

# Provision of Urban Transport Services in Accra

Samuel T. Addo, University of Accra

## Introduction

Accra, the national capital of Ghana is located on Latitude 5° 33' N and Longitude 0° 13' W (Fig. 1). Its current population based on a national population and housing census conducted in the year 2000 stands at 1,657,856 (Ghana Statistical Service, 2002). This figure reflects the total population resident in the administrative area currently defined as Accra Metropolitan Area (Fig. 2). Eighteen miles to the east of the city of Accra is the modern port city of Tema with a population of 511,459 (Ghana Statistical Service 2000). There is a vibrant interaction between these two cities for obvious reasons.

Urban transport in Accra is synonymous with road transport. The road network in and around the city of Accra is based on a system of radial routes converging on the Central Business District (Fig. 3). A major weakness in the network is the lack of adequate east-west corridors. What is considered as local roads function principally as access to residential areas (Fig. 4). At the moment there are four radials, three of which are heavily used and experience considerable congestion (Addo, 2001; Tamakloe, 1993). Flows of vehicles per minute on these arteries ranged from 10 to 14 in morning peak hours and 8-12 in evening peak hours in 2000 (Segbefia, 2000).

Table 1: Flows of Vehicles Per minute

Transport type and Route	(Q) Flows of Vehicles Per Minute					
	Morning Peak		Off Peak		Evening Peak	
(Public Transport) Achimota/Apenkwa to Ofankor.	10.0	10.0	10.2	10.4	8.4	6.6
(Public Transport) Adenta Barrier To Tetteh Quashie (Shiashie)	11.7	10.8	9.5	10.7	9.7	10.3
Private Vehicle Achimota – Apenkwa To Ofankor Barrier	12.0	12.1	13.6	13	9.8	8.2
Private Vehicle Adenta Barrier – Tetteh Quarshie Shiashie.	<i>14.2</i>	12.3	<i>10.2</i>	12.6	<i>11.8</i>	11.0

Source: Fieldwork, 2000. (Values in Italics represent flows with traffic stream).

The road network on the whole is generally fairly extensive, covering a total of about 950 kilometres, of which 550 kilometres are paved. Out of the total length of 950 kilometres about 40% represent major and minor arteries while the remaining 60% could be considered as local roads. The major and minor arteries experienced significant improvements in surface quality at the turn of the century. The network structure as a whole is however weakened by the haphazard location and management of most terminal and transit points (Fig. 5). Most often, residential areas are developed without any consideration of public transport terminals. This is, of course, the result of non-adherence to strict planning principles. Most terminals are therefore located either near streets or on privately owned land, which inhibits the development of permanent structures (Fig. 6). It is not surprising then that 56% of all terminals are between 1,000 and 3,000 square metres in size. Only 5% are of the size above 12,000 square metres. There is a positive correlation between the size of a terminal and the number of vehicles handled within the hour (Addo, 2002; Oppong, 2000).

It is within above described environment that Accra's present urban transport system evolved dominated by individual operators most of whom belong to either the Ghana Private Road Transport Union (GPRTU) or Ghana Co-operative Transport Union (GCTU) or are on their own and do not belong to any organisation.

It must be noted that prior to the emergence of the present transport system in Accra in the last two decades of the twentieth century, Accra like most cities elsewhere, had a well planned and managed public transport system owned by the state and operated using big comfortable buses which were safe, regular and reliable. This state run urban transport system collapsed due to poor performance of the economy and associated mismanagement.

## Vehicle mix

An individual or group who intend to operate an urban transport service in Accra must first procure a vehicle that satisfies the requirements of Government of Ghana Legislative Instruments 952 and 953 titled, 'Road Traffic Regulations, 1974' containing 47 and 96 sections respectively dealing in detail with issues like registration, licensing, construction and use of vehicle, and driver behaviour etc. etc.

Table 2 below provides statistical information on licensed vehicles involved in providing commercial transportation services in Accra during the period 1999 – 2001.

Licensed commercial vehicles operating in Accra (Table 2)

YEAR	LIGHT BUSES	TAXIS	TIPPER TRUCKS
1999	3,780	9,711	90
2000	4,107	9,951	40
2001	2,731	7,902	25

Source: Accra Metropolitan Authority, 2002.

The adoption of structural adjustment policies including liberalisation of the economy, following the virtual collapse of the economy in the early 80's, led to significant improvement in infrastructure (including transport) and the importation of fleets of vehicles both new and slightly used ones. The tendency of African governments to adopt more liberal policies during election years may account for the higher figures recorded in the year 2000. Similarly the assumption of power of a new government in 2001 and more stringent application of rules and regulations governing imports may account for the sharp drop in numbers in 2001 in addition to withdrawal of over-aged vehicles from service.

A close examination of the year 2000 figures vis-à-vis the population figures for the city reveals that about 404 persons in the city were tied to one 19 seater mini-bus while 167 persons were tied to a taxi. This analysis, of course, ignores the fact that there exist a large fleet of privately operated vehicles in the system owned by members of the middle class who are not normally inclined towards use of the mini-buses (trotros) and taxis which are often associated with discomfort, insecurity and unreliability as well as discourteous behaviour of the drivers and their aides. Between 1995 and 2001 (excluding 1996) an average of 22,058 saloon cars with engine capacity not exceeding 2,000 were registered annually in Accra (VELD 2002). In 1996 an exceptionally high number of 112,991 of this category of vehicles were registered in Accra. (This may have something to do with the adoption of very liberal policies during election years). Private saloon cars, including four-wheel drive vehicles with engine capacities above 2,000 cc registered in Accra in 1996 stood at 1,067. For the period 1999 to 2001 this higher category of private vehicles registered in Accra averaged 5,376 yearly (Table 3).

Table 3. Private saloon cars and four-wheel drive vehicles registered in Accra 1995-2001

Average number of private saloon cars (below 2000cc) registered in Accra between 1995 and 2001 (excluding 1996).	Number of private saloon cars (below 2000cc) registered in Accra in 1996.
22,058	112,991
Average number of private saloon cars (above 2,000cc including four wheel drive vehicles) registered in Accra between 1999 and 2001.	Number of private saloon cars (above 2,000cc including four wheel drive vehicles) registered in Accra in 1996.
5,376	1,067

Information obtained from VELD, Accra.

Between 1995 and 2001 therefore a total of 149,645 privately owned saloon cars and four-wheel drive vehicles were registered in Accra. If we assume that all these vehicles registered during a period of seven years are operating on the roads of Accra, it gives us a vehicle/person ratio of 11 persons per vehicle. We may compare this with 404 persons per a 19-seater mini-bus and 167 persons per a taxi. Thus the key road transport arteries in the city of Accra are

choked with more privately owned vehicles than with vehicles engaged in commercial transportation.

### **Procurement of commercial vehicles**

Most of the mini-buses and cars operating in Accra are of Japanese and Korean origin and are imported 'Used vehicles' brought into the country by Ghanaian 'Used Car' dealers. Majority of these vehicles might have been used for at least 8 years before being imported. If a brand new 19 seater mini-bus in 2001 cost US\$17,000.00 (including tax, registration and insurance) this translates to ₵119,000,000.00 (using an exchange rate of ₵7,000.00 per 1 US\$). This amount is beyond the reach of individual commercial vehicle operators, hence the preference and reliance on imported 'used vehicles'. Presently, an imported used 19 seater mini-bus costs ₵25,000,000.00.

If we use the 2001 value for a brand new 19 seater mini-bus as a base figure and discount at 15% per year, it will take 6.6 years to wipe off the entire cost. What this means then is that the 8-10 years old imported 'used vehicles' are already scrap material which should have been destroyed in their countries of origin. But these are the vehicles brought into a poor country like Ghana to perform intra and inter urban movements of persons and goods. Incidentally all these vehicles are certified and licensed as being road worthy.

The individual commercial vehicle operator procures his mini-bus or car through personal savings, loan from a relation, or a privately or publicly arranged high-purchase system. The publicly arranged high purchase system involves the Ghana Private Road Transport Union (GPRTU) being an organisation with legal identity entering into a bulk high purchase arrangement with a motor firm for the supply of a quantity of vehicles to be paid for over a given period. These vehicles are then given to individual hardworking members of the organisation who operate the vehicles and make monthly payments (agreed amounts) to the organisation. The G.P.R.T.U in turn makes bulk monthly payments to the motor firm until the total cost is paid.

The privately arranged high purchase system is where the original owner of a vehicle passes it on to another person to work and pay monthly amounts (previously agreed upon) until the cost of the vehicle is redeemed.

Obtaining a loan from the bank to purchase and operate a commercial vehicle is uncommon probably due to prevailing high interest rates and equally high risks and lack of suitable and acceptable co-laterals to back such transactions.

### **Operational of commercial vehicles in Accra**

The owner of a properly certified and licensed commercial vehicle in Accra may choose to operate the vehicle himself (provided he is a certified and licensed professional driver) or employ a professional driver to operate the vehicle.

The operator chooses a route and may apply for membership of a local branch union of the GPRTU or GCTU. On admission the applicant's vehicle is added to the pool of vehicles operating on the particular route. Normally a queue of vehicles is formed at the terminal of origin on the basis of time of arrival of the vehicle at the terminal. Passengers then line up and board these vehicles, one after the other, to their destination which is invariably the Central Business District (CBD) or some distance from the CBD. A similar arrangement exists at the destination terminal to convey homebound passengers to their terminal of origin. Between these two terminals the vehicle may stop at recognised points or upon request to pick and drop passengers. The more journeys a driver makes, (with passengers, of course) the more money he collects. A driver's mate assists with the collection of fares.

A deviation from this standard practice is where a driver ignores the queue and drives off to pick passengers en-route to the destination. This is done mostly during the peak hours and also by drivers who are not members of the transport union and therefore do not qualify to operate from terminals under the management of the transport union.

Most commercial mini-bus operators start work at 5 a.m. and close between 9 and 10 p.m. On the other hand taxi operators start work between 4 and 5 a.m. and close before midnight. A group of taxi drivers prefer working between midnight and 6 a.m.

Fares are normally a function of cost of inputs, especially fuel, distance covered, and quality of road surface as well as demand levels for transport. Fares are usually determined on a per mile basis but distortions can arise where distances covered may be relatively short but surface quality may be deplorable. Taxi fares are usually higher than fares of mini-buses because taxis carry fewer persons and are generally more comfortable and faster. In addition taxi fares are higher when a client hires the taxi to convey him or a group to a particular destination for a negotiated fee.

A mini-bus driver is expected to pay about ₵100,000.00 daily to the vehicle owner after discounting cost of fuel, daily wage for himself and mate, and weekly tax. In addition the driver is paid a monthly salary ranging between ₵150,000 and ₵200,000. Taxi drivers, on the other hand, pay daily amounts of ₵40,000.00 to vehicle owners and obtain similar monthly salaries like mini-bus operators. Most drivers observe a six-day working week.

Table 2 gives us an idea of the number of persons directly employed in the informal transport service section in the city of Accra. Between 1999 and 2001 the average yearly number of employees directly engaged in the informal transport sectors in the city was 16,370. (This includes a driver's mate for each mini bus and each tipper truck). The indirect employment is generated by the close to 1,000 vehicle repair and maintenance workshops littering the townscape with about 5 master craftsmen each (discounting the higher number of apprentices) yields a value of 5,000 workmen. But the total number of vehicles to work on is 149,645 privately owned vehicles and 12,779 commercial vehicles making a total of 162,424. Therefore 394 out of the 5,000 garage workers owe their jobs indirectly to the 12,779 commercial vehicles operating in Accra. We may also consider the over 500 motor spare part dealers and workers at

the VELD (vehicle licensing division) of the Ministry of Road and Transport as well as employees of Insurance companies and sign writers as indirect employees in connection with the informal urban transport sector in Accra. A detailed analysis of vehicle operating costs reveal that actual profit to the vehicle operator/owner hovers between 25 and 27% of income. The rest goes to pay for labour, taxes, operational costs and defrayment of original cost of the vehicle (Addo, 1990).

### **Ramifications of commercial transport operations in Accra**

The most serious weakness in the informal urban transport system in Accra relates to cost effectiveness. Three 19 seater mini-buses are not able to handle 60 passengers that can be conveyed comfortably in one big bus. Again the operational cost of 3 mini-buses exceeds the operational cost of one big bus.

The transport unions have not been able to regulate effectively driver behaviour. Drivers and their aides could therefore be discourteous to passengers and other road users knowing very well that severe sanctions are rarely applied even when reports are made to the executive members of the unions. Again commercial vehicle drivers even flout some of the Road Traffic Regulations such as driving on the shoulders of the road to avoid the slow pace in the mainstream of traffic, stopping abruptly in traffic to drop and pick passengers, and sometimes even jumping a red traffic light probably due to the insufficient number of police men on the beat or on traffic checks. The absence of well designed and properly located bus stops as well as insufficient and inadequate terminals are factors that promote driver misconduct (Oppong, 2000). The road network structure and orientation as well as the disjointed location and distribution of terminals make it difficult for public transport users to make one leg journeys from their origins to final destination. Most often more than 80% of public transport users make two or more legs before getting to their destinations (Oppong, 2000 p.117).

Table 4. Modal structure of normal routine journeys legs

Mode	Journey Legs				Total
	1 <sup>st</sup> leg	2 <sup>nd</sup> leg	3 <sup>rd</sup> leg	4 <sup>th</sup> leg	
Taxi	2 (2.1%)	18 (14.1%)	4 (5.8%)	2 (10%)	27 (7.5%)
Trotro	2 (1.4%)	107(83.6%)	9 (13.0%)	2 (10%)	120(33.1%)
Walking	140(96.9%)	3 (2.3%)	56(81.2%)	16(80%)	215(59.4%)
TOTAL	145(40%)	128(35.6%)	69 (19.1%)	20 (5.5%)	362(100%)

Field Survey, 1998.

Over all the absence of a central authority responsible for schedules and organisation has resulted in public transport vehicular movements being irregular and unreliable with reference to time.

### *Regulation (overview)*

Reference had been made earlier in this paper to the government of Ghana. Road Traffic Regulations, 1974, backed by Legislative Instruments 952 and 953 and generally operated by the VELD (Vehicle Licensing Division of the Ministry of Transport). Regular enforcement of these regulations once the vehicle is in operation is done by the Motor Transport and Traffic Unit (MTTU) of the Ghana Police Service. The effectiveness of the MTTU is however undermined by inadequate logistics and men. Again technological aides, such as traffic lights, are few and bottlenecks and confusion are created during peak hours at many intersections where there are no policemen on duty to intervene and control the traffic. It is on such occasions and at such points that one witnesses the worst behavioural forms of mini-bus and taxi drivers who are often in haste to get to their destinations.

### *Recommended measures to improve services provided*

It is a known fact that traffic is a function of land use. The implementation of a policy geared towards decongestion of the Central Business District (CBD) through relocation of certain services which attract considerable traffic will be a step in the right direction. Adoption of better procurement, management, and regulatory policies by the transport unions to minimise waste and ensure reliability and dependability of their services will be highly appreciated in the interim while the Accra Metropolitan Authority embarks on a mission to re-introduce an effective and dependable city bus service for mass transportation services. These bus services could be complemented by fast modern train services which will operate over distances up to about 80 miles from the city centre and along the existing radial road arteries. The creation of a Metropolitan Transport Authority to establish modern transport facilities as well as superintend over existing ones, to help improve service delivery would be useful for the attainment of a vibrant, safe and comfortable city life in Accra. In doing this, Ghana may borrow a leaf from the experience of Senegal where micro-transport operators in Dakar are being organised into viable transport companies with inputs from the world bank.

### **Conclusion**

The attainment of a vibrant and comfortable city life is a function of land use, transport, cultural values and the imagination and management skills of city officials. The informal urban transport facilities available in Accra today were established by individuals to fill a void created through the demise of the state owned city bus transport services over two decades ago.

While members of this informal urban transport union may have all the good intentions, their operation is characterised by structural and human lapses which only an imaginative and action oriented Metropolitan Authority can erase and replace with a modern city transport service befitting the status of Accra as a national capital.

## References

Government of Ghana, Statistical Services, 2000 population and housing census reports, Accra, 2002.

Addo, S.T., "Urban Transport in Ghana and Africa: Problems and Solutions", Ghana Social Science Journal, Vol.1 No.2 (New Series) 2002. In print.

Tamakloe, E.K.A., 'Transport' The Future of Our Cities, Proceedings of the Ghana Academy of Arts and Sciences, Volume XXX, Accra, 1993, pp.31-37.

Segbefia, Yao Alexander, 'The Potentials of Telecommunications for Energy Savings in Transportation in Ghana: The Dynamics of Substituting Transport of Persons with Telecommunications in the Greater Accra Region of Ghana', Department of Geography and Resource Development, University of Ghana, Legon. Unpublished M.Phil. Theses, September, 2000.

Oppong, P.A., Problems of Urban Mobility and Accessibility: the Case of Accra, Ghana. Department of Geography and Resource Development, University of Ghana, Legon. Unpublished M.Phil. Theses, July, 2000.

Government of Ghana, Road Traffic Regulations 1974 – Legislative Instruments 952 and 953, Accra, Ghana.

Addo, S.T., 'The Transportation Factor in Woodfuel Distribution in Ghana', The Journal of Management Studies, Third Series, Vol. 6, 1990, Legon pp. 1-12.