

Order out of chaos

Self-management and public control of the paratransit sector: case Ghana

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Abstract Accounting for 70% or more of the public transportation of people in Ghana, the Ghanaian tro-tro is probably one of the most efficient paratransit systems in the world. Through its long history it has developed an efficient and cheap system based on self-management. The main elements are so-called lorry stations as terminals for the buses driven by trade unions as route associations. A flat rate and the “fill and run” principle reduce competition among the tro-tros. The fares are fixed and set by the unions after consulting with the government.

The system is in an ongoing state of transition. The state policy is like a pendulum, swinging from side to side—from the state steering to liberal freedom and back again. Today, the pendulum is moving towards more state control and steering out of a desire to find solutions to the heavy rising problems of traffic congestion, pollution, and accidents. However, a solution based on big busses driven by a state-owned company appears not to be a good fit for a poor country with weak institutions, widespread corruption, and nepotism.

While an impressive literature exists on ‘top-down’-planning of large transport systems and is followed by institutional recommendations from, for instance, the World Bank, this paper advocates for further research on decentralized solutions based on local entrepreneurship.

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1. Introduction

Transport using minibuses in a paratransit system¹ is an important informal public transit system around the globe. This type of system exists in most countries throughout the world, including, to some extent, even in the richest countries.² It is a self-grown system that springs from contractors with few resources in geographic areas that have no affordable alternative means of transport. In some countries, the system has evolved over 50 years or more; in other countries, it develops after the public transportation system has collapsed—for example, after the end of centrally planned socialist states. There are differences in the paratransit system between countries, but the general principles are strikingly similar.

In Ghana, the paratransit vehicles are called tro-tros. There is no formal definition in the legislation. Generally speaking, a tro-tro is a bus carrying more than seven but no more than 23 passengers.³

The system is self-grown. There are no traffic planners, researchers, foreign aids, or big companies behind the creation of these routes. This principle makes this paratransit system the cheapest mode of bus transportation—the buses run only when they are full, so that there will be many passengers to help pay for the most expensive travel cost: the fuel. If there is a need for more transport, anybody has the free initiative to start a new bus route. Competition is fierce, so no large surpluses are made. Capital accumulation is rarely seen—vehicle owners rarely have more than one or two buses. The system can only work in a situation close to total freedom. Nevertheless, there are attempts at coordination and management, both from the state and other public authorities, and also from the trade participants themselves.

The name ‘tro-tro’ is evolved from the Ga (the local language in the Ghanaian capital of Accra) word “tro,” meaning “three pence,” which was the rate for a trip back in the colonial time when this transport system first emerged. The Ghanaian tro-tros currently serve 70% or more of public transit passengers,⁴ which means that Ghana is presumably the country with the highest paratransit prevalence in the world.⁵ The study is based on an anthropological fieldwork in the southern and western part of Ghana in 2013,



A mammy wagon on one of the few ordinary bus lines around 1950.

followed by supplementary archival and literature studies to create a more complete picture of the development patterns.

2. The early history—Bad roads and mammy wagons

The tro-tros provide the local transport service in the big cities as well as the regional and national transport in the country. The large share of paratransit vehicles has a historical explanation. One of the aspects is a lack of road transportation traditions. Back in time, the tsetse fly made transport using vehicles drawn by animals impossible in most areas of Ghana. Only small pathways were available, but they made some transportation possible, although this cumbersome transport system was only profitable for very expensive goods such as salt, gold and ivory. For many years the British used these tracks for their transportation, including hammock bearing. In 1894, they first set up a roads department to build and maintain roads. Railways were the focus in the years before 1900, but by the 1920s, after the most important mines had been connected to the harbor towns, the fast expansion of the railway slowed down and the road system was prioritized.

Road transportation has had a very slow development. The laterite ground and the heavy rainfalls affect road construction and the maintenance is rather expensive, making the whole society lag behind other countries with more temperate climates. Better roads with asphalt and drains have been built gradually, but new construction still occurs only rarely because of



One of the first lorry parks. Probably Kumasi around 1935.

limited budgets.

The number of vehicles has always been relatively small compared to wealthier countries. The first vehicles were mostly trucks on the feeder roads to the railway and a few personal cars for the European administrators and missionaries. Originally, the truck was the dominant means of transport for persons and goods. Around 80 years ago, the business model developed with an unofficial transport system where drivers received a fee for the transport. Since then it has developed into the present system.

The private lorries were mentioned in the colonial report for 1931–32: “Privately owned lorries ply for hire both as regards passengers and goods over all motorable roads.” Already in 1933 the owner-driver became a problem. As it was stated in the official report from the colonial administration in 1934 (and repeated in the report for 1934):⁶

“Road transport gives employment to many, and the African lorry owner-driver is becoming a problem on account of his successful competition with the railway. The lorry owner can always rely on his family and his friends for shelter and sustenance, and his clothing needs can be reduced to a minute sum. He does not necessarily work every day; he is almost entirely without overhead charges, and, except for the payment of the instalments on his lorries and of his running charges, he has little need for money. Consequently road transport on the Gold Coast is exceedingly cheap and is probably run on an uneconomic basis.”⁷

Since 1934, vehicle quality has been regulated and demands have been made regarding the drivers’ ability. For instance, it was required for drivers to be literate in order to read and understand road signs. From the beginning, the state had difficulty defining and controlling driver practices. The colonial definition of a man who was qualified to be a driver and the African understanding of these requirements were different, leading African drivers to ignore the laws.⁸ Finally, drivers in the Ghanaian capital of Accra went on strike in 1938 over frustration about the many restrictions.⁹

The mammy wagon became very important in Ghana for many decades. In West Africa, a mammy wagon is a small open-sided bus or light truck used to transport passengers or goods,¹⁰ and it became the dominant vehicle in the countryside for a long period. They were widely used to haul farmers and their products to the markets.¹¹ They became important in carrying both goods and people on fairly regular runs or as tramp vehicles, going wherever work could be found. In 1952, Ghana had 20,000 vehicles, of which 7,700 were mammy wagons.¹² Most mammy wagons consisted of locally made wooden bodies built on an imported truck chassis, often a Bedford truck. A truck chassis was well suited to the Ghanaian roads with its rather stable construction and its raised height that allowed it to drive on very jagged roads. With its simple design and the engine situated in front of the driver, it was also very easy to repair.

Efforts to build a public transport system based on large busses became for many years a fiasco. Urban public transportation experienced a downturn similar to that suffered by the railway in the years after independence. As stated in an official report on transport and the issues on poverty, the problems were caused by “Inadequate infrastructure and weak institutional and human capacity in all sectors including transport sector”.¹³ An explanation of the declining efficiency of the railways was caused by charging fares that were too low, which led to missed opportunities to maintain its overall services.

In the early 1970s, smaller vehicles were introduced, such as Land Rovers rebuilt with an enlarged bed on the back with seats along the two sides and across the front of the bed, while the back served as a door.¹⁴ These trucks could have high slats around the bed and a ridge pole for a

tarpaulin in the rainy season.

The number of mammy wagons has been falling throughout the past few decades. The improved quality of at least some of the trunk roads removed the need for vehicles built on a high chassis. This, along with a desire for a more comfortable driving experience, gave rise to the present prevalence of the minibus. In 1966, new registrations for mammy wagons with wooden bodies were discontinued for safety reasons.¹⁵

3. Lorry parks

The Ghanaian paratransit system is based on lorry parks. As the name implies, a lorry park was originally a parking place for lorries, but when the many wagons were replaced by minibuses it kept its name. All towns have one or more places where drivers offer their services for regional or interregional transport. In large cities, they are given names like Central Lorry Park or Transport Station and similar, while the parks in smaller towns have no names.

The parks are typically located near to a harbor, railway station, market or gas-pumping station where traveling people or traders are gathering. Most are organized according to the type of vehicle and their final destination.

The grounds are generally owned by the municipality. The infrastructure is rather primitive, often with only a plain, unpaved field but very rarely with small buildings for offices. There are seldom warehouses for storage space or loading equipment. Today, the lorry park simultaneously serves as a transport terminal and a spot market for freight transportation on lorries that do not have an allowance to carry passengers. If the local municipalities do not keep pace with the development, then the drivers themselves start new stations. In 2009, there were 42 stations established at unauthorized places in the Ga East Municipal, most of them by the roadsides which further compounded the problematic traffic situation.¹⁶

In Accra in 1991 there were 156 parks spread over 33 terminals,¹⁷ and in 2005 there were about 12,000 active tro-tros in Greater Accra.¹⁸ Half are in operation daily and the rest work privately for hire or are not functioning.¹⁹ In 2008, one of the largest parks had around 400 vehicles. The passenger

vehicles were a mix of small and larger busses. The smallest are personal cars, although most are 12-seater busses with a few larger busses.

The municipality has handed over their operation to a managing organization. The trade union GPRTU plays an important role in managing lorry parks all over the country. The organization became politically aligned with the dominant political faction in the 1980s and now organizes around 90% of the tro-tro sector. It is active in taxi provisions as well.²⁰ Non-union members can use the station as well, but they have to pay a larger fee.²¹

GPRTU lost its monopoly on the stations and now other unions are allowed to operate at lorry parks. The Ghana Co-operative Transport Association (GCTA) has taken over some of the stations in Accra while the Progressive Transport Owners Association (PROTOA) is strong in the Kumasi area. Several lorry parks can join together to make a terminal station.

The truck assistants shout out the next destination of their vehicles several times a minute. When passengers have located their vehicle they can sign on and reserve their seat by sitting in it. Partially filled trucks can wait for more passengers—a process that can last many hours outside the peak-hours, probably in a sunbaked vehicle and with the danger of losing one's place if one goes away on an errand.²²

The route for the tro-tro is shown on a primitive cardboard sign in the windshield; a more permanent sign is not appropriate because a tro-tro can drive on many different routes in a single week. There are no fixed timetables; the car simply starts its journey when it is full.

When lorry parks are mentioned, street hawkers need to be mentioned too—the lorry park also functions as a market with women and children selling food and other goods for travelers. They occupy a large part of the park—around 25–35% of the area—which does not leave much space for maneuvering the tro-tros. Most hawkers (around 80%) are selling goods to passengers with the outbound traffic, offering everything a person needs. If someone forgets something they can buy things from the tro-tro window at stops out at the roads.²³



The typical Ghanaian tro-tro with people and their luggage.

4. Owners and drivers in the tro-tro business

In old days, the largest trucks for long distance trips usually had four people on the crew. The driver had one of the three seats in the cab. Another seat was occupied by his assistant, who helped him with non-driving tasks such as putting water in the radiator, guiding the truck through tight places, etc. Two loaders on the back belonged to the crew. On the smaller mammy wagons, there were only two members of the crew, the driver and a helper on the back. This is the same in the present tro-tros.

Some owners drive their own car, but most hire a driver instead. Even though an owner may only own one or a few cars it is difficult to control the driving; therefore the owners often get a fixed rent from the driver and the driver gets the passenger's fares in order to pay for fuel, small maintenance and the crew mate. The surplus amount is his salary. Because of this payment system, the drivers are interested in capturing freight and being on the road in order to earn more money.

On the vehicle, the conductor (also called the "mate") collects the fare. He (I have never seen a female driver or conductor) sits at the sliding door so he can easily hop out to help the travelers with their goods, put it in the luggage trunk or hide it around the traveler's seat. The tro-tro has a defined route and a fixed fare for the distance, but before the traveler enters the car at a stop there

could be a negotiation about the fare if the traveler is not travelling to the end destination of the car's route. In a silent moment the conductor collects the money for the trip.

Drivers often pick up a number of passengers on the route, so revenue leakage happens often. Drivers are often illiterate or semi-illiterate, with a lack of formal training in the transport sector. The record keeping is also generally poor.²⁴

5. The tro-tro vehicles

The tro-tros are mostly light vans converted for passenger carrying use through the installation of windows. The installed seats are fabricated locally after a very simple design that is not best suited for passenger comfort or safety.²⁵

Unfortunately it is difficult to get precise information about the number of vehicles and the distribution of vehicle types. The road transportation sector has been unregulated to an extreme degree. There are statistics on new registered vehicles from the buying of new license plates, but otherwise there is no system for deregistration. Therefore it is impossible to know how many of the registered vehicles still are on the road and how many of them have been scrapped.

The minibus was introduced earlier in Ghana compared to, for instance, Zimbabwe or Botswana. Accident statistics after 1995 show very few roll-over accidents with mammy wagons and pickups/4WDs in spite of the fact that the passengers were unprotected in the event of a roll-over.²⁶

Most motorized vehicles in Ghana are second-hand cars from Europe. Importing cars to the countries in West Africa started in the 1980s, beginning with 10,000 cars a year and growing to more than 500,000 a year around 2000, representing a value of more than US\$1 billion. The first imports were brought by European tourists, development specialists or young African students in Europe, and the cars were driven through the Sahara or as additional freight on regular cargo ships. Today professional shipping lines are in regular trade between Europe and Africa. The vessels operate on the Hamburg-Amsterdam-Antwerp-Le Havre route, where thousands of cars are loaded on a special roll-on/roll-off ship.²⁷ In Africa, the ships typically sail a route to some of the eight most important harbors, where the cars are redistributed

Lorrypark Kumasi. This chaos is normal in all lorry parks.



onto the land. After the harbors in Senegal and Côte d'Ivoire, the ships arrive in Tema, Ghana, before they continue to Togo.

This second-hand import system completely changed the car fleets. Now many new brands come to Africa, including brands from Germany and Japan. The cars are in good shape according to African standards, although a large portion of them are so damaged that they cannot even be resold to poorer European countries. Those cars are sold for rather small money on a European price level. For the Ghanaians, the price is high and so only the most necessary repairs are made. The cars are not repainted and nearly all of the vans still have their original advertisements for the plumber, baker or whatever company originally owned the van, with slogans written in German, Danish, Dutch or other foreign language. This is illustrated by the story of the German ambulance car 7/83-2 that became the tro-tro Dr. JESUS.²⁸ The ambulance was identified in Germany and its history was told. It was severely damaged and later, after a lighter renovation, it was sailed to Ghana. This is an example of "technology transfer."

It is not only the used vehicles that are imported. Tires and spare parts are purchased after their best times have passed. According a survey, more than 64% of all tires in Ghana are purchased used.²⁹

6. The "fill-and-run" system

The principles for loading the tro-tros are "first come, first served" and a "fill-and-run" basis. The customers have to take the first tro-tro in the line; they do not get a choice of vehicle. The system is simple. With this principle there is no competition between different vehicles at the lorry station. In contrast, however, there is a huge competition on the road to get passengers to empty seats. There is no violence in this competition but the mates are very aggressive in their calls for new passengers.

The 'fill and run' system has some general issues, including the fact that a tro-tro only departs when it is full, which could take hours outside the peak time (the rate is the same all day long, so travelers have no incentive to travel outside of the peak hours). Normally this waiting problem is caused by a temporary shortage of vehicles, rather than slow loading. On the other hand, the tro-tros are small vehicles with few seats so it would have been more uneconomical to use transport in larger buses. Especially during off-peak times of the day or in peripheral areas, filling the few seats will be carried out in a rather lengthy but accepted timeframe. Some drivers take some of their buses out of business rotation during these periods of time. All in all, the system looks to have a



A mate at his place in the tro-tro watching for customers.

significantly high efficiency rating with an average factor of 80% in total. This shall be compared with experiences from large urban bus companies, where a factor of 90% can only be obtained during the morning peak hour and in one direction only.

The principle of “fill and run” is only occasionally deviated from—for instance, in order to service passengers on the route. Normally the drivers themselves would not volunteer for this but their opinions could be overruled by a union official.³⁰ The system can only be undermined by powerful GRPTU representatives. One present illustration is from the big Kaneshie station in Accra, where drivers protested against the GPRTU national chairman. They claimed that his 6 Yutong buses were always loaded before all other the buses were loaded, irrespective of the time the chairman’s buses actually arrived at the station.³¹

The tro-tros only take up passengers when there is an empty seat available. Therefore passengers who live nearby a lorry park need to walk to this place of departure. This could particularly pose a problem in large cities where passengers might shift from one tro-tro to another, perhaps several times.

The system with tro-tros in line on a strict rotation means that the owners of the tro-tros have no incentive to clean their vehicles or otherwise improve their quality. Otherwise, the passengers will need to take a later bus to get better accommodations.

7. The economy

7.1 Setting the fare and routes

New routes are determined through a negotiation between the managers at two lorry stations. In this respect there is no competition between them because they both have the advantage of a new functioning route. They are very adaptive to the needs of transportation and new lines can be tried if a new entrepreneur wants to try to go into business.

In theory, the fares were fully deregulated through the program of economic liberalization, beginning in 1983. Some researchers, however, say that the state played a large role when the rate was set in the late 1980s by the Ministry of Transport, which published the transport rates the unions used for paying the then-3% tax.³² Only the prices on a few essential products were still government-controlled—among them, the price of fuels. In reality there is an unofficial fares regulation in the form of ‘negotiations’ with governmental institutions. From 2001, fares were set through negotiations with the Ghana Road Transport Coordinating Committee (GRTCC), and later these negotiations were transferred to the Transport Fares Review Committee for a review of transport fares bi-annually in January and June of every year.³³ Originally, the fares were based on a long list of components such as fuel, tolls, salaries, tires, overheads and so on. In the present situation, the price of fuel is the foremost component. For many years there has been no authority under which the government could claim negotiations, but nevertheless they are still arranged twice a year.³⁴

The fares are set for routes but there is not a separate rate per kilometer. This system is advantageous for the government because it is the union that is responsible for the rate, so the government cannot be blamed for fares that are too high in the public opinion. At the same time, for the last decade, the government has had its state-owned MMT company which is able to charge a lower fare, and thereby pressure the fare level to come down.

7.2 The economy of the tro-tro

The principles of the economy behind the tro-tro business can only be given roughly. Accurate information about the cost per kilometer of operation is not available, as only around 22% of the vehicles have working odometers. However, it is estimated that a typical distance operated in a week is only 711 kilometers.³⁵

Here are some of the expenses to give an impression of the trade. The variations in income and expenses have been very large, depending on many factors, and they vary from park to park.³⁶

- Minibus/19-seat tro-tro: 38,000 Cedi.
 - Insurance: 40 Cedi per seat per year.
 - Annual operating permits: 23 Cedi.
 - Union affiliation: 13 Cedi a day.
 - Repair costs: Around 500 Cedi a month.
 - Joining fee for the station: A one-time fee.
 - Wages for the driver: If this is the agreement.
 - Driver payments to the owner: If this is the agreement, the driver should pay around 8 Cedi per seat per day.
 - Owner payments to register for a route: The registration fee is for the lifetime of the vehicle and is dependent on how profitable the route is.
 - Daily entry fee for the car: Paid on a daily basis for use of the terminal facilities and ensuring an orderly market including a Social fund. The amount is different from park to park; at large parks it can be 100 Cedi (\$30), while small parks may only be 6–15 Cedi.
 - Wages for the mate: 18 Cedi a day.
 - Income tax: 2.5 Cedi per seat per quarter.
- Variable costs:
- Diesel: 6 Cedi.
 - Minor repairs (driver): 5 Cedi.
 - Miscellaneous expenses: 80 Cedi.

In particular, the politics behind the user fee, calculated as a commission on the value of the transport, are different from park to park. This rate is normally handled by the local trade union. At some parks it officially it could be up to 5% but unofficially it probably is higher—perhaps up to 10%. Loads acquired outside the parks are also subject to the union's commission.³⁷

For most owners, a loan at a bank has been out of reach. In general there should be a significant deposit made on 25–30% of the value and the payback time would typically be three years with a high interest rate to cover the risks. This is unaffordable in a business with low margins.³⁸

New cars could solve the problem of outdated vehicles. For the last several years there has been an effort to finance loans for the small owners of tro-tros. Around 1994, the union GCTU funded 13 buses but they were only a small part of the total fleet of 1476 under the control of the union.³⁹ In 2013, another of the unions, PROTOA, gave loans for up to 50 of their members for mini-buses bought from Toyota and financed by a local bank.⁴⁰

8. Union power through lorry parks

The trade unions within the road sector started up when the Motor Drivers Association was formed in 1928.⁴¹ Especially after the Second World War the unions gained a stronger power hold on the area. The Motor Drivers' Union started to agree to certain rates and prevented the former ruinous levels of competition.⁴² Today there are several associations in Ghana but the tro-tro business is dominated by the Ghana Private Road Transport Union (GPRTU). The forerunner for GPRTU was established in 1935 as the Gold Coast Motor Union by a group of professional drivers, mostly old servicemen from World War I. At the time of independence in 1957, it was renamed the Ghana Motor Union, and in 1967 the name changed again to the Teamsters and Private Transport Union in a short period during which it banded together with seamen and dockworkers.⁴³ GPRTU is a trade union for the private transport sector and has been a member of the Ghanaian Trade Union Congress, TUC, since 1967. Its members are drivers and people working closely with the land transport business, such as people working for the lorry station. Owners of tro-tros are members, too. The

union has no collective bargaining function, as it has members who are a combination of transport owners and drivers. It works as a welfare association to enhance the working conditions of its members. It acts as the members' mouthpiece in seeking to influence national policies. In 2001, the union had about 55,000 members, where 60% were vehicle owners—mostly owner-drivers—and around 35% who employed drivers.⁴⁴ In 2011, the number of members was raised to 120,000, according to the organization.⁴⁵

The corporatist idea has been dominant for many years in Ghana. There has been a desire for a hegemonic political control by the state over the economy, often through a centralized political and administrative power. The political pendulum has gone back and forth, but with the PNDC Revolution in 1981, the GPRTU obtained a high national profile in close relationship with the PNDC; sometimes GPRTU was called an "organ of the revolution". Since 1983 the politics changed to, in general, being favorable toward the private transport sector. There was a liberation of the control of fares which at the same time gave the liberation increased availability of spare parts, more privatization of the state-owned transport sector and better roads due to massive investments in road building. In the fight against many other unions, GPRTU was the winner with the closest connection to the state organizations, with seats in national boards and committees, and through this influence it entered into national transportation policy. GPRTU got control over all the lorry parks in Ghana and also got allowances to employ guards to patrol them. Their employees could also get training from the police and military.

Through the union, the members could get subsidized vehicles, tires, and lubricants. In disputes with local authorities and with other organizations, GPRTU had advantages through its political contacts. On the other hand, it supported the government, which from time to time was in opposition to the Trades Union Congress, of which GPRTU was a member. During elections and political rallies, GPRTU provided transport and disseminated the government's propaganda. In 1989, it succeeded, through a circular from the government, in becoming the sole organization to control and regulate the movement and operation

of all vehicles at the lorry parks in Ghana.⁴⁶

The local secretary manages the organizational work, collecting the daily fee from the drivers for their use of the station. The local branch of a station is organized like a military unit. This hierarchical system is well-known in Africa, with inherited patriarchal structures from both the pre-colonial period and from the European colonizers' institutional structures. Due to a low skill level, a stiff hierarchy is necessary because with low skill levels it is difficult to delegate duties to others.⁴⁷

In 1979, GPRTU formed a national union guard for securing discipline at the stations and on the road.⁴⁸ The secretary then employed guards with extended prerogatives. They acted like the police, except they had no firearms. After perhaps a nine-month training period, mainly in physical training like in the police, prisons and fire service, the guards started work, with operatives wearing uniforms with light blue shirts, dark trousers, caps, and badges. GPRTU's officials could act as police officers. They could stop the drivers on the road to see if they have their receipt for paying the tax. The guards could give drivers fines if they didn't have a receipt or if something else was wrong, for instance having too many passengers, driving too fast, driving in bathroom sandals, ensuring that buses only depart when full, and so on. They could get an unofficial payment through free rides from the drivers, to more criminal matters like getting some money in exchange for not giving a higher fine. The guards had power and were titled "sir", and they could join the parade on Independence Day together with the brigades from the military and other uniformed corps.⁴⁹ Today GPRTU has lost its monopoly and much of its power because other unions are allowed to be active. Others, including the Ghana Cooperative Transport Union (GCTU, occasionally called 'Association' instead of 'Union'), are organized with both owners and drivers and an association only for vehicle owners—the Progressive Transport Owners Association (PROTOA).⁵⁰

GPRTU was close to becoming a paramilitary organization around 1990. Its power was threatened by the local authorities. For instance, in 1988 Accra City Council embarked on a major traffic exercise. A task force driven by the police and other units was posted at various points throughout the city to



Blockade against the governments enforcement of the use of safety belts in tro-tros. Accra 2015.

check on the vehicle's quality, the driver's license, and so on. Many vehicles were impounded and drivers received severe fines. The reaction from GPRTU was sharp and after a strike the city was forced to relinquish its control.⁵¹

This rivalry has given rise to many problems over time. One of the most serious conflicts happened in 2003 in Kasao. PROTOA had gotten permission from the local chiefs and the local District Assembly to take over the local lorry station, but GPRTU members attacked the PROTOA offices and destroyed property worth 15 million Cedi.⁵²

A similar situation happened the same year in the Asikuma lorry park, where GPRTU did not allow PROTOA members to load. The police stopped the loading because the local Security Council had advised that if the two organizations operated at the same lorry park there would be no peace.⁵³ At other parks, it looks possible to have members of the two unions working together. This policy was written into a declaration for a new lorry station at its opening in 2014 in the Volta region.⁵⁴

The GPRTU monopoly definitely stopped in 2013. The policy from the governmental group Ghana Road Transport Coordinating Council changed when it mandated that individual tro-tro owners be members of a recognized transport organization when they acquire a commercial vehicle for operation. Commercial drivers must belong to a union but have a free choice of which union they prefer.⁵⁵

A court dismissed a GPRTU action against PROTOA in 2005. GPRTU had been in charge of the Madina-Somanya routes since 1998, which in

their opinion meant that it therefore was a route belonging to the union. The court said that no individual transport organization could claim monopoly over the private transport sector; PROTOA therefore should be allowed to drive on the same route, too.⁵⁶

Problems could also be internal. In 2014, a demonstration started by some drivers at the Circle-Neoplan station in Accra because they found that the chairman of GPRTU had turned his office into a dynasty by appointing only family members and close associates to executive positions throughout his 22 years as chairman. He collected 150 Cedi per bus and not less than 60 buses loaded from the station, but he failed to account for the booking fees. The police arrested the leaders of the demonstration when it turned violent.⁵⁷

9. Governmental steering and regulations

9.1 Political background

A little background information about Ghanaian politics is necessary to understand the history of transportation. After many decades under British administration Ghana gained its independence in 1957, with Kwame Nkrumah from his Convention People's Party (CPP) as president and an administration largely based on central planning.

This policy did not function well, and the country's progress was stopped in many areas. The road network was in rather good condition at the time of independence, but the road budgets declined in the 1960s and the maintenance accordingly suffered. In the 1970s, the roads were breaking faster than they could be maintained. The decline in this and many other areas of society provided the backdrop for a military coup in 1981, led by John Rawlings with his party, the Provisional National Defense Council (PNDC). The policy changed to more pragmatic views with a decentralization of institutions. Support came from the International Monetary Fund and other foreign bodies, and with this followed the foreign institution's requirements for money according the Bretton Woods agreements in order

to get loans from the IMF in 1983. For instance, the foreign institutions wanted a more liberal administration of businesses instead of the former Soviet centralized business model.

With the Economic Recovery Programme (ERP), followed by the Structural Adjustment Programme (SAP), an increasing emphasis was put on self-sufficiency for private enterprises together with an income tax for the informal sector beginning in 1987. The government should divest itself of the state-owned companies and its role should only be to regulate and tax the transport operators together with making investments in infrastructure.⁵⁸ These removed trade barriers and other deregulation set the background for the previously mentioned second-hand car boom.

The pendulum between state patronage and free market forces continued to move from side to side. With the New Patriotic Party (NPP) coming into power in 2001, the president changed the policy once more. Another change back to the NDC party in 2009 did not change this policy that much.

The pendulum currently is not going back in the direction of the old situation with state steering of the transport sector. However, it is noted that an active state intervention in mass transit provision is necessary to ensure efficient transport systems that are socially accessible, environmentally friendly, and economically sustainable. The dominance of services provided by private companies “hinders economic growth”, and “the large number of vehicles required to meet demand causes congestion and parking issues” besides causing “pollution and low safety.”⁵⁹

9.2 Registration

Every prospective operator of a bus can easily procure a permit from a local authority to drive in the total area of that authority. The only requirements are a vehicle with a valid certificate of roadworthiness and a driver with the appropriate license. The next issue is to get registered at a lorry park and pay the dues. In reality, the unions control the market entry. If a proposed route is believed to be over-subscribed, the bus owner will not receive permission to open it.⁶⁰ Once a driver is in the system, he will move away from a route



Congestion on one of the few large roads in Accra.

that is not giving him enough income. In reality, the market forces dictate the policy.

No governmental or local authorities know the transport system thoroughly. There are no records or proper data on the operators of public transport because most of the operators have not been registered. Their respective routes of operation are not known, nor are their activities harmonized to ensure efficient service delivery. From the authorities' point of view, therefore, the planning process is difficult.⁶¹

9.3 Taxation

Several decades ago even the informal sector was required to pay tax. The conventional system for taxing gave rise to high costs of collection, and at the same time there were difficulties in the monitoring and enforcement of the payment. The tax was based on an assessment for income and did not take into account any vehicle breakdowns or workdays lost by illness.

The government devised a new system called “Identifiable Grouping Taxation” (IGT) that was simple and easy to administer. Instead of paying a lot of money to corrupt and uncertain public officials, it was better to pay directly and legally to the state through the GPRTU representative at the station. The system was based on an innovation in tax administration. The drivers only had to pay when they were actually working and they did not have to spend a whole day at a tax office just to pay their taxes. This resulted in significantly improved tax revenue from the drivers. The unions

were eager to be efficient in maximizing collections because they were given 2.5% of the collected revenue. For the government, this system was the largest of the 32 informal sectors in which the IGT system was implemented.⁶²

With the tax collection system, Ghana has a relatively stable relationship and cooperation between the two main actors in the transport area with a strong incentive to co-operate. At the same time the system learned the informal sector was a culture where paying tax was a normal situation, although GPRTU and the other unions eventually became “less efficient at handing the money over to the government” —in other words, corruption and fraud became common.⁶³

When the power in Ghanaian society shifted in 2001 to the new NPP party, GPRTU lost some of its power due to its close identification with the former government. Because of this (and/or to reduce the power of the unions) the tax system was changed. The first step was taken in 2002 when the monopoly of GPRTU was removed and other unions were allowed to collect the taxes as well.⁶⁴ A more radical change happened in 2003 when the system was replaced with a Vehicle Income Tax. Transport owners and drivers were instead required to pay tax on a quarterly basis. The system was based on a sticker system, where stickers were required to be pasted on the windscreen in order to be inspected by the police. The tax was paid based on the category of the vehicle, which depended on the passenger capacity and type of vehicle.

The taxation through a sticker gave a significantly higher income than when the unions collected the tax. If the tax was not paid, a 500 Cedi fee could be the result of an inspection by tax collectors or by the police (as of today, July 2015, 1 Ghanaian Cedi equals 0.27 US \$). This income tax is for the local Assemblies in general and not for purposes specifically related to the transport sector. The system became a success. It gave a reasonable higher income to the authorities and the drivers got rid of the bureaucratic burden of paying the tax every week in exchange for the new fixed price four times a year.

9.4 Traffic congestion

A well-known problem in big cities with a growing population and rising numbers of cars is traffic

congestion. Typical door-to-door travel speeds in big towns are low because of traffic congestion. Walking could give a speed of 3–5 km per hour, cycling 10–12 kph, motorcycle 15–20 kph, car 15–17 kph, standard bus 8–10 kph, and a minibus 10–12 kph.

Developing countries have many problems and most of them are the same. The World Bank⁶⁵ described traffic conditions in general as chaotic. Safety is low, air pollution is high and a great deal of time is lost because of traffic jams. The enforcement of traffic laws is low or poor due to corruption and inadequate human and financial resources.

In the towns of Ghana the road space is occupied by street vendors that can take up an average of 25–35% of the available space. Scant space is available to begin with, but it is often occupied illegally by parked cars and both legal and illegal kiosks.

A large part of the Ghanaian environmental problems are caused by the use of vehicles. Accra alone, with its population of over 3 million residents, has a fleet of motor vehicles growing faster than the 3% annual GDP growth rate. The routes are populated by 200,000 private cars, around 10,000 tro-tros, and 2,000 taxis. In 2007 it was estimated that these numbers would see a 50% increase by the year 2010.⁶⁶

9.5 Rising death rates and efforts in road safety

Africa has the highest traffic injury mortality rate in the world. In 2004, the rate was 28 deaths per 100,000 people, compared with 11 in Europe. While the continent did not have the largest proportion of road fatalities (this distinction went to Asia), the accidents were more serious.⁶⁷

Not surprisingly, the most common cause of accidents are minibuses, which make up a large part of the transportation in Ghana. Thirty-four percent of all fatalities happened with passengers or drivers in minibuses.⁶⁸

There has been a tremendous decrease in the number of accidents per vehicle, from around 122 fatalities per 10,000 vehicles in the year 2000 (compared with 1.7 fatalities per 10,000 vehicles in the United States).⁶⁹ On the other hand, it is possible that the more rapid growth in the total number of vehicles may have something to do

with why the causality rate has been growing so fast. With 824 killed in traffic accidents in 1994, the number rose to 1,362 in 1998.

Under-recording and non-reporting have been general problems with the statistics from Ghana. In its records, WHO has increased the number of road traffic deaths in Ghana from the Ghanaian number of 1,986 to 5,407 deaths—and there are probably many more. One survey documented that in the 1990s most of the deaths in Kumasi were not registered in official files. Only 70 injury deaths per year were reported from a town with more than 1 million inhabitants. There were subsequent initiatives to correct these faults and get a more reliable statistic. A few years later the number was more than 600.⁷⁰ A large part of the increased number of accidents is, in reality, an improvement in the quality of the statistic.

Between 90% and 97% of all vehicles exceed the posted speed limit of 50 km/h in the settlement areas. On rural undivided highways where the recommended speed limit is 80 km/h, it was exceeded by 47–66% of vehicles.⁷¹ Lowering the speed limit would help bring down the number of accidents, and speed control carries the greatest potential for this. Unfortunately the police have few resources and a sparse education; together with corruption of the police officers, this leads to a low enforcement level. Though speed bumps and rumble strips are relatively cheap investments, they have reduced fatalities by more than 55% in the areas where they are used.⁷²

While approximately 80% of all traffic accidents in Ghana can be attributed to drivers' error, campaigns could be made to reduce the number of dangerous drivers' acts through safety education. Television and billboards have been created to address these problems. In theory, this message should get through to the target group, a large portion of which is illiterate, but an investigation showed limited results. Only larger and more expensive campaigns were able to make an impact.⁷³ In that sense, is it probably not suitable to transfer the know-how from Western countries to developing countries if the basic attitudes among drivers are totally different. A kind of fatalism in the belief that accidents are pre-determined can reduce the effectiveness of campaigns. Cultural beliefs and understanding need to be incorporated



Angry tro-tro owners at a demonstration against an extended technical control of vehicles.

into the discussion of contributing factors.⁷⁴

Thanks to foreign help, Ghana established and mostly financed a National Road Safety Commission, which is functioning well.⁷⁵ In the years around 2005 its road safety program included a television broadcast once a week for 15 minutes. It had programs for radio, schools, churches and mosques. The drivers had a three-day safety training focusing on issues such as vehicle maintenance, testing of tires, drivers' rest, speed and alcohol.

Often an accident has several explanations. The statistics address the distribution of fatal crashes by driver errors when the most indicated single error in fatalities was the "loss of control," with more than 30% of the fatalities being caused by this. Numbers two and three on the list were the car going "too fast" (24%) and the driver being "inattentive" (20%). In total, inattentive drivers driving too fast and losing control can account for 75% of the total number of accidents.⁷⁶

The drivers can have visual acuteness. A study of truck drivers in Cape Coast showed that 12% of a group of commercial drivers did not have the minimum visual acuity required for driving, while 7% had visual impairment.⁷⁷ Many buses are overcrowded and can lack maintenance with replacement parts not being endorsed by the original manufacturer, or with bad brakes and defective tyres—and probably with incorrect tyre inflation as well.⁷⁸

Safety seat belts are generally non-functioning in Ghana except in brand new cars, and they are seldom used. A study from Kumasi shows that only 18% of the drivers used a seat belt and only 5% of the front right passengers did so. Those numbers are remarkable because there is a national seat-belt law in place for both front and rear seat occupants.⁷⁹ WHO estimated the effectiveness of seat-belt law enforcement to be 3 on a scale from 0–10 with 10 as the best score.⁸⁰

The roads can be in bad shape with potholes and sharp or steep bends. Drivers drive fast, even in town, and the speedometer often does not function properly.

The present situation is rather chaotic and a long way from an optimal situation. Many drivers don't know the traffic laws and road signs. One reason is that many have not taken or passed a driving license test and instead have acquired licenses through illegal means (a survey showed that 24% of drivers in 2007 had fake licenses). This is an obvious solution because of the price of 7\$ for a license along with a 48-hour compulsory driving school for beginner drivers. Many drivers operate with an invalid, non-renewed license (19% in 2007) and again the reason is that the price of renewal is too high for many people (1½\$).⁸¹ Along with the union, the government made a project in 2015 to train 40,000 drivers nationwide in a two-day training on road safety and customer care in order to enhance their skills and knowledge.⁸²

Driver fatigue is one of the biggest reasons for accidents. The law is demanding that commercial vehicle drivers have a maximum of an 8-hour working day, but in general, drivers in Ghana work for around 16 hours every day.

Drunk driving can also be a problem, especially on the weekends, with many funerals and other parties with their heavy drinking. A test showed that 11% of all weekend drivers (including private drivers) were driving under the influence of alcohol.

The Ghanaian government has long known about these problems and through many years has tried to better the situation. In 2014, a long row of initiatives were enacted but they were met with strikes and blocked roads by angry drivers. One of the public claims was to prevent illiterates from driving—the same issue that was behind a strike 75

years ago!⁸³ Similar measures have been taken in South Africa and Nigeria but were abandoned by the authorities after they proved impracticable.⁸⁴

9.6 Better cars and law enforcement

The mammy wagon with its wooden body was prohibited around 1990. It was a dangerous vehicle and often the numbers of passengers were larger than the maximum allowed. An observation from 1967 can illustrate this: A 7-ton lorry with a maximum legal load of 45 persons left Bolgatanga for Kumasi with 58 persons and 88 sheep on the passenger list, according the payment made to the lorry park.⁸⁵

Some years ago the police got an incentive to be more efficient through a system where 40% of the court fines that were made were given back to the police. This made the police more efficient but this system has since been deemed unlawful. Instead it was replaced by a mostly inefficient system of low-level, on-the-spot fines.

The trade liberalization after 1983 made it possible to import second-hand cars. In the mid-1990s, 50% of the car fleet was older than 10 years and 10% were more than 22 years old.⁸⁶ A law on imports introduced in 1974 banned the import of any vehicles over two years old, but the law was never effectively enforced. In 1998 came a ban on vehicles older than 10 years old entering the country. It was a very unpopular decision and was subsequently scrapped in 2002.⁸⁷ Instead, a penalty is paid for the import of over-aged cars. For commercial buses and minibuses, the penalty rates for a car older than 10 and fewer than 12 years old are 2½% of its value; for older than 12 and fewer than 15 years, 10%; older than 15 and fewer than 22 years, 15 %; and 22 years or older, 50%. The penalties are rather small compared to private vehicles or commercial trucks.⁸⁸ However, the imported cars are still of a low quality—they may not be as old anymore but perhaps may be damaged instead.

Although there has been a law requiring a regular test for cars to prove their roadworthiness (twice a year for commercial vehicles), this test is being evaded more and more. A report from 1996 indicated an evasion rate as high as 65%.

The inspection system for vehicles is limited by the institutional and technical capacity of the test

centers. Many buses drive without this certificate because the risk of being discovered by the police is small.⁸⁹

An official report stated in 2010 that only 5 out of 100 inspected buses had the prescribed kind of seats. Many seats in mini-buses were constructed of metal and had sharp edges. Seat belts should be



The long distance bus for Accra-Cape Coast is convenient but is expensive and with a bureaucratic system at ticket sales and loading.

securely fixed to the structure of the vehicle and used in all buses, but only 4 buses out of the 100 inspected had seat belts at all.⁹⁰

Even when the governmental Driver and Vehicle Licensing Authority helped the National Association of Garages to train mechanics from many garages on the proper fitting of the seatbelts, the issue is not only a technical matter. It is an economic burden for the owners of the mini-buses to achieve the required standard. At the same time, it is inconvenient and takes time to use seat belts when three or four passengers are sitting at the same row in a bus and the innermost passenger needs to go in or out. Time is money on the road.

There was a nationwide strike in June 2015 against a new rule that cars need to have seat belts to have their registration renewed. The GPRTU representatives were asked about the action but they denied being involved in it. At least officially, the union is a spokesman for security but in reality it is more pragmatic; it is unbelievable that the union at the local lorry parks had not been involved in the action, unofficially.⁹¹ It looks like the union did not prioritize the training policy

for its members in order to reduce road accidents knowing that installing seat belts is expensive. Instead, it focused mostly on bereavement benefits from social security and insurance schemes for members.⁹²

One more reason behind the action from the angry drivers was the introduction of electronic roadworthy stickers. For a long time all cars were required to have such a sticker to show that the car had been inspected for its standard. The stickers have been copied but the new stickers were machine readable to secure the authenticity of the inspection process.

11. Competition from “top-down” companies

11.1 Metro Mass Transit

The first formal transit agency, the State Transport Corporation, was set up by the colonial authorities in 1909 as a Government Transport Department to cater to the transport needs of the colonial administration. In 1965, it was corporatized to run commercial passenger services and it changed its name in 1995 to the State Transport Company. After an unsuccessful effort to privatize the company, it became a state-driven company once again under the name Intercity STC following the change in power relations in Ghana in 2001. However, the company is currently ailing and is inundated with a colossal financial burden.⁹³

Most large towns operated their own urban bus services in the period between 1927 and 1969. Urban public transportation experienced a downturn similar to the railway in the years after independence. The large transport providers were nationalized in 1969 and consolidated into a single state-owned enterprise, the Omnibus Services Authority (OSA). The company operated large and medium buses in large and smaller cities, together with an inter-city bus operation. In the mid-1970s, the company ran into severe troubles and in spite of many unfair competitive advantages, tax incentives and other subsidies—including strong support from the World Bank to support an Urban Transport Project (UTP) in 1993⁹⁴—it entered the classic spiral of deterioration with a loss of capacity and market, finally ending in a bankrupted

economy in 2000.⁹⁵

The Ghanaian government re-introduced the state-owned bus system through the establishment of the MMT company in 2003, built on the ruins of the OSA company. There was a political initiative to provide an alternative to the tro-tros to run routes generally considered to be unattractive and unprofitable by private operators and free for uniformed schoolchildren when many of the tro-tros were “unroadworthy and in poor mechanical state for carrying passengers”. The “dominance of these unregulated and sub-standard operational system impedes economic growth and reduces the quality of life for citizens as the large number of minibuses employed to meet demand causes congestion and parking issues and, in the main, citizens suffer high levels of vehicular pollution and unsafe voyages.”⁹⁶

It had a 65% so called private ownership. The state has the power over the company through its 45% share and because some of the ‘private’ companies are state owned. Some of its activities include the transportation of wealthier people who can afford to pay the high price to have air conditioned comfort.

The government could use foreign aid to support the company through considerable subventions including deferred payment on import taxes and acquisition of buses in a large number. The Italian Government donated 17 secondhand Fiat Irisbus/Iveco buses at the startup of the company and later came some Dutch DAF and VDL buses through a 35% gift and a 65% loan situation from the Dutch government.⁹⁷ The acquisition of a large number of Yaxing buses from China gave a lot of problems. Their quality was not the highest, as a report few years later stated: the vehicles “are already showing signs of structural corrosion”.⁹⁸ Many of them broke down, and even with a service contract and several Chinese engineers as residents in Ghana, it was not possible to get all of the buses back to running. A large number of the buses were soon grounded or cannibalized to service other buses.⁹⁹ Their low engineering quality gave them an estimated useful life of only 5–6 years.¹⁰⁰

For several years, procurements of new buses were on the national budget and there were plans to buy 250 buses by the 2004 national budget, with 200 in 2005, 400 around 2006, 300 in 2007, 150 by generated funds from within the company, and 200

more from the governmental budget in 2014—in all, 1,500 buses. The company stated in 2013 that it had 1,631 buses with 800 active on the roads at any point in time.¹⁰¹ A further 290 Scania buses are planned to be bought to support the later-mentioned BRT project.¹⁰² This large number of buses looks like an illusion. In 2015, workers from the transport company conducted a nationwide strike to protest against the decision by the management to ground 330 of the company’s then-only 945-bus fleet because of a lack of spare parts.¹⁰³

In any event, it looks like MMT probably still has problems with corruption, a weak economy and to some extent bad management—claimed to be thanks mostly to “top party cadres and closet members” in the state-controlled company. In 2015, 20 buses disappeared—towed away in the night between a Saturday and Sunday—and were later found in private garages across the country. The explanation from the managers was that they were sold as “scrap”. This was against the official company policy that demanded that buses should be destroyed as vehicles before the metal was sold as scrap. This was a necessary policy to reduce corruption through selling operational buses at the low price of scrap.¹⁰⁴ The president of Ghana later dissolved the company’s board because of this.¹⁰⁵

The policy with MMT constitutes an unfair competitive advantage over the private transport operators. The company keeps its prices on average 20% lower than the fares being charged by the private transport operators. School children in uniform up to Junior High School level have free rides on workdays. Buses are designed to be disability-friendly with low boarding platforms as well as seats reserved for people with disabilities.¹⁰⁶

The GPRTU and other unions with drivers as members are interested in keeping work for all of their members. Therefore they are not interested in large buses that will reduce the numbers of employed people. At the same time, because the union is not an ordinary union with negotiation for the drivers it looks at the owners interests what fore it keeps the payment low.

In the two largest towns, Accra and Kumasi, during 2010 the local governments implemented a new system of permits for routes. The implementation is progressing slowly due to resistance from GPRTU.¹⁰⁷

These and other factors are behind the general

opinion at GRPTU that it is being persecuted by the authorities. Clayborne has in his present thesis an illustrative example of an organization under pressure where as a researcher he was suspected of being a spy for the government.¹⁰⁸

11.2 Bus Rapid Transit

A project with a potentially huge impact on the tro-tro system is Bus Rapid Transit (BRT). Together with the MMT company the state wanted to make a pilot project of BRT based on money from the World Bank. The pilot should reduce traffic congestion on the Kimbu-Adenta highway in Accra. It was based on the use of large buses in a 15-minute interval but, thanks to traffic congestion, no enforcement of the “bus only” lane, and maladministration of the service (75 employees were dismissed due to theft of funds), it did not function.¹⁰⁹

Even when the pilot BRT project collapsed, a new plan for a BRT project was set up. The new plans from 2007 again presented a bus lane system in Accra to deliver fast, comfortable, and cost-effective urban mobility through exclusive right-of-way lanes and excellence in customer service. The model was taken from TransMilenio in Bogotá, Columbia, and its copy from Africa in Dar-es-Salaam, Tanzania,¹¹⁰ although a lot of other towns had made similar systems.¹¹¹ In 2014, the total number was estimated to be 161.¹¹²

From the beginning, the project did not have the same ambitions as the Colombian ones, which used \$5.3 million per kilometer. “Motorization level is much lower and city development patterns are less constrained by geography” were the main arguments for the low budget solution.¹¹³

The project had its pilot as a major route from the center of Accra and out of the city westbound. In addition came several smaller projects. In all, the project was financed by \$45 million. This is an enormous amount compared to the free enterprise tro-tro business without subsidiaries and with a relatively high yearly amount of tax paying. The project should have been finished in 2012 but has not yet been finished as of the middle of 2015. Some work on the roads still has to be made, but thus far it has not improved the travel speed significantly. The World Bank itself is judging some of the project’s ratings as “moderately satisfactory”.¹¹⁴

12. Discussion

A decline in the traditional bus companies happened all over the world between 1960 and 1990. Many state-owned companies went out of business. One trend had been to decentralize the responsibility for transport to municipal governments in the hopes that the local management would improve the system efficiency.¹¹⁵

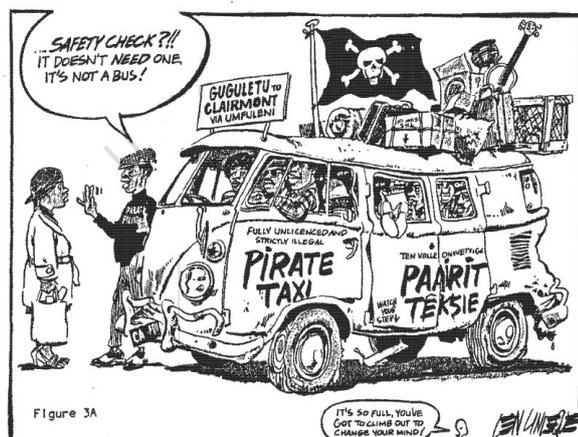
The growing need for transport has given rise to a private paratransit system all over the world. Route associations can be indispensable forums for bringing order, discipline and rationality to the informal transport sector as seen in many difference shapes.¹¹⁶ It is the “glue that keeps the system entire efficiently running”;¹¹⁷ in Ghana, the trade unions act as the route association. Often the state or local authorities try to regulate the business as well in order to find and provide the best societal solutions.

Public steering and control could have been made in Ghana through the issuing of licenses. Since 1972, the laws have been in place for this but no institution is established or is strong enough to handle a license system. Otherwise, authorities could be efficient in other countries with other situations. This was done by the city government in Tbilisi in Georgia in 2001 when it interfered in 223 lines deployed with 3159 vehicles.¹¹⁸

Security problems exist everywhere within this competitive area without large profit. For instance, in St. Petersburg in 2008, 80% of the marshrutka vehicles were found to be technically invalid. There had been an introduction of control standards since 2005 but without a decreased number of accidents.¹¹⁹

Route associations can evolve into competition stifling cartels as has happened in Santiago, Chile and Mexico City by limiting total vehicle numbers and keeping fares high.¹²⁰ This mechanism is not seen in Ghana.

The unions have a rather close cooperation with the government. This is a contrary situation to the matatu industry in Kenya, which is characterized as being ‘inside the system, but outside the law’. The unofficial transport system is functioning but is not recognized by the authorities. This provided a role for the illegal Mungiki movement to take over the power to make the public transport work.



The tro-tro business in Ghana is peaceful compared to the situation in other countries. For instance South Africa has huge problems with fighting route associations. The cartoon is a comment to a regulation of the vehicle quality in South Africa.

The government has made attempts to regulate and organize the actors into formal unions but it missed the opportunity to provide the needed services and by this opened up space for non-state interventions.¹²¹

The Ghanaian system has made a quite peaceful situation with a system for reducing the 'coat-throat' competition and still maintain peace between the actors. This is in sharp contrast to South Africa, where a liberation process of the paratransit happened roughly in the middle of the 1980s. The number of permits issued rose from 3,782 in 1985/1986 to 39,604 in 1987/1988. The role of the trade unions was rather defensive, as the South African Black Taxi Association (SABTA) warned against a total liberation that it claimed would result in chaos and violence—which it did. In the country, the concept of "taxi war" became a well-known issue—for instance, "the Cape Peninsula taxi war" in 1990–1992, where the violence was related to commercial competition over routes between two taxi organizations. Many men were killed in this war, which happened during a time with severe social turmoil.¹²²

Even when the post-apartheid government tried to stop the taxi wars, it continued, because they gave success for the winners. It is estimated that 123 were killed and 67 injured in 1991, rising to 330 dead and 526 injured in 1993. The numbers fell to a lower level during the rest of the 1990s, with

around 250 dead and 300 injured a year. It is, in reality, a real 'cut-throat' competition.¹²³

The government has tried to solve these problems, for instance, through a Taxi Recapitalisation Program where vehicle owners could have their old buses replaced with new ones under some specific conditions. The reform strategy failed because of a policy that was not properly thought out.¹²⁴

A BRT system in Johannesburg was established in relation with the FIFA Soccer World Cup. A taxi spokesman stated that this was a "systematic plot to nicely get rid of us". The government made peace with the taxi drivers through a yearly dividend to the former owners of 585 affected taxis. There tends to be development in South America that changes the view of paratransit "from one of being a problem—one that must be solved through forced formalization—to one of being an essential part of the economy".¹²⁵

In many aspects, the development of the paratransit tro-tros in Ghana as compared to those in South Africa has been peaceful and successful. The system with "fill-and-run" and fixed routes from lorry parks steered by unions has been efficient, and the government has to a large extent made progress through negotiations with the unions as well.

13 Conclusion

This self-regulation of the sector has removed the worst consequences of 'competition on the route'. It has resulted in a well-functioning transport system all over Ghana.

On the other hand, there are a number of negative consequences. The system is based on transport to and from lorry parks, which makes a stiff route network; these routes are not necessary the desired routes of the customers.

The contemporary government, many researchers, and large international aid institutions all look at the tro-tro sector with negative attitudes. For instance, they are telling the public that the tro-tros are causing the traffic congestion in a system based on large buses that are planned to reduce the unofficial buses. Nobody is complaining about personal cars, including the taxis, which that are driving in a much larger number. 70% of the transport sector depends on bus transport,

which occupies only one-third of the road space. In comparison, private cars and taxis account for one-fourth of the transport but occupy more than half of the road space.¹²⁶

As Robert Cervero, one of the few critical researchers in this area, states:

“restricting paratransit as a way of enhancing the automobility of the middle-class is often a price the poor pay as it undermines their collective mobility....Traffic engineering consultants from abroad often take a myopic and cynical view toward paratransit, recommending the removal of slow-moving vehicles in order to expedite traffic flows.”¹²⁷

We can use the knowledge from research on paratransit not only for improving the existing paratransit systems, but also for planning the optimization of the service and bus routing for demand-responsive bus planning. In a recent dissertation, Alex Neumann is sketching how to use experiences from paratransit on the theoretical approaches on public transport in general.¹²⁸ Such studies can be useful when more detailed experiences from paratransit systems around the world are published.

Endnote

- 1 In this paper is used the concepts used in Neumann 2014. For instance I use paratransit instead of share taxi. A useful lexical definitions of paratransit is in Neumann 2004, p.181-184. A discussion about the different types of minibuses, shuttle vans, jitneys, and commuter buses is in Cervero 1997.
- 2 Cervero and Golub 2009, p. 493.
- 3 Ibis 2005, p. 35.
- 4 Trans-Africa 2008, p. 41.
- 5 Some areas in big towns I other countries are higher. In Dakar for instance 95 % (Cervero and Golub 2009).
- 6 His Majesty's Stationery Office 1933, 1934 and 1935.
- 7 His Majesty's Stationery Office 1934, p. 27.
- 8 Hart 2011 and 2014.
- 9 Hart 2014, p. 204-205.
- 10 Merriam-Webster dictionary.
- 11 Kaplan, 1971.
- 12 Gould 1960, p. 79.
- 13 African Development Bank Group, 2005, p. iii.
- 14 Jordan, 1978.
- 15 Kaplan 1971.
- 16 Homepage for local authorities in Ghana.
- 17 TDP Consult, 1991; cited from Fouracre et al. 1994, p. 53.
- 18 Ntewusu 2011.
- 19 Finn 2008.
- 20 Finn 2008.

- 21 Pedersen 2001; World Bank 2007 is setting the share of GPRTU control of stations to 90 % while Pedersen is saying more than 80 %.
- 22 Jordan 1978.
- 23 Klaeger 2012.
- 24 Maunder and Pearce 2001.
- 25 Ibis 2005, p. 36.
- 26 Gorell 1997.
- 27 Beuving 2009.
- 28 Beisel & Schneider 2012.
- 29 Grid-Goal-Besuma Associate 2008.
- 30 Fouracre, Kwakye, Okyere and Silcock 1994, p. 51-52.
- 31 "Drivers gear up to wrestle down GPRTU chairman", Ghana Politics 25 December 2014.
- 32 Pedersen 2005.
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