

Parking Planning and Policy in the CBD of Accra, Ghana

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Abstract—Transportation is the engine of growth and the bedrock to the rapid development of every country or economy. In recent decades the rate of vehicle acquisition has been on the ascendency and these cars are often parked for longer hours on daily basis. This makes parking of vehicles a vital component within the transportation system especially in the CBD of cities in Ghana and especially in Accra where land is limited and land values are high. The indiscriminate state of parking vehicles on the street has caused loss of lives and properties in Ghana. Parking allocation in the CBD especially has remained a tremendous challenge for most developing countries which has triggered a lot of academic discourses. This research considered the parking planning policy and related chronic traffic congestion in the CBD of Accra, Ghana. Does the insufficient nature of available parking lots contribute to the traffic congestion in the CBD and is there any parking policy guiding the provision of parking space in the CBD? The results indicate that there is no available parking policy but a parking regulation governing parking. Additionally, both private and commercial vehicles are parked on-street with few off-street parking provisions mostly privately owned. We recommend that a comprehensive and strict parking and management policy should be enacted. More private companies should collaborate with government agencies to invest in parking.

Keywords— Parking policy, Central Business District (CBD), Traffic Congestion, Accra Metropolitan Assembly (AMA), Parking Planning

I. INTRODUCTION

Problems of delays, congestions and inconsistencies in public transportation have forced people to prefer to drive to downtowns in their private vehicles. This situation has increased the demand for parking spaces in the Central Business District (CBD). Most urban dwellers drift to the central business districts for greener pastures. The CBD is seen as the heart of every city where most of the activities within the city are carried out and the easiest but busiest place to locate. Most of the traffics of a city are concentrated and directed towards the CBD and out of the CBD and has the Peak Land Value Intersection (PLVI) of the city. The growing demand for vehicles has rather made it more daunting in the provision of parking spaces. Due to inadequate land resources, some developers do not include parking space in the planning and development of cities. Car parks have their own position in terms of urban planning that is currently

inconvertible. Even if they look simple, they are very difficult to plan, design and construct. The location, design of a car park can either ease or cause traffic congestion most especially within the CBD with a narrow or inadequate road infrastructure. Different countries have rolled out various parking policies and strategies as well as researches have been conducted by different scholars in managing traffic congestion most especially in downtown areas due to parking problems.

According to Marsden and May (2006), parking policy should not be developed in isolation but as part of the local and regional, spatial as well as the transport planning processes. This is so because parking policy plays the role of an interconnector between the implementation of land-use and transport policies. Planning for parking plays a vital role in shaping our physical environment and landscape as well as determining the outcome of how walkable the built environment can become (John G. Shaw).

In the United States there is a growing realization that the dysfunction caused by poorly conceived parking policies is a major impediment to creating an effective and efficient balance in the urban transportation system and it is also a significant cause of traffic congestion. Policies have promoted automobile use and dispersed land uses therefore undermining public transit, walking and cycling. However, newer approaches emphasize measures which manage parking demand through pricing, shared parking and reduced off-street requirement (Donald Shoup, 2012).

According to Rui Wang et. al (2013), an available data reflects that the gap between parking supply and parking demand has enlarged tremendously in China. The inadequacy of parking facilities in cities often result in difficulty in finding a parking space and causing a lot of illegal parking of vehicles on already crowded streets causing huge traffic at certain times gridlock and also posing traffic safety hazard (Peter Calthorpe, 2012). To this regard, the governments of cities like Chengdu, Nanning, Fuzhou and Guangzhou have given a juicy tax policy for those who venture into the construction and management of parking facilities. A new policy has been implemented in Beijing and in other cities recently which is to foresee that only businesses of individuals which show a tendency of providing parking spaces are issued with a license plate, which is a good parking planning strategy (Guoxin Liu et.al, 2005).

In Ghana, available statistics indicate that the number of vehicles including commercial and private ones which ply the roads have shot up considerably in recent years. In 1995, the total number of vehicles registered by the Driver and vehicle Licensing Authority was 42, 976. However in June 2014, the

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number of vehicles was 1,799,200 (Driver and vehicle Licensing Authority, Accra, Ghana, 2014). In spite of this escalating rise in vehicle ownership, the infrastructure has not seen any significant change in terms of development. The road networks have not been expanded and there are not enough lands for the various land uses.

Due to this huge competition for land especially in the CBD where land values are high, making way for the construction and establishment of parking spaces in this area has always been a challenge. In Accra, approximately 10,000 vehicles enter the CBD during the morning, peak hour and on typical weekdays. With this alarming number of vehicles entering the CBD with few parking spaces most of which are purposed for commercial vehicles (minibuses and taxis), there must be a policy controlling it. The roads in the CBD are narrow with long vehicles often parked on the shoulders of the roads off loading goods to shop owners and this obstruct traffic often leading to heavy congestions. Also, there are no enough market space for hawkers and vendors hence they often occupy the limited parking lots and on the shoulders of the road due to lack of policies.

Accra faces the challenge of indiscriminate on-street parking and frequently erratic stopping by commercial drivers to pick up passengers. As opined by the Motor Traffic Transport Unit (MTTU), the huge traffic congestion in Accra is attributed to the lack of parking lots for drivers. Therefore, parking planning, parking policy and parking management need to be considered holistically within the arena of the transport system in the city.

II. METHODOLOGY

Data presented in the study were obtained through primary and secondary data collection techniques. Primary data were collected through structured questionnaires and field observation and interviews of staff from MTTU and AMA. The CBD of Accra covers Adabraka, Osu, Tudu, UTC, Makola, Post Office square, Agogbloshe and Accra central. A total of 128 questionnaires were administered for both commercial and private drivers in the CBD. Sixteen (16) persons each from the 8 CBD in Accra were randomly chosen to administer questionnaires, where 8 represented commercial and 8 for private drivers respectively. Respondents rated and ranked various variables from the highest to the lowest. Secondary data was acquired from published journals and articles, internet, news and books. Microsoft Excel was also used for the computation of data and analysis.

III. RESULTS AND DISCUSSIONS

3.1 Parking Planning and Policy in Accra

The road network system in Accra is based on a system of radial routes converging in the CBD. Approximately forty percent of the road space on a normal work day is used for parking of vehicles and this greatly impedes traffic movement and reduces the road capacity. Parking is usually provided by departments, shops, and offices for their workers and customers. Public parking facilities on the other hand are very inadequate in Accra. This condition has resulted in a lot of parking lots (Lorry Parks) springing up in unauthorized places. There are also designated areas marked for parking in

congested districts within the city where no fees are charged for parking. Most banks, shopping centers and hotels provide free parking spaces for clients and guests. This brings up the question of if there is any parking planning and policy governing the provision of these lots?

The CBD of Accra covers Adabraka, Osu, Tudu, UTC, Makola, Post Office square, Agogbloshe and Accra central and Tudu and Makola serve as the main big districts (the core of the CBD). Parking facilities in the CBD are both public and privately owned, approximately 70% are publicly owned. Majority of the car parks in the CBD are below standard, not adequately planned and designed or upgraded into a modern parking lot because there is no parking planning and policy in Accra. For instance, Rawlings Park which is located at the core of the CBD becomes muddy when it rains. Vendors and hawkers have also taken part of the space thereby reducing the capacity of the lot. Very commonly, cars and long vehicles who do not get access to the parking lots park on the wings of the road displacing pedestrians onto the main road. Long vehicle from hinterlands and ports also park on the road to offload goods.

Accra needs an effective parking policy and parking management as the research has revealed. The parking space at the Tema station parking lot for commercial drivers is not meeting with current demand. Therefore, drivers park on the main road outside the lot and wait for a vacant space and this is contributing to traffic congestion. The research results showed that the Accra Metropolitan Assembly (AMA) is responsible for the provision and management of both on-street and off-street parking in the city and the CBD. They discharge this duty in collaboration with the Ministry of Transportation and the Department of Urban Roads. The Accra Metropolitan Assembly has also subverted the management of parking scheme to a private enterprise. For instance, on-street parking is managed by Messer Goodman Ventures and the revenue accrued is taken to the AMA and the AMA in turn pays the company a fee for that service. They are managers of paid parking scheme in the CBD of Accra such as Derby Avenue, Kinbu road, Agogbloshe road and high street and the city car park limited. However, these services are still inadequate and not very effective because there is no policy and possibly the parking planning is not accurate. It was discovered that 51.6% of the respondents have knowledge of driving regulations though it does not reflect in their reckless parking habits. This can be attributed to the fact that 76.6% and 66.2% of both commercial and private vehicle owners respectively do not have valid driving licenses. Also, about 87.7% and 70.3% of both private and commercial vehicle respondents do not have any knowledge of parking policy. A priori, the reason for the indiscriminate parking of vehicles in the CBD could be due to lack of a parking planning and policy and the figures recorded above makes it clear of the unavailability of a parking plan and policy.

1.3.2 Parking Limitation in the CBD of Accra

Results showed that 33.1% of the respondents think that poor urban planning is a major contributory factor to the parking limitations in the CBD. In Accra, especially the CBD, it is very difficult to determine the type of parking policy which is practiced in the area. The CBD was not planned for

vast automobile usage hence very difficult to build more parking facilities or expand roads. However, the research also revealed that 22.1% of the respondents think that inadequate land space is rather the cause of the parking limitations in the CBD. 19.1% also think that the mismanagement of available parking lots is also a parking limitation factor in the CBD. Mismanagement of available parking lots (19.1%) cause drivers to cruise around for empty spaces and lead to traffic congestion. Advertisements in the form of leaflets, fliers, television and radio jingles can all be employed to inform commuters of existing parking locations and empty spaces in the CBD to prevent drivers from cruising around for emptying spaces. A parking planning and policy that will punish offenders is vital in the CBD. Proceeds can be used for infrastructure development such parking facilities, hospitals, schools and so on.

Drivers of big trucks mentioned that there is no known and organized lot/space meant for them to park and off load goods to client and customers especially in the CBD, hence they turn to park on the shoulders of the main road. The implication is the constant traffic congestion that is usually recorded in the CBD. According to Asad Khattak et. al. (1993), having an idea of an available parking facility or space most especially in the CBD can influence a commuter's travel behavior. Since commuters visit the CBD for various purposes as revealed per the research conducted 33.8% (shopping), 38.5% (work), 16.9% (school), and 10.8% (other reasons), a common parking area to serve all these purposes will go a long way to reduce traffic in the CBD. This calls for an intensive parking management system such as considering how long parkers will stay in a lot for a period of time. This will help reduce the constant movement of short term drivers meandering between vehicles to find parking space. The research also revealed that 89.3% of the respondents wish to pay for parking. However, 10.7% of respondents think that paying for parking is another skew by public officials or authorities to siphon money from them hence are not willing to pay.

It is an undeniable fact that paying for parking in the CBD be it on-street or off-street ease the traffic congestion in the CBD. To this end, 90.6% of respondents advocate for an effective parking system for both commercial and private drivers especially in the CBD.

1.3.3. Parking and Traffic Congestion

From the research conducted, it was realized that it does not matter where one stays or one resides, people across board regardless of their class or place of residence all contribute immensely towards the problems of parking in the CBD. For instance, 33.8% of respondents reside closer to the CBD while 66.2% of them stay further away from the CBD but commute daily or often into the CBD. Both residents and non-residents of Accra all contribute to the parking problems. Hence, any parking policy to be rolled out must consider the needs of various commuters. 54.7% strongly agree that traffic congestion is an economic challenge in the country. Chronic traffic congestion has become a major challenge to successive governments and urban planners and the CBD is an indisputable area of traffic attraction. In Accra, traffic congestion is severe during the peak hours of 7:00am-10:00am and from 4:00pm-5:00pm daily diverging

from the CBD to other parts of the city. In 2010, a research conducted by R. Baffour reveals that inadequate roads networks system, ignorance on the part of drivers and antiquated traffic control devices and gadgets are contributory factors to traffic congestions in Accra. However, respondents identified various reasons for the frequent traffic congestion in the CBD, including reckless parking (82.2%), crossing of pedestrians, vendors and hawkers (76.9%), lack of parking facilities (92.2%), poor traffic management (66%), inadequate local parking lots in the CBD (64.6%), lack of market space (70.7%) and poor management of parking lots (66.2%). 90.7% of respondents of both private and commercial vehicle drivers have experienced traffic congestion at one point when commuting to the CBD.

However, transport experts in Ghana say the worsening traffic congestion is propelled by rapid growth in vehicle population, coupled with inadequate urban road systems and too many people working in the CBD. In June 2014, the DVLA recorded a total number of 1,799,200 vehicles as compared to 702,648 in 2004 (60.95% increase), approximately 38.4% are located in Accra.

The Accra Metropolitan Assembly (AMA) and the MTU are trying all avenues possible to reduce the traffic congestion in the city especially in the CBD. But with all the efforts put in place by these agencies, if the problem of parking is not solved, traffic congestion will continue to be a problem in the CBD.

1.3.4 Relationship between Parking and Traffic Congestion a guide to Parking Planning in the CBD

Parking and traffic congestion are inter-related in the sense that the absence of parking will augment traffic congestion situations. When there is more parking supply than there is roadway capacity to serve that supply, congestion will result. Also, too much parking in the wrong location, that is, where parking supply is concentrated so that large flows of cars exceed the capacity of local streets, localized congestion will result. Poor management of parking which include on-street, parking lots, parking garages, public and private, if not properly managed to ensure few spaces are almost always available in all locations, motorists will drive in circles trying to find available parking spaces. This situation may result in severe and entirely unnecessary traffic congestion. All parking should be managed to achieve a 15% availability target at all times of the day. Typically, the best way to meet the available target is to change the lowest hourly price that meets the target. Again, if parking is under priced so that driving is cheaper than taking a bus, it encourages excessive speed driving habits. Most especially in situations where on-street parking is cheaper than off-street parking drivers will always cruise around looking for empty spaces to park, thereby causing traffic.

Traffic congestions therefore cannot be looked at without giving due consideration to solving parking problems in a city's CBD. Therefore, to solve traffic congestions, parking shortfalls must be tackled first. Therefore managing congestion in a city can include the elimination of minimum parking requirements, establishment of maximum parking allowances which is tied to available roadway capacity, pricing public parking to achieve 15% available parking

target, working with private owners of parking to manage parking to achieve the availability target and investing in walking, cycling and transit to make sure that they serve as more efficient modes and more attractive than driving for more trips.

IV. SOME COMMON MISTAKES

4.1 Recommendations

With increasing vehicle ownership the demand for more parking lots and regulation has become inevitable in the CBD of Accra and traffic congestion has become a common and daily problem of commuters to the CBD of Accra. Therefore, we put forward the following recommendations for due consideration. There should be public-private partnership in the provision and management of parking in the CBD. Special department or unit should be created to foresee parking demand and supply fee and recruitment of park wardens to be in charge of parking lots. The government should construct a market facility (flea markets) according to zones or vicinity to spread traffic flow evenly in the city. Also, market facilities in the CBD should be created and parking facilities in the CBD should be provided alongside to cater for shoppers, businessmen and customers. We also recommend that 20% of the revenue received by the AMA from various parking lots should be put aside for the rehabilitation of old parking facilities and the development of new parking lots to meet the current parking demand in the CBD.

Furthermore, Road Traffic Acts and Regulations should be enforced and DVLA, AMA, NRSC and all stakeholders responsible for the management of urban roads should make available to the general public their roles and responsibilities, missions, visions and objectives. Parking management strategies such as pay and park, park and ride, on-street meters, multi-storey parking facilities, phone parking, park once, disability parking may be employed in the CBD. A "private car free day" should be enacted in the policy to encourage private car owners to join public transport on specified day. Drivers should be made to pay for on-street parking and it should be more expensive than off-street parking to deter parking on the road. And parking lots should be time bound, without subsidies for companies or government agencies. Finally, this research has focused on current parking situation in Accra's CBD only and therefore we recommend future research to explore the type of parking requirements for Ghana, desired future parking practices and whether there is any need for control on vehicle acquisition in cities.

4.2 Conclusion

In the CBD of Accra, rampant unauthorized parking has taken over the streetscape and this can be attributed to the fact that 87.7% of private drivers do not have any knowledge of parking policy which is evident in their parking attitude. Also, though commercial drivers (56.3%) have knowledge of parking location in the CBD, vehicles are seen parked outside the parking location on the main street, thereby delimiting the capacity of the streets and contributing to the daily traffic menace. The parking regulation which is the LI 24B 2012,

restricts places for parking, for stopping and picking up of passengers and also stipulates the height of vehicles and where they should park. This regulation focuses on parking in general and not parking in the CBD and is not also a policy. Therefore, there is need for a parking policy to direct the provision of parking in the CBD.

People across the social board regardless of class all contribute towards parking problems in the CBD. Some drivers of both commercial and private vehicles have no valid driving license. The computer system introduced by the DVLA meant to reduce the human meddling system in conducting theory driving test for unbiased scoring is laudable, but applicants of the licenses should be thoroughly educated. The system should not be so stringent and expensive to scare potential applicants from applying because it could be one of the reasons for not acquiring licenses. The available parking locations in the CBD are poorly managed, dilapidated and outmoded. Drivers who do not derive maximum satisfaction would park on the road, as parking on-street in some parts of the CBD is free. Until the system is reconsidered and available parking locations are effectively managed, drivers will keep parking on-street and cruising for empty spaces in the CBD.

Conclusively, parking planning and policy including payment for parking brings about development, creates employment for the youth, order on the streetscape and help tremendously in solving the traffic congestion problems in the CBD, putting to mind that On-street parking and traffic congestion are mutually inclusive.

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