commodities and the final selling price. Accidents are also faced during movements which slow down or halt some of the movements. All these problems result in the delay and availability of these agricultural commodities. Armed robbery also causes a lot of delay and sometimes damage to perishable commodities because the transporters are forced to stop when such actions are taking place (See Table 4). This also confirm the findings of (Weijermars, 2007) which states that the temporal pattern relates to timing and is analyzed at different time scales, ranging from minute to minute variations to year to year variations. The common variations are hourly, daily, weekly, monthly, yearly and seasonally.

Table 4: Problems in Transporting Agricultural Commodities

Problems	Frequency	Percentage
Mechanical Problems	53	22.3
Harassment	105	43.7
High Cost	40	17.0
Damage	1	0.4
Poor Road	6	2.6
No Problem	2	0.8
Two(2) or More	31	13.2
Total	238	100.0

Source: Field Survey, 2010

The bad conditions of the roads also affect both movement and distribution of commodities. Some of the roads are seasonal and have poor linkage to the main roads; transporters are forced to wait for flooded roads to drain during heavy rains. Sometimes the respondents have to pay twice the normal price in order to reach their final destination.

The markets identified and used in the study are many, but they have been categorized into six groups while the law enforcement agencies are six in number. Table 5 shows that the markets in group 1 have the highest perception of the law enforcement agents as a problem to the movement of agricultural commodities.

Table 5: Distribution of Respondents' Perception of Law Enforcement Agents as a Problem for Agricultural Commodity Movement by Market

Market	Law Enforcement Agency						Total
	Police	NDLEA	Union Workers	Road Safety	VIO	Others	
Group1	20	31	39	22	13	7	132
Group2	12	4	16	2	0	3	37
Group3	8	6	9	3	1	2	29
Group4	8	3	7	7	1	0	26
Group5	2	1	1	2	0	0	6
Group6	2	2	3	1	0	0	8
Total	52	47	75	37	15	12	238

Source: Field Survey, 2010

This is followed by the markets in group two with a total of number of 37 personnel's. The result reveals that the markets in group 1 to 4 view the law enforcement agents as being problematic to the movement of commodities while those in group 5 and 6 do not have many problems from the agents.

"The markets that were identified and used in this study were grouped based on how frequent the respondents patronize them."

Group i. - Sabon- Gari and Giwa.

Group ii. – Dan-Magaji, Jushi, Palladan, Samaru, Tudun Wada, Unguwan Fulani, Wusasa and Yangoro (Kwangila).

Group iii. – Anchau, Kiawahi, Kwoi, Maigana, Pambegua, Saminaka, Soba, Sundu and Tuoho.

Group iv. – Danja, Kudan, Makarfi and Tudun Saibu.

Group v. – Barkin Dogo, Dutse and Dumbi.

Group vi. – Central Market Kaduna, Kawo, Mando Onisha, Sabon Tasha, Sokoto, Ajegunle Ogasa.

CONCLUSION AND RECOMMENDATION

For the agricultural sector to make any meaningful impact on the development of any nation, the entire social and economic infrastructures essential for agricultural development should operate effectively within an integrated framework. An effective and efficient transportation system interconnects these variables of agricultural development are therefore a key variable in agricultural development.

In response to the problems faced by the respondents, this study suggests that the Federal, State and Local Government should build good and durable roads, and there should always be a good maintenance culture and improvements of the already existing roads. Also areas that are not accessible should be connected to nearby roads. This will facilitate and ease movements of agricultural commodities and increase frequent movement; it will also reduce the high cost of transportation.

More storage facilities should be made available which will enable the farmers and traders to be able to store large number of goods. This will also help prevent damage of the agricultural

commodities. The State and Local Government should make more parking spaces available for vehicles such as trailers, trucks and lorries around and within the market environment. This will ease loading and off-loading of the commodities and it will also reduce congestion at the markets place and on market days.

Effort should be made towards proper training of the law enforcement agencies; this will prevent an agent in one institution from carrying out the job of another agency that he/she does not belong to. Efforts should also be made in preventing extortion, unnecessary delay and harassment that are done to the respondents frequently. Agents with honest/good integrity and good discipline should man the check points; agents that are hot tempered or easily provoked should not be made to stand at check points in order to reduce casualties of victimization.

In response to the complaints of the law enforcement agencies, this study suggest that the drivers must be properly educated so that they can always obey the rules and regulations guiding the uses of the roads. Drivers should always be patient and avoid hastiness during movements and they should always make their vehicles road worthy and have the proper particulars, they should also be mentally fit to be on the road. Drivers should always have a driver's license and carry it along with them whenever they are on the road, they should always be patient at check points and avoid over loading their vehicles.

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