

Virtue out of Necessity? Urbanisation, Urban Growth and Okada Services in Accra, Ghana

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Abstract

Rapid urbanisation in Ghana over the last two decades in particular is straining the capacity of the cities to provide basic infrastructure, degrading the quality of life and impoverishing the urban environment. In Accra, an obvious lack of co-ordinated land-use planning and the enforcement of appropriate regulations have made the challenges in the transport sector very daunting, with traffic congestion growing by the day. The situation has compelled some commuters to adopt strategies to navigate themselves in the city in order to avoid the traffic menace. Based on questionnaire and in-depth interviews with individuals and stakeholders engaged in and connected to one such strategy, 'Okada transport', the study demonstrates why the commercialisation of the motor-cycle still thrives though it is in conflict with and a clear violation of the existing road transport regulations. The findings confirm that the authorities' inability to plan holistically has dislocated the urban system and indeed led to a virtual infrastructural systemic breakdown, compelling frustrated commuters to find adaptation strategies. The study posits that the trend is likely to continue and perhaps even accelerate unless a well planned policy intervention, such as the Rapid Bus Transit, is adopted and efficiently implemented.

Keywords: Urbanisation, System dynamics, Congestion, Okada transport, Accra

1. Introduction

Rapid urbanisation is a global phenomenon, and like all human induced changes, it is a response to socio-economic, political or environmental conditions, characterised by an unprecedented concentration of humans in cities (Satterwhaite, 1996; Masek *et al.*, 2000; Songsore, 2003). For the first time in history, more than half of the world's population of 3.3 billion people were living in urban areas by 2008 and this number is projected to reach about 5 billion by 2030 (UNFPA, 2007; UN-Habitat, 2008). A parallel trend is the decentralization of cities: cities have spread out faster than they have grown in population, with rapid growth in suburban areas and the rise of "edge cities" in the outer suburbs. This decentralization creates a growing need for travel together. Accra, Ghana's largest administrative and economic hub has not been left out of this urban revolution. Ordinarily, the process should not have been antithetical to development if such growth was in tandem with the provision of infrastructural services, especially those related to transportation, which is perceived as part of the daily rhythm of urban life (Hoyle & Knowles, 1992; Addo, 2005). A reliable transport network is also essential to public safety, economic vitality and the overall quality of life.

Unfortunately, the transport system has suffered a dip with increasing urbanization, and this presents a clear challenge to the city authorities. This includes congested central areas, poor level of service from public operators and high exposure to road accidents (Kwakye and Fouracre, 1998). Reasons for this development are varied but not limited to the concentric and centripetal form and structure of Ghanaian cities which has led to the concentration of high density activities at the hub and the limited amount of road space. Additionally, large

proportion of personal means of transport, the simultaneous use of carriage ways by vehicles and pedestrians, the limited number of high capacity buses for mass movement as well as inefficient management and policing of traffic have further worsened the situation (Tamakloe, 1993; Addo, 2005; Agyemang, 2009).

Recent studies about the traffic situation in Accra have revealed that over 50,000 vehicles per day have been recorded during weekends whilst on a typical weekday, about 270,000 vehicle trips are recorded to and from the Central Business District (CBD) (Quarshie, 2007 cited in Armah *et al.*, 2010). It is also noted that, about 1.3 million passenger trips per day are estimated to enter or leave the Accra Ring Road and 1.6 million passenger trips to go in or out of the motorway extension. In terms of mode of transport, 84 percent of the trips are made by public transport, 56 percent by mini vans, and a further 15 percent by taxi. In general, about one million passenger trips are made each day in and out of the CBD using mini vans and taxis, making inefficient use of available road space. Congestion has thus become a major problem on arterial routes with 70 percent of major roads operating at an unacceptable level of service of less than 20 km per hour (Armah *et al.*, 2010).

The deficiencies in the current system and their attendant frustrations in the face of growing urban youth unemployment (Oteng-Ababio, 2011; Grant and Oteng-Ababio, 2011) have given birth to the use of motorcycles for commercial services, a practice popularly referred to as “Okada”, a term purported to have originated from a defunct Nigerian Airline, OKADA AIR. This practice is in contravention of the existing transport legal regime and a section of the population also sees the operators as “rude and indisciplined”. These lineal submissions have had an overarching influence on officialdom which has tended to enact deficient-oriented policies and programs. Such policies, including the outlawing of the “Okada” practice without reference to local knowledge, tend to stifle local initiative as people then see themselves as those with special needs to be met by ‘outsiders’. This runs contrary to the realities of ‘distressed populations’ who focus vast amounts of creativity and intelligence on survival-motivated challenges. It is from this perspective that we explore the prevalence of Okada transport at a time when the neighbouring countries where the practice allegedly originated have officially outlawed the practice. Is this just a case of creating a ‘virtue out of necessity’? Can the city authorities outlaw the practice in the face of current realities? We employ the concept of interdependence in urban systems as a theoretical underpinning to unravel Okada’s emergence and survival in Accra’s urban landscape. Our choice of systems dynamics emanates from our firm belief that within the urban milieu, infrastructure system work in a holistic manner and in tandem with the urbanisation process and that a shortfall in any one of the sub-sectors will have a negative feedback on the whole system.

2. Exploring Urban System Dynamics and Interdependence

All things, as objects primarily but also as ideas, have connections with many other things and the significance of any one depends on its relationships with others. Chisholm (1967) opines that a unit of study should not be considered as a single thing but a system of interrelated objects or ideas such that a change in a sub-sector causes a change in the total system (Young, 1964; Warneryd, 2004). The structure of a system is therefore the totality of the relationships that exist between the system variables, which operate over time to produce dynamic behaviour patterns. There is thus a causal relation among the variables with the input variable influencing the output one (Armah *et al.*, 2010). A positive relation may lead to harmony, efficiency and general wellness within the system, while a negative feedback creates disorder in the whole system (Bertalanffy, 1968).

Understanding the system dynamics and interdependencies thus helps identify ‘the multi-loop, multi-state, non-linear feedback system that reacts to the decision makers’ actions in ways both anticipated and unanticipated’ (Forrester, 1969; Armah *et al.*, 2010: 257), and this has been employed extensively in traffic congestion studies (Springael, 2002; Barlas, 2002; Wegener, 2003; Armah *et al.*, 2010).

Armah *et al.* (2010), for instance, found a causal relationship among road expansion, traffic congestion and air pollution in Accra metropolis. They rightly concur that the concept of interdependence among system variables, or simply sub-systems, enables us to mirror and analyse the different conditions in geographical areas resulting from increased or decreased interdependence (Lee, 1983; Warneryd, 2004). In expanding the concept of interdependence, Urry (2003) elaborated on ‘global hybrids’ and argued that in the study of information systems, automobility, global media, climate change and health hazards among others, their inherent interdependencies and complexities should be examined to better appreciate their emergent properties. Borrowing a leaf from Urry, Warneryd (2004) argues that the spatial arrangement of higher education, as a sub-system of the total Swedish urban system, is a source of increasing interdependence between places, “thereby altering the urban and economic fabric of the cities and producing a new ambience to life in these places” (Warneryd, 2004).

We concur with these studies and demonstrate that the inclusion of ‘urban transport system’ to the list of global hybrids will broaden our understanding not only of the positive feedbacks of a well functioning system, but also

the extent to which government policy failure generates negativity resulting in the emergence of ‘illegal’ transport systems (Figure 1).

As illustrated in Figure 1, in an ideal situation where policy makers have implemented, holistically, effective policies and interventions to cater for transport infrastructure, efficient land use management and urbanisation, there has been a corresponding efficient and effective urban system and the general sustainability of the urban economy.

Unfortunately, in Accra the failure of the authorities to anticipate and plan for these interdependent sub-systems has set in motion various processes and feedback loops that create a congenial atmosphere for alternative means to survive or outwit the deteriorated system, as exemplified by the Okada operations.

In this paper we argue that failure to properly anticipate and plan holistically the transport sub-system in tandem with Accra’s growth and development dynamics has created unprecedented traffic problems which have occasioned the Okada transport.

3. Urban Growth Dynamics of Accra and the Emergence of Okada

3.1 Data and Methods

The study examines the genesis and the *raison d’être* of the commercialization of the Okada Transport Services despite the Motor Traffic Act (LI 956) which criminalizes such practices, a situation which creates a conundrum: the operations of Okada as a livelihood strategy in the face of high youth unemployment and the perceived negative tendencies of its practitioners from both legal and social perspectives. We adopted multiple techniques in collecting the data: participant observation, personal interviews and stakeholder interviews. The questionnaire survey purposefully targeted 40 operators of Okada transport at two different operational turfs (i.e. Central Post Office (CPO) and Korle Bu hospital). This approach was adopted due to the difficulty in obtaining information on the exact number of operators at the various turfs except for the verbal approximated reports by the operators at each turf.

The choice of the CPO was informed by the fact that it is within the CBD where traffic is heaviest while that of the Korle Bu Teaching Hospital corridor was selected because most people commute between the hospital and the CBD where most of the big pharmaceutical companies/stores are located (mostly under emergency situations).

The operators’ survey sought information on their bio-data profile and service characteristics: structure and organization, viability and challenges. A simple random sampling technique was employed as the reconnaissance survey had revealed identical *modus operandi* among operators.

The participatory method involved some of the research team patronizing the services of Okada to and from specific locations within the city. To get a fair idea of the time and trip characteristics, the team members traveled on the specific routes twice a day (morning and evening) for a period of two weeks. This enabled the team to compute for average travel and waiting times both in the morning and evenings. It also allowed the team to experience the services at first hand and provided greater insight into their operations, contexts, relationships and behaviour. Furthermore, it provided benchmark data that aided the questionnaire design and administration as well as the stakeholders’ interviews and data analysis. There were also in-depth interviews and consultations with the service beneficiaries and other relevant agencies including the leadership of the Okada operators, City Authorities and the Ghana Police Service to ascertain their perceptions, legal issues, as well as the future prospects of the practice. The passenger interviews focused mainly on their motivation, user satisfaction and general attitudes of the operators.

3.2 Accra: Its Growth Dynamics and the Emergence of Okada

Accra, the national capital has witnessed a phenomenal growth since 1957 when the country gained independence from British colonial rule. Its physical expansion mimics the haphazardness of a sprawl into peri-urban areas, to the extent that it has not only tripled in size between 1991 and 2007 but now functionally overlaps into both the Central and Eastern regions. Regrettably, the tripling in size is not commensurate with the intensity of infrastructural development. From its colonial beginnings, planning in Accra has been taken for granted while its internal structure is derived from its British colonial heritage. Nangia (2004) and Mills-Tettey (2008) opine that Accra’s internal structure mimics Britain’s planning and urban design policies which were consciously planned to physically and socially separate the Europeans from the Indigenes. Songsore (2004) re-echoes this duality of residential differentiation by demonstrating the co-existence of an “European Town” and an adjoining “African Town” in colonial Accra.

The process of growth and urbanization in Accra commenced with the completion of the three European trade posts and fortifications in the 17th century. Thereafter in 1877, the transfer of the seat of British Administration from Cape Coast to Accra was of seminal importance in the growth of Accra as the town grew rapidly but generally, in an unplanned manner (Dickson, 1969: 259). The creation of the offshore port of Accra, and later the construction of a new port at Tema, about 32 km east of Accra, provided a further catalyst for Accra's future growth and expansion. Table 1 indicates that as the population of Accra has increased over time, so have the density levels within it, from just 36 persons per hectare in 1960 to almost 141 persons per hectare in 2007.

The high urban growth rate, mostly in an unplanned manner, has outpaced the harmonious provision of infrastructural services in general. This has resulted in negative externalities including congested central areas, which are reflected in long commuting times and journey delays as well as lengthy waiting times both at and between terminals. Some studies have revealed that though growth in the 1960's and 1970's was spontaneous and fairly rapid, it was relatively easy to manage the city given its size both in terms of land coverage and population (Jackie, 2008). For example, the travel time by Bus No 36 from Circle through Korle Bu to La and back was less than 20 minutes, while today the travel time from Weija to Adenta could be well over two hours (Jackie, 2008).

The worsening traffic situation within the metropolis has created disadvantaged commuters and by extension, an enabling environment for the emergence and successful operation of the Okada services. The proximal factors may be seen from the demand-supply nexus: on the one hand is a market saturated with a growing number of transportation disadvantaged residents who bear the greatest brunt of heavy traffic and are willing to pay for Okada's services due to its flexibility, while on the other side is an ever-increasing army of unemployed youth with a dire need to eke out a living in an urbanising city, with accelerating transport externalities.

3.3 Okada Transport – An Old Wine in a New Bottle?

The rate (and speed) at which the Okada service is fast gaining acceptance and popularity with the travelling public tends to create doubts as to whether the practice is a recent development. Indeed, the commercial use of motorcycles has been a common practice not only in Nigeria but also in Ghana's immediate neighbouring countries, Burkina Faso (in the north) and Togo (in the east), mainly because Okada appears to be easily affordable, very flexible and readily available. Its low start up capital and operational cost in the face of growing youth unemployment has made it a ubiquitous transportation option. This resonates with studies by Asogwa (1980) and Solagberu (2006) in Nigeria which revealed four reasons for the prominence of Okada, including the low purchasing price of about US\$ 500 for a brand new motorcycle compared to that of a second hand car of about US\$ 3000.

In Ghana, motor bikes had been a major source of private mobility in the north. The recent twist is a dilemma and it is believed to have filtered into the country through its eastern corridor (Aflao). The increasing fraternisation between Ghana and Nigeria, facilitated by neo-liberalisation and globalisation, has also legitimised and concretised the practice. In Accra, the Okada operators provide public transport services to meet beneficiaries' diverse needs and compete with other public transport services on regular routes. They congregate at major intersections, especially in the CBD (i.e. the Central Post Office area), and satellite areas including Korle-Bu as well as on the Mallam – Kasoa highway. Figure 2 presents the current operational routes of the Okada services within Accra as captured during the study. These are notoriously identified traffic congested localities where vehicular movements are always at a snail pace.

The operators offer feeder connections between main arterial bus routes and nearby neighbourhoods through narrow alleys and walkways which are normally impenetrable by motor vehicles. Though their operations appear to be filling a vacuum, as did the famous '*trotro*' or '*jitney*'-type public transport when the state-owned service collapsed, the current Ghana Road Traffic Regulation (LI 956 of 1974), and Regulation 64 of the Motor Traffic Act prohibit the use of motorcycles for commercial purposes. Specifically, the LI 704 recommends punitive measures including fines and prison terms for operators and seizure of motorcycles used for such purposes. These limitations have currently rendered the operators bereft of the necessary legal authorization for their business.

The legal criminalisation regime has made the operators targets for incessant official (police) harassment (or extortion?). On 1st February 2011, a group of about 500 Okada operators in the city stormed the Parliament to ask the House to, as a matter of urgency, take the necessary step to legitimize their operations and help "rescue them from the inhuman treatment from the city authorities and the continuous extortion from the police" (GNA, 2011). Commenting on their petition to the leaders of the house, the group's leader remarks:

"We are here because we hear that there is a law that motorbikes should not be used for commercial purposes so we want Parliament to do something about it...we want Parliament to give us a temporary permit so that our youth can operate.we didn't know there is a law [that forbids our operation]... If there is a law that can create unemployment for this number of people, then I see it as a bad law.

Therefore you have to look at it and review it. We believe that Parliament can do something or we will go to the Father (the President of Ghana) himself (Note 1)."

For parliament to proffer any policy direction demands well-researched information which is currently non-existent. The results of our study will therefore help bridge this information gap and thus assist the authorities in unravelling the current dilemma.

3.4 The Demographic Characteristics of the Operators

The demographic characteristics of the respondents captured during the survey include sex, education level attained, previous employment status, age and household size. Table 2 presents respondents' demographic characteristics. The results show that the Okada business is gender biased (although not unexpected) as all the 40 operators were males. In terms of age, about 70 percent were within the age group of 20 to 40, while almost 10 percent were below 20 years of age, which contravenes existing national traffic regulations which enjoin any prospective commercial driver to attain a required age limit of 21. By inference, most operators in general are within the active age group who need a source of livelihood.

The findings also show that 15 percent of the respondents had no formal education, while 10 percent and 60 percent of them had primary and secondary education respectively. By implication, it can be deduced that about 85 percent appear virtually cut-off from formal sector employment since they tend not to have the requisite qualification to make them employable. In terms of their previous occupation, the results show about 78 percent respondents were either unemployed or self-employed while 22 percent were engaged in either public or civil services. This observation is crucial in a country where 17.6 percent of the economically active population remain unemployed and 28.5 percent of the total population live below the poverty line (GLSS, 2008).

It also demonstrates that Okada is not the preserve of the urban poor but serves a significant number of formal sectors employees who hitherto have been erroneously assumed to be immune to the urban economic conditions (Oteng-Ababio, 2011). About 23 percent of the sampled population were public/civil servants who had taken up the Okada business as a supplementary trade. The findings also present background information of the respondents which is not unexpected. The majority of respondents hail from the northern regions where the use of motorcycles has a long history and from where the recent protracted conflicts had compelled many to flee down south for survival (Grant, 2009; Oteng-Ababio, 2010). Of particular significance is the international dimension it has assumed apparently because some neighbouring countries, where the process started, have outlawed the practice. In this study, 10 percent of the respondents were from the neighbouring countries, Nigeria, Togo and Burkina Faso.

4. Okada Transport in the Urban Economy of Accra

The study explored the economic viability of the Okada business and interrogated its working conditions and modus operandi. We also availed ourselves of some of the externalities that have ensued as a result of the seeming over reliance on Okada services especially in the traffic prone areas. Based on the results of the questionnaire survey, in-depth interviews and participant observations, it is revealed that the use of Okada is more convenient due to its flexibility and/or manoeuvrability compared to other major modes of transport within the city (i.e., trotro and taxi).

4.1 The Viability of the Okada Transport

The study shows that Okada is more versatile and useful for meeting deadlines and appointment schedules, and for attending to emergency situations. For instance, the results show that patients at the Korle Bu Teaching Hospital who urgently need to buy prescribed medication from major pharmaceutical companies, most of which are located in the CBD, can spend over one hour on a return trip of about a two kilometre distance. However, Okada covers the same distance in just about 10 minutes. Table 3 presents sampled Okada trip patterns and travel times captured during the study. In all the destinations, none of the current 'official' transport mode within the metropolis can make a trip in an hour.

During interactions with some service beneficiaries at the Korle Bu corridor, they see Okada as a timely, life-saving transport mode. An elated beneficiary remarks:

I work at the Ministries [Ministry of Local Government and Rural Development] and was called in by my wife only to be handed with a prescription for our only daughter who has been slated for an operation. I had to park my car and use the Okada because of the emergency. In less than 15 minutes, I had returned with the medication. Those who speak evil against the [Okada] system appear ignorant of the current traffic situation in Accra or might never have been in my situation. The reality of today's Accra is that Okada is a necessary and indeed indispensable evil, even if some people see it as such (Personal Interview).

Figure 3 presents a comparative analysis of the Okada services with the two common public transport services (taxi and trotro) in Accra in terms of average travelling times. The results show Okada's significant benefits over the other travelling modes. On the average, Okada uses about 5 minutes from the CPO to Korle Bu, a distance of about 2.5 kilometres while taxis and trotros spend almost 15 and 30 minutes respectively.

It was also revealed during interactions with the stakeholders that the quasi public Metro Mass Transit (MMT) limited bus could expend almost an hour to cover the same distance due to the many stops on its route and the fact that it has to compete with all other road users for the limited road space. Previous attempts by the city authorities to create a "reserved" bus lane for the MMT fizzled out days after the plan had been officially out-doored with fanfare. Accordingly, the traffic congestion and the many stops the MMT buses have to contend with have made Okada the last resort among the available modes of transport.

In today's scheme of things, Okada is seen as filling a potential transport services void created by the ineptitude of the other public transport systems. Commuters within the city have to wait for several minutes especially during the rush hours in the mornings and evenings. This has thus compelled some motorbike owners to ingeniously make a living out of the 'madness of the streets of Accra called traffic jams by ferrying desperate commuters through the jam to their destinations'. Table 4 presents a comparative analysis of distances to some of the various destinations and the average waiting times between the Okada operators and other common urban transportation providers.

Currently, there is no waiting time for Okada services across any of the operational turfs visited during the study. However, the mean waiting times for trotro in the mornings and evenings are 11.75 minutes and 7.35 minutes respectively, while those for taxis stand at 2.36 minutes and 1.18 minutes (see Table 5).

The study further employed the t-test to compare the mean values from the two samples (trotro and taxi) to see whether they are statistically significant. The result of the t-test for waiting times for both trotro and taxis is presented in Table 6. It shows a p-value of 0.00 in both situations (mean waiting times for the mornings and evenings) and therefore, the difference between the two means is statistically and significantly different from zero at the 99% level of significance.

During the study, we conducted in-depth interviews with some desperate commuters at some transport terminals. The comments by a lady secretary in a public institution waiting for a *trotro* after a day's work at Accra Central epitomise the general sentiments of most public and civil servants who rely on the existing 'trotro'- public transport which is perceived as the dominant means of getting home after work. She intimates;

I left the office just after 4:30 [pm] and have been in the queue for the past 30 minutes. Granted I am even lucky to get one (trotro) right now, I am most likely to reach home [Adenta] after 6 [pm], and this has been almost a daily ritual on week days (Personal Interview).

The findings further revealed that, the Okada business is serving as a "sustainable" source of livelihood for a large army of unemployed youth in the city. Among the reasons deduced by the practitioners for the booming enterprise include its low start-up capital and operational cost. During the study, the cost of a brand new motor cycle with accessories (helmet, repair kits and tools, etc) ranges from GH¢700 (Note 2) (\$457.94) to Gh¢ 1,500 (\$981.31). Besides, the study also confirms the availability of a multiplicity of fairly used motor cycles, which are averagely priced between GH¢200 and GH¢400. There is even a "work and pay facility" (a hire purchase) whereby beneficiaries buy the motor bikes and pay in instalments. Added to these are the low maintenance cost and the low fuel consumption rate. All the operators have a fair idea of how to maintain the bikes, as many had 'migrated' from the north where the motorcycle remains a major means of mobility. During the interactions at the Korle Bu Hospital, one of their leaders retorts:

You need to be in our shoes to appreciate the importance of this business. Today, nobody will employ you even if you have the certificate, let alone some of us who had to abandon schooling half way because of this [Bawku] conflict. But for this, many of us would have become something else: Here we are, you don't need millions to get an average cycle. Even if you are fortunate, you can get "work and pay". This is better than armed robbery. With this, now we can look after our family and send some money to our parents back home.

The study explored a further quantification in terms of the financial viability of the operations. We were overwhelmed by the “level of sophistication” of the operations in terms of record keeping. Unlike other informal survivalist activities where book-keeping remains a challenge, all the operators of Okada had note pads in which they recorded their daily transactions. The records include the individual daily transactions and the fares charged, fuel used for the day and any other costs incurred through maintenance and sometimes ‘bribes’ to the police and AMA officials. That provided a fair basis to analyse the economic returns of the operators which appear very attractive by all standards and serve as an irresistible motivator.

According to the results, an Okada operator is earning between GH¢ 40 and GH¢ 50 daily in a country where the national minimum wage is only GH¢ 3.11. It is thus not surprising that as much as 23 percent of public and civil servants are also caught in the web. Even though some operators hire the motor cycle on a daily basis at Gh¢20, the financial attraction still appears too great to be resisted by such desperate unemployed youth and some public/civil servants whose involvement is seen as a means of containing and perhaps reversing a potential slide in their living standards as a result of the current economic conditions. A trained teacher who also doubles as an operator bemoaned the ‘meagre salary’ that comes with his trained profession. He passionately reveals:

Before joining this [Okada] business as a part-time operator, I had three pupils I taught on part-time basis after school, yet I could not make ends meet. Today, I work just about 2-3 extra hours on week days and certainly, I am far better off than all the nine years I had been employed by the Ghana Education Service.

4.2 Externalities of the Okada Transport

Notwithstanding Okada’s direct positive bearing on the sustainability of the urban economy, we also have to reckon with some of the negative tendencies inherent in such operations. Ghana for example records a crude rate of 8.6 persons per 100,000 accidents and there is the possibility of traffic fatalities increasing with the operation of the Okada system (London *et al.*, 2002; Afukaar *et al.*, 2003; Republic of Ghana, 2007). This translates into an estimated revenue loss of about US\$ 165 million or approximately 1.6 % of GDP annually, in addition to unquantifiable social losses which can perpetuate the cycle of poverty (Republic of Ghana, 2007). Earlier studies have revealed that on the average, motorcycles have higher fatality rates (Odelowo, 1994; Miller *et al.*, 1999; Nantulya and Reich, 2002; Peden, 2004; Oluwadiya *et al.*, 2004; Zhang *et al.*, 2004; Solagberu *et al.*, 2006; NETS, 2011). Further, motorcyclists are 35 times more likely than car occupants to die in a crash and 8 times more likely to be injured. Motor cycles have the highest crash costs per person-mile (Miller *et al.*, 1999). Even though official motorcycle injury statistics for Ghana could not be obtained for the present study, most stakeholders including officers of the MTTU opined that with the emergence of Okada in Accra, the fatality figures of road accidents are likely to soar.

Our observations further show that most Okada riders do not particularly pay attention to road signs and other users of the road in their haste to get to their destination, a practice which is reminiscent of the behaviour of most commercial vehicle operators within the metropolis. Some of the riders are notorious for picking passengers at unapproved locations and often resort to riding on the shoulders of roads and on pedestrian walk ways. This brings them into direct conflict with other road users and can complicate the current chaotic situation. Our observations further reveal that few Okada riders and their passengers used crash helmets, which can also increase the fatality rate in the event of an accident. Beyond accidents, there is a general fear among some respondents (whether real or imagined), that the Okada business has gained notoriety for criminal activities of various sorts, especially the snatching of personal effects such as mobile phones, purses, travelling bags and jewellery. The service has also been criticised on environmental grounds as critics opine that the bikes will pollute the atmosphere with their fumes. During the interaction a Police officer recounted other negative attributes of the operations. He noted:

“The frequency with which motorbikes have been used to commit crimes in the country means that the country will not be safe if the Okada business is regularized. Several of the operators have been arrested with over 500 bikes seized. We intend to auction the bikes as a deterrent to potential Okada operators (Note 3)”.

These legitimate concerns do not however completely negate the positive services being rendered by Okada but rather complicate the issues. It is for example very unclear if everyone on a motorbike is a criminal. Again, have there been instances where criminals have been caught driving some of the most expensive vehicles in the city? If that is the case, can there be any justification for anybody to suggest that all motorcycle riders are criminals? Moreover, is there further proof that bikes emit more carbon monoxide and other harmful pollutants than the jalopies we are compelled by scarce resources to import into the country? Obviously, these questions do not lend themselves to easy interpretation.

5. Okada: Vignette of Change through Necessity?

There is ample evidence in Accra today that the urban planning and governance system seems to have failed to respond adequately to the rapid urbanisation process (Owusu, 2008; Grant, 2009; Yeboah, 2003). In the last 15 years, Accra's population has doubled and its area has expanded almost threefold. This has culminated in unprecedented traffic problems in Accra, characterized by heavy congestion (especially during the peak periods), heavy dependence on informal private bus services, weak implementation of traffic management measures, inadequate facilities for pedestrians and bicyclists, poor road safety arrangements, and attendant high accident rates as well as inefficient use of existing capacity. For example, almost 70 percent of motorized person trips in the city depend on some form of bus transport, which is the dominant mode and uses about a third of the road space. In contrast, private cars and taxis provide only a quarter of the person trips but occupy over half of the road space.

These flawed processes have created in their wake, haphazard urban development resulting in unprecedented traffic congestions. Not only has commuting in the city today become time-consuming and impacted negatively on productivity, but also it is very frustrating and a sheer nightmare. Our survey reveals that, in the absence of better alternatives, the majority of commuters have found much relief in Okada services and wish the system were legalised and properly monitored to ensure their safety. From the findings, it can also be inferred that Okada transport is not only filling a vacuum in the prevailing urban transport system, but economically, it is improving man-hour productivity in the city by overcoming the costs imposed on the urban economy by heavy traffic congestion. Significantly, its income generating potential for both the unemployed and even other public sector workers who engage in the practice as a way of reversing the negative impact of economic crisis is well attested to in this study.

Our position is strengthened by studies conducted by Agyekum (2008) and Danquah (2008) which empirically estimated that in each hour of the approximately 6-hour congestion peak periods in Accra and other major towns in Ghana, an estimated time loss of 0.394 hours is registered on a daily basis. This cumulatively amounts to 862.13 man-hour losses in a year. In real economic terms, the authors peg the loss at \$ 0.50 per hour. Thus, for the peak periods of approximately six hours, \$ 3 is lost daily, amounting to \$ 1,095 annually. These Ghanaian studies recall similar studies which estimated a \$72 billion loss to 68 cities in US due to congestion (Schrang & Lomax, 1999) and about 2% of western European GDP (Prud'homme, 1997).

From this perspective we concur with the views of a Ghanaian Journalist who writes:

For a developing country confronted by many challenges, the best we can do is to look at the positive side of things. Secondly, the best way to manage a situation is to recognise its existence and the good things it can offer. Then we can be in a position to streamline its operations. It is a fact that many Ghanaians patronise the services of Okada operators, not only in Accra and the big towns but also in the rural areas where roads are very bad or non-existent. We also know that Accra's traffic problem is partly due to the large number of vehicles on our limited roads. So if there is a way we can reduce reliance on vehicles for intra-city movement, that opportunity must be exploited. Remaining glued to the past, without relating to current trends and exigencies, will only lead to sabotaging our forward march. The law against the use of motorbikes for commercial purposes was made by man for man. At the time of making that law, it made sense because we had a smaller population, public transportation was not much of a problem and only a few vehicles were on the roads. Today, the reality is that we have a bigger population and more vehicles are on the same few roads and so very often people get to their appointments very late or never make it.

If we are not in the position to build vast flyovers in the city to reduce traffic, we can use our ingenuity to find other ways to solve an endemic problem (Note 4).

The study has demonstrated that the asphyxiating effects of congestion on Ghana's GDP could be disastrous. The congestion has not only been associated with unprecedented waiting and travelling times but also with additional fuel consumption, high pollution levels, and vehicle wear and tear. It also exerts unquantifiable adverse impacts on the social (e.g. people unable to physically contact relations on time), environmental (e.g. climate change, poor air quality, noise, deficient water and soil quality) and safety aspects of urban dwelling. These terrifying conclusions create a conundrum; a situation which leaves Okada operations straddling legality and illegality. Be that as it may, we argue that not until and unless a more sustainable public transport system, for instance, the forty-six-million-dollar high capacity, scheduled Bus Rapid Transit (BRT) system has been implemented to address the bottlenecks in Accra's current urban transport output, the Okada transport will continue to survive despite the seemingly entrenched and ill-informed official position and crackdowns.

Admittedly, any society without laws breeds a chaotic environment where rules and regulations are thrown to the dogs. However, it is also true that the laws are made by man for man and, therefore, the laws can be changed by man for the convenience of man. Accordingly, until an efficient intervention is found (e.g. the BRT system), it should be possible to amend the current road traffic regulation (LI 956 of 1974) so that motorbike owners who want to operate commercially will have special registration plates and be insured appropriately. It should also be possible for the Assemblies, under the auspices of the Ministry of Local Government and Rural Development, to champion the re-organisation of the Okada operators under a recognised body, similar to the Ghana Private Road Transport Union (GPRTU) which is an umbrella organisation for most commercial vehicle operators.

Such formalisation will not only help the Assemblies regulate the Okada operations and protect patrons, but also help them exact the appropriate taxes. This can be facilitated through the issuance of special uniforms and personal I.D tags similar to those required of taxi drivers in the city. This will legitimately be providing a sustainable livelihood to the teeming urban poor. Such integration will give empirical meaning to government's avowed position to pursue policy interventions that will complement and empower local solutions rather than replicate or undermine such initiatives. The mere criminalization of the Okada operations could not be a justifiable antidote as there are as many criminals among taxi drivers as there are among those who drive expensive cars, and therefore it should not be strange to find a few criminals among the Okada operators. The pilot Bus Rapid Transit system is proposed as a long term solution to the litany of transport challenges, which created the conducive environment for the Okada transport system to thrive in the first place.

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Notes

Note 1: www.myjoyonline.com/news/201102/60416.asp (accessed on February 3, 2011)

Note 2: 1 GH¢ is equivalent to US\$ 1.52

Note 3: <http://www.ghanatoghana.com/Ghanahomepage/nigerian-legalise-okada-ghana>

Note 4: <http://kofiakordor.blogspot.com/2011/04/back-to-okada-debate.html> (accessed on January 11, 2011)

Table 1. Population and Growth Rate of Accra, 1891-2007

	1891	1945	1960	1970	1984	2000	2006*	2007*
Population	20,000	135,800	338,396	636,667	969,195	1,658,937	1,915,983	1,960,462
Pop. Growth rate (%)	-	3.5	6.1	6.32	7.51	4.3	4.3	4.3
Pop Density/ha.	-	-	36.0	50.8	69.3	118.6	137.4	140.6

* Projected population figure

Source: 1960-2000 National Population Census Reports (AMA, 2006).

Table 2. Demographic characteristics of the Okada operators (Accra)

Variable	Categories	Okada operator	
		Freq.	%
Sex	Male	40	100
	Female	0	0
Educational level	No formal education	6	15
	Primary/JSS	4	10
	Secondary/SHS	24	60
	Vocational/Poly	6	15
Previous Employment Status	Unemployed	11	27.5
	Public/civil servant	9	22.5
	Self employed	20	50
Age	Below 20yrs	10	25
	20 – 29yrs	18	45
	30 – 39yrs	8	20
	40 – 50yrs	4	10
Marital status	Never married	2	5
	Married	25	63
	Divorced	9	23
	Widowed	4	10
Household Size	1 – 5 persons	29	73
	6 – 10 persons	11	28
	11 – 15 persons	0	0
Hometown (Region)	Greater Accra	2	5
	Volta	2	5
	Northern Regions	32	80
	Foreigner	4	10

Source: Field data, 2011

Table 3. The relationship between Distance, Time and Cost of Okada operation

Origin	Destination	Distance (km)	Travel time (min sec)	Cost per trip Gh¢
Accra CPO	Korle Bu	2.5	5.43	2
	Mallam	15.7	27.4	5
	Dansoman	10.7	22.17	5
	Kaneshie	4.9	7.51	2
	Average	8.45	15.63	3.5

Source: Field Data, 2011

Table 4. Comparative Analysis of Waiting Time of Okada and Other Modes of Transport

Origin	Destination	Distance (km)	Waiting time			
			Trotro		Taxi	
			Morning	Evening	Morning	Evening
Accra CPO	37 Military hosp	7.8	10.45	8.18	-	-
Accra CPO	Cantonment	5.9	5.58	2.65	-	-
Accra CPO	Osu (Children's home)	5.9	5.58	2.65	1.85	8.43
Accra CPO	Circle	4.9	5.67	2.08	-	-
Accra CPO	Dansoman	10.7	20.10	6.75	11.08	2.45
Accra CPO	Kaneshie	4.9	12.12	9.13	-	-
Accra CPO	Korle Bu	2.5	15.15	6.60	10.62	0.90
Accra CPO	Dzorwulu	12.2	20.30	18.18	-	-
Accra CPO	Mallam	15.7	12.12	9.13	-	-
Accra CPO	Ridge	3.2	10.45	8.18	-	-

Source: Field Survey, 2011

Table 5. Descriptive statistics of waiting time in the morning between trotro and taxi

	Morning		Evening	
	Trotro	Taxi	Trotro	Taxi
Mean	11.75	2.36	7.35	1.18
Variance	30.13	20.39	21.99	7.1
Observations	10	10	10	10

Table 6. Comparing waiting time in the morning between trotro and taxi

	Morning	Evening
Hypothesized Mean Difference	0	0
Degrees of freedom	17	14
t - Stat	4.18	3.62
P(T<=t) one-tail	0.00	0.00
t Critical one-tail	1.74	1.76
P(T<=t) two-tail	0.00	0.00
t Critical two-tail	2.11	2.14

T-Test: Two-Sample Assuming Unequal Variances

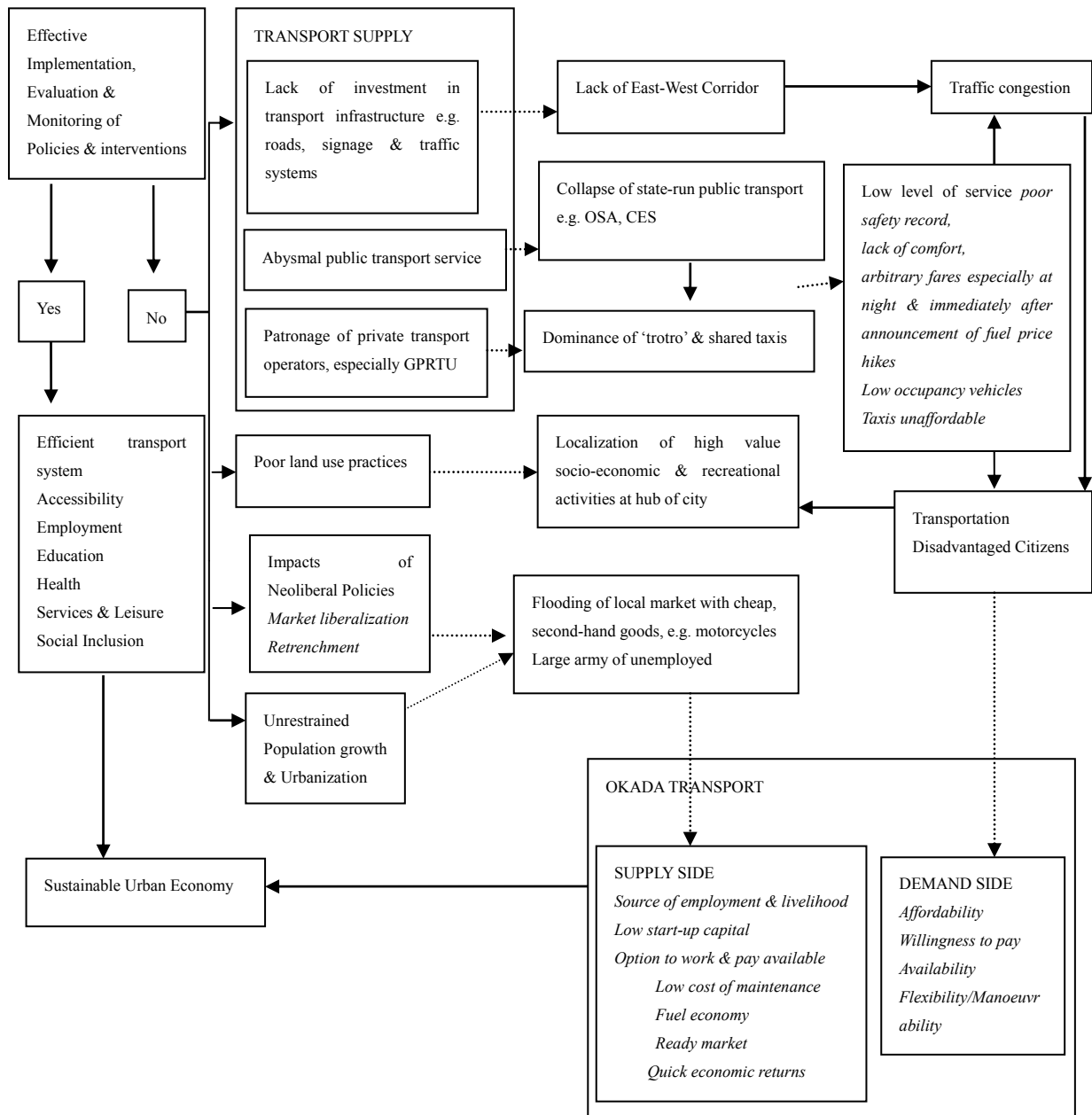


Figure 1. Dynamism and interdependencies among urban systems and the Okada transport in Accra

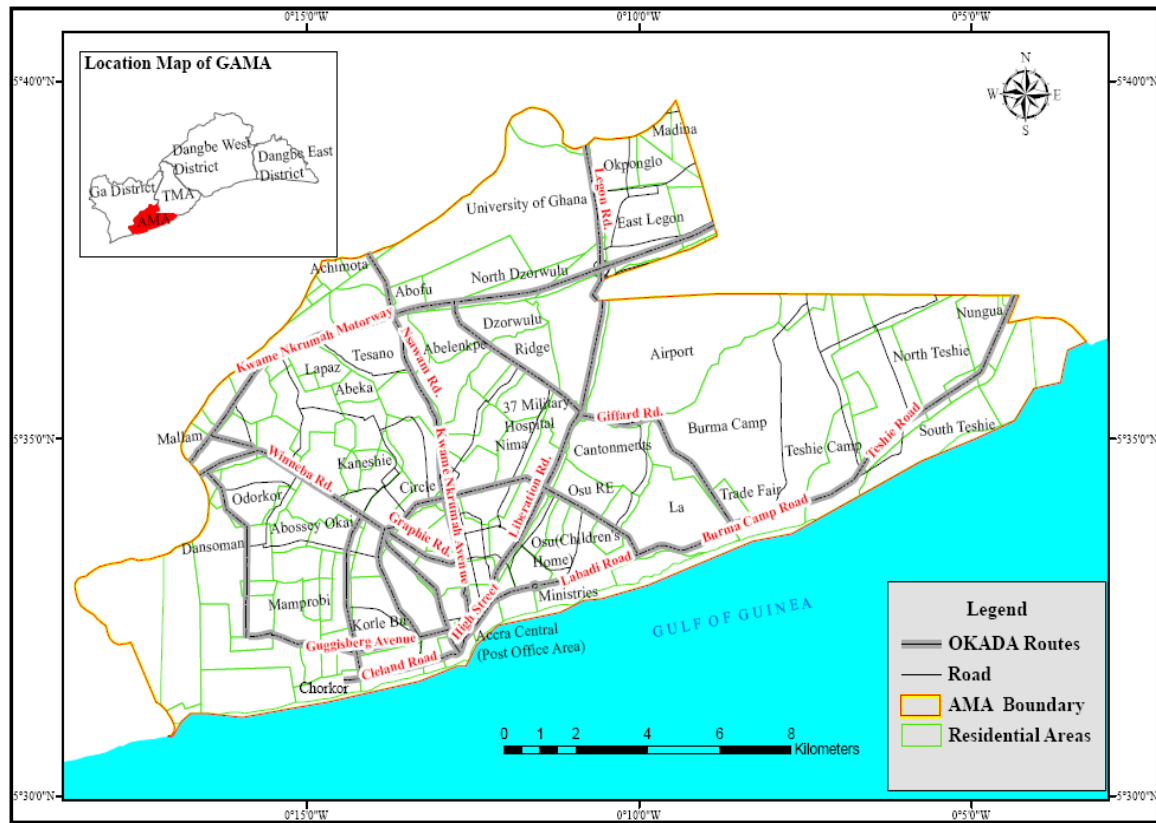


Figure 2. An annotated map of Accra illustrating the geographical distribution of the Okada
(Source: Field Survey, 2011)

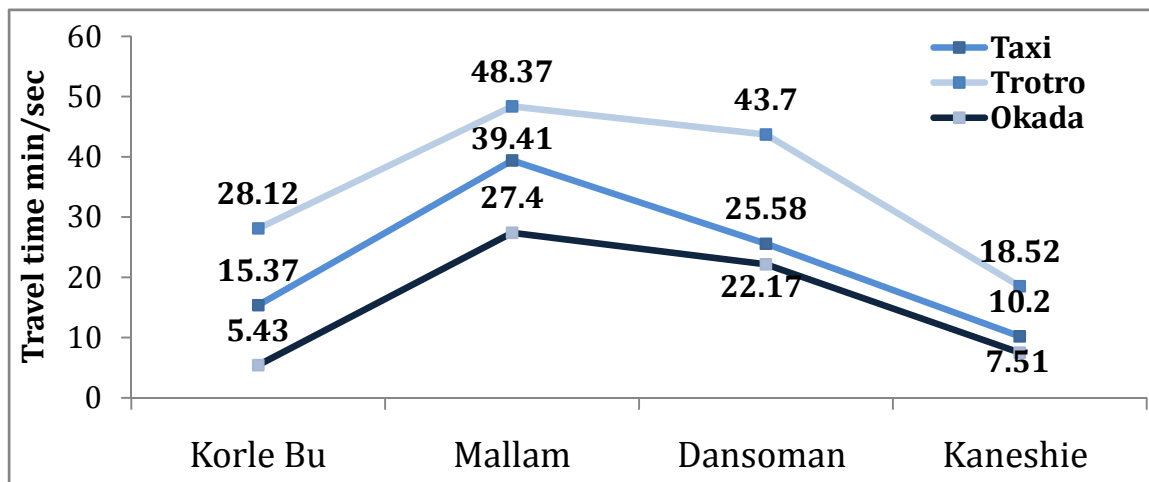


Figure 3. Comparative Analysis of Travelling Time of Okada, Trotro and Taxi
(Source: Field Survey, 2011. *The origin is the Post Office Square in the CBD)