

## THE STATE OF ROAD TRANSPORT INFRASTRUCTURE AND ENSURING PASSENGER SAFETY IN GHANA

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**ABSTRACT:** *Road safety and the increasing death toll on Ghana's roads remain a prominent, emotive issue with terrible impacts on communities and families. Quality road transport infrastructure is very critical to ensure road safety for all passengers. This study sought to explore the state of transport infrastructure in ensuring passenger safety. The study was conducted in Kejetia, the biggest open bus terminal in Ghana. The study revealed that the most pressing problems faced by operators, passengers and drivers at the lorry terminal include driver parking at any vantage point, vendors taking over the terminal space and the gradual emergence of market in and around the terminal. It also found out that the terminal lacks basic facilities such as a clinic, security post and fire station to provide essential services to all users of the terminal. The terminal also lacks adequate signage to aid in providing a safe haven for passengers and drivers. Management of the terminal as well as city authorities must restructure their local transport policies regarding road terminal operations and re-align, enforce and monitor overall transport operations in the city.*

**KEYWORDS:** Transport Terminal, Passenger Safety, Road Transport, Transport Infrastructure.

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### INTRODUCTION

Transportation however, has developed rapidly in the Ghanaian society albeit the struggles people go through to earn their livelihood and at the same time contribute towards national development. Indeed, it is heart-breaking to see how citizens rise every day to struggle for vehicles before reaching their various destinations and sometimes how they get seriously injured or killed as a result of congestion and the difficult conditions at bus terminals or pavilions. These missing links are major obstacles to the free movement of passengers within and between many bus terminals. This calls for efficient and effective management of road infrastructure at bus terminals.

Road transport is the predominant means of commuting in Ghana. It accounts for high passenger travels and carting of goods in the country thus making it a vital transportation service that links the countries in the entire West African sub-region. According to the Ministry of Transport (MOT) (2011) road transportation accounts for over ninety- five per cent (95%) of all transport supply in Ghana. Ghana today is becoming urbanized with major economic activities hovering around Accra, Kumasi and Takoradi. Urban transportation specifically mass transport in urban areas needs special attention because it has become an increasing challenge for Ghana as the rate of urbanization increases. Urban locations also give rise to the few inter-modal connections occurring in Ghana as well as intra-modal connections between different forms and scale of road transportation, namely: bus, car, taxi, cart, etc. Currently,

these connections are not planned, are poorly organized and chaotic in nature, with resulting service delays for users and operators.

Also, public transport in urban areas remains in the hands of smaller operators which with minimal regulation, remains largely informal. For example, in Kumasi, the modal share for informal transport (minibus and collective taxis) is more than seventy per cent (70%) followed by private car and non-motorized transport (NMT) with formal bus operations providing less than five per cent (5%) of the services. Surveys undertaken for the Ghana Urban Transport Project (GUTP) show that safety is a primary concern for users who had no representation in the industry. All major roads in Ashanti Region converge at Kejetia bus terminal, which is the city centre of Kumasi. The present physical structure of Kumasi Metropolis could be described as circular or concentric in nature, encouraging development in all directions. Settlement growth is towards all directions from the city centre. There is always a huge human and vehicular traffic in and around the Kejetia bus terminal and that makes its management and law enforcement very difficult. This has led to a glaring disparity between quality and availability of road infrastructure at Kejetia bus terminal. It is against this backdrop that this study was conducted to assess the state and condition of bus terminals in Ghana and how they contribute to the safety of users.

## **LITERATURE REVIEW**

### **Road Transportation in Ghana**

Transport in Ghana is accomplished by road, rail, air and water. Ghana's transportation and communications networks are centered in the southern regions, especially the areas in which gold, cocoa, and timber are produced. The northern and central areas are connected through a major road system; some areas, however, remain relatively isolated. The deterioration of the transport and communications networks has been blamed for impeding the distribution of economic inputs and food as well as the transport of crucial exports. Consequently, the first priority of the Economic Recovery Program (ERP) was to repair physical infrastructure. Under the program's first phase (1983–86), the government allocated US\$1.5 billion, or 36 per cent of total investment, for that purpose and an additional US\$222 million in 1987 for road and rail rehabilitation. In 1991 the Ghanaian government allocated 27 per cent of its budget for various road schemes. Foreign donor support helped to increase the number of new vehicle registrations from 8,000 in 1984 to almost 20,000 in 1989. The distribution of vehicles was skewed, however, because, by 1988, more than half of all vehicles were in Accra, which contained approximately 7 percent of the country's population.

Road transport is by far the dominant carrier of freight and passengers in Ghana's land transport system. It carries over 95% of all passenger and freight traffic and reaches most communities, including the rural poor and is classified under three categories of trunk roads, urban roads and feeder roads. The Ghana Highway Authority, established in 1974 is tasked with developing and maintaining the country's trunk road network totaling 13,367 km, which makes up 33% of Ghana's total road network of 40,186 km (Transport Indicators Database, 2007).

### **Road Transport Infrastructure**

Transport infrastructure development has been generally seen as one of the most important aspects in ensuring passenger safety. According to the Cambridge International Dictionary of

English, the word infrastructure has been used in English since at least 1927, originally meaning “The basic structure on which an organization or system is built and which makes it able to work”. Transport infrastructure is the basic physical and organizational structures needed for the transportation services of vehicles such as buses, cars and trains (Grubber, 1990). Transportation infrastructure consists of the fixed installations necessary for transport operations to take place and for transport vehicles to move on.

There are different types of transport infrastructure which include road and highway networks such as bridges, tunnels, culverts, retaining walls and bus terminals (including waiting shelves and pavilions used for two main purposes); waiting areas for passengers and loading base for buses and pavement blocks. Kejetia bus terminal (the focal study area) which is used for intercity and intra-city (cross boundaries) services within the jurisdiction of Kumasi has two main access points for entrance and exit from the bus terminal and three different access points for limited services. Jorgensen and Rundmo (2006) in their study reported that constraints on mobility and problems of access and poor transport infrastructure are some of the main impediments to improve the livelihoods of the Ghanaian population. According to Jorgensen and Rundmo (2006), improved access and transport provision are given priority for development.

### **Law Enforcement to Safeguarding Passenger Safety**

Law enforcement poses problems in major cities across the world. However, African cities have greater problem especially for the use of road transport infrastructure and traffic related offences due to inadequate personnel and the level of training. Thus there is the problem of law enforcement especially in the area of the use of road transport infrastructure and organized crime. Zaal (1994) reviewing literature on the use of road transport infrastructure and traffic law enforcement, gives different means of ensuring passenger safety. He made a distinction between Selective and Integrated use of road transport infrastructure and traffic law enforcement saying studies suggested the need for some type of random allocation of resources with weightings given to high volume, high accident roads.

Explaining further, Zaal (1994) states that selective enforcement techniques requires the examination of road transport infrastructure, traffic and accident data to identify and prioritize accident locations that will ensure passenger safety including the time of day of high risk taking behaviour. Integrated enforcement ensures that a range of illegal road user behaviours targeted all at the same time can maximize the use of available policing resources and ensures that all transport infrastructure traffic laws are equally enforced. Both methods are used in Ghanaian cities but the former is more visible with personnel of the Motto Traffic and Transport Unit of the Ghana Police (MTTU) being deployed at various intersections and traffic congestion zones to enforce the law.

In spite of the urgent need for road transport infrastructure law enforcement in cities, most police personnel do not want to take part in traffic policing due to its hazardous and life threatening nature (Global Road Safety Partnership, 2004). In Ghana, law enforcement is controlled by the Ghana Police Force with special responsibility for road and traffic policing given to the MTTU.

### **Passenger Safety Policies and Practices at bus terminals**

In his book review, Holder (2004) suggest steps to control road and traffic offences as limiting driving to speeds that are appropriate and safe for passengers and the present road environment.

Also, he suggests the facilitation of the detection and enforcement of speed limits and alcohol levels of drivers in low income countries with the use of radar guns and breathalyzers. He, however, questions the integrity of the law enforcement agency saying frequent roadway patrols and vigorous enforcement of these and other laws that govern dangerous driving and vehicle condition are constrained by limited resources and corruption. Corruption has gained root in law enforcement in low income countries where officers cover up road and traffic offenders. Dogbe (2008) in a report in the Daily Graphic in Ghana was of the view that, it is the near hopelessness of the police man (in terms of salary, accommodation, and general service conditions) that has led to the actions of a few personnel and the general conclusion that police personnel just love to take bribes. He recommends a massive police reform that will inure to the benefit of the personnel themselves and the citizenry and also the need for better, reliable, effective and efficient communication system for the police service to improve their performance.

## **METHODOLOGY**

This study is exploratory in nature because it sought to find out what is happening, seek new insights, and ask questions and to assess the phenomena in a new light. ((Robson, 2002) and also adopted a case study strategy in order to derive a rich understanding on the objectives of our study and emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. The target population for the study includes all stakeholders of the bus terminal. These comprise a large number of passengers, drivers, station masters, the police, hawkers and the administrative management of Kejetia bus terminal (Motor Traffic and Transport Planning Department of Kumasi metropolitan Assembly (MTTPD, Urban Passenger Transport Union, UPTU). a sampling size of sixty (120) respondents was selected using systematic random and convenience sampling techniques, comprised of thirty (30) drivers and station masters, fifty (50) passengers, fifteen (15) hawkers and traders, five (5) policemen and twenty (20) employees of the administrative management of Kejetia bus terminal (MTTPD, UPTU). The study adopted semi-structured interview to collect data. This is because the preliminary study conducted at the terminal indicated that majority of the research population could either or write comprehensively. The authors took turns to conduct the interviews at the terminal, which took two weeks to complete. Finally, the research design, the data collected and analysis were basically qualitative in nature.

## **RESULTS**

The study revealed quite a number of issues of which some are quite disturbing. It was discovered that there are no clinic and fire station which are either at the terminal or closer to serve the passengers, drivers and all users of the terminal when severe catastrophes occur. There is one nearby children's hospital which has no accident and emergency unit to deal with cases of that nature. The only health centre with such a facility is the Komfo Anokye Teaching Hospital (KATH) which is located about 1.3 kilometres from the terminal but driving from the terminal to the hospital in a normal business day can take about 30minutes, which hitherto could be done in less than five minutes.

From the study, it was very clear that there have been major changes in the way the terminal is supposed to be managed to the actual way it is being operated. Station masters (these are

managers of various substations within the terminal for specific routes) hardly report to the police about incidents that occur at the terminal. They only report about drivers' complaints rather than complaints made by passengers to the police. Reckless driving and parking at the terminal are left unchecked as the station masters do not want to leave their assigned pavilions and work stations. Kejetia is a road passenger terminal and per its own designed, heavy duty trucks ought not to enter the terminal for loading and unloading of goods. Any heavy truck found within the terminal is supposed to be impounded and released only after a prescribed fee is paid to management toward maintenance. Moreover, the fee fixed for allowing the trucks onto the terminal and the bye laws for punitive measures however do not correspond and makes room for wrongful activities to continue without much control.

Only a few passengers use the pedestrian crossing. Foot bridges are also not placed or constructed at points convenient to passengers. They are constructed too far from where they are needed. Drivers load anywhere due to their reasoning that passengers need quick access to transport and they believed that they will make more money if they do so.

The most pressing problems faced by the lorry terminal in Kejetia are; every driver packs at any vantage point, vendors taking the terminal space via the use of umbrellas and a bigger market construction by KMA despite the lack of available space. Furthermore, the research revealed that most educated passengers and commuters are concerned about the congestion at the lorry terminal, specifically theft and sanitation issues. As a result, they feel insecure and unsafe to use the terminal- they rather prefer chartering taxis than to go to the terminal. In addition, shops operating at the terminal bring in articulated trucks to offload their wares on the terminal which have high deteriorating effects on the pavements. Also the lighting systems at night are very poor, leading to theft and robbery at the Kejetia bus terminal. The frequent power outages also contribute to posing danger to the passengers and users at night.

## CONCLUSION

It has been realised during the study that safety of passengers has become more important to the KMA and the police. Transportation plays a pivotal role in the development of every economy, whether developing or developed. This also holds true for the Ghanaian economy.

To a greater extent, the terminal has facilitated the movement of passengers and cargo to their final destinations. The terminal has created more job opportunity for Ghanaians such as the drivers and vendors than what the central government could do. The terminal has contributed immensely to the growth of the economy by increasing the quantity of distributed goods to various markets in the region and country as a whole.

The terminal has also increased the convenience of passengers to travel in and around Kumasi and an increased in government revenue through the annual registration fees and additional fees payable by transport operators to KMA.

Although transportation plays all these important roles in the development of the economy, the Kejetia bus terminal faces a lot of challenges. Some of these challenges include inadequate bus terminal space to operate effectively and efficiently, very poor drainage system, poor sanitation and congestion

## RECOMMENDATION

For Kejetia bus terminal to become a safe haven for all manner of users, the study recommends to management of KMA as a matter of urgency to support the operations and maintenance of the lorry terminal by finding potential investors who are willing to spend money, time, or energy on improving the terminal, especially for the benefit of passengers and the drivers. Management must also ensure that the correct plan of action pertaining to policies and penalties are properly executed. It also recommends a parking depot should be provided for vehicles which are not ready for loading. This will free some spaces on the terminal. This allows the terminal to accommodate more passengers. This also helps the drivers as it will become quite easy to exit the terminal. Space should also be provided for vendors who bring in goods to the terminal to offload and charged a fee to generate more revenue for the maintenance of the terminal.

In addition, stakeholders such as KMA and the police must come in to publicly educate or create the awareness of passenger rights and safety responsibilities as passengers usually think drivers have the right authority and experience to operate without any passenger or police interference. KMA and the police can use the radio stations to reach the passengers. Drivers' attitudes towards passengers should be regularly checked to ensure their safety as most drivers feel they are of importance to the passengers. Long distance travelling vehicles should be relocated from the terminal. The terminal should only serve its immediate surroundings. This will allow passengers to locate the right pavilions to be able to board the vehicles. This also helps in solving the congestion, sanitation and drainage problems at the terminal. Hawkers and vendors should be moved away from the pavilions to create more room for movement. KMA should organise a "Defensive driving" course and insist on it before allowing drivers to register and operate at the terminal. With defensive driving, a driver drives to save lives, time, and money, in spite of conditions around them and the actions of others. Station masters, the police and traffic warders must help in ensuring that defensive driving practices are always used on the roads. All vehicles must be frequently checked for maintenance at entry and exit points.

Road safety signs should be posted in and around the terminal to address the importance of road safety. Passengers should also be made aware of the usefulness of bridges and walk paths and motivated to using the pedestrian crossing by using the correct road signs. In addition, a well-structured road network should be designed for easy access of ambulances and fire trucks to the terminal. Since the terminal lacks a clinic and a fire station, an ambulance and a fire truck should be stationed at the terminal for quick response time in case of emergencies. More exit points should be opened to facilitate easy movement.

## FUTURE RESEARCH

The study was limited to one terminal in assessing Transport infrastructure and road safety. Further studies could be conducted using a collection of terminals and a wider study area

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