



## **The Status of Commercial Motorcycle Operations in Ahmadu Bello University, Samaru-Zaria, Kaduna State, Nigeria**

by

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### **Abstract**

*This study examined the status of commercial motorcycle operations in Ahmadu Bello University, Samaru campus via the exploration of its characteristics for possible improvement. Mixed approach of quantitative and qualitative methods was adopted for the study. Physical observations and surveys such as Origin Destination O-D surveys, traffic volumetric counts, and parking survey were carried out in order to estimate the volume of traffic produced and distribution pattern of commercial motorcycle in the cordoned area (Zones A-F), by trip generation and destination of traffic and the availability of parking spaces respectively. ARCGIS 10.5 version was used to edit and digitise the google earth map to suit the pursuits of the study in terms of the cordoned study area, location of parking points, and zoning of the trip generators. Face to face interviews were also conducted with the officials of M Information Services (MIS) and Security office who are the custodians of information and operations of the motorcycle in Ahmadu Bello University, Zaria, respectively to provide information of their operational policies. Descriptive statistics was adopted for analysing data, and were presented in tabular summaries, percentages and frequencies of occurrences from respondents. The study revealed that there was no gazzeted policy or legal framework for operations, traffic volumes were generated more at the entrance and exit points (Main (9,858 bikes) and North gates (9,214 bikes)) of the university, 41% of trips were generated and destined more at academic, administrative and student's living areas. The study recommended the provision of a gazzeted/policy document that should guide commercial motorcycle operations, restriction of commercial motorcycle in some zones by providing appropriate routing, price regulation of fares for students/ staff should be incorporated in the policy document.*

**Keywords:** Commercial motorcycle, Campus, Operations, Public Transportation, Characteristics, Highway code,.

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## **1. Introduction**

In Nigeria's contemporary society, use of commercial motorcycles has long been accepted as a means of public transport (Aluko, 2018; Danjibo, Olasupo, and Ojo, 2019), this is not excluding tertiary institutions of learning and other public organisations. In 2018, the Ahmadu Bello University, Zaria main campus introduced the operations of commercial motorcycles, with the sole aim of meeting the increasing demand for transportation services and ensuring the ease of movement for the members of the University community. The foresaid was necessitated, firstly, by the increasing population of students, members of staff and other non-staff members that provide services to all members of the university community. Secondly, to ease the movement of the members of the university community in overcoming the friction of distance of the newly ongoing phase II development site of the institution. It is observed that, the quick response to meeting up the need for public transport via the 'motorcycle taxi' is not part of the provisions of the master plan of ABU. Therefore, the introduction of commercial motorcycles on the campus without effective containment strategy on transportation, may lead to several problems. This may include increasing traffic volumes, road congestion, demand for parking spaces at origin and destination points, non-adherence to traffic and safety rules and perhaps some socio-cultural and economic problems.

Some previous and immediate past studies on commercial motorcycle operations at the city level in Nigeria, had identified the existence of several problems in their operations inspite the societal acceptance and importance in the public transport sphere. The problems range from public health and safety, environmental, and crime issues and social conflicts that exists between the operators(rider) and passenger to mention a few (Konings, 2006; Menzel, 2011; Oster and Strong, 2013; and Aluko, 2018). By extension, the operations of commercial motorcycles in any location or place can not be without some associated challenges that would require quick intervention and adequate planning. However, Nigerian cities, just like cities of other developing countries are becoming highly overdependent on the services of commercial motorcycles due to the obvious reasons of socio-economic benefits that includes source of employment, door-to door-services, easy manoeuvre during inevitable congestion on traffic and routes that may be impassable to other vehicles, and reduction in waiting time for para-transit mode just to mention a few (Aluko, 2018). However, some cities in Nigeria had ban the operations of these motorcycle taxi along their metropolitan districts and core city zones due to problems that were highly related to crimes (insurgence, theft, kidnappings), non-adherence to traffic/ safety regulations and environmental pollution by excessive release of carbon monoxide from exhaust and increase in generation of traffic which in turn translates into gross nuisance in cities (Isenyo, 2015; Kazeem, 2020). This had triggered lots of studies on several themes towards understanding issues and challenges related to commercial motorcycles ranging from alternative employment source and income generation, socio-economic status of operators, safety and accidents rate pose by commercial motorcycle operation to mention a few (Yakubu, 2012 and Ogunrinola, 2011; Olawole, 2010 and Mahslein, 2009;).

All of these studies focus on the entire city not minding the peculiarities that may exist in the institutional settings of cities such as those of the university. It is against this background that this study was inspired to inquire the situation of the newly introduced

commercial motorcycle operations in an institutional setting that accepts its operations through exploring and examining their characteristics and perhaps unveiling their challenges/ problems towards making recommendations for improvement. The aim of the study therefore is to examine the status of the commercial motorcycle operations in Ahmadu Bello University, Samaru campus, Zaria through the following objectives: Review of the guidelines and highway codes, issues and criteria for operations of motor cycles on campuses, characteristics and problems of the operations of commercial motorcycles in ABU, main campus, zaria and make recommendations for improvement.

A Motorcycle is a two wheeled motor vehicle that was designed by Germans at different styles to suit a range of desired needs such as long trips, tour cruise, sports, race, off-road riding, manouvre of urban traffic congestion, private mobility and commercial purposes (taxi) (Litman, 2003; Ajayi, 2012; Gumel, Adam, and Rilwan, 2017). Before the 1980's, motorcycles were privately used globally (Gumel, Adam, and Rilwan, 2017). They later metamorphosed to 'commercial taxis' in the 1980's due to the mobility challenges of that time and the inability of the mini-buses and cars to cater for the increasing demand for intra-urban public transport in some Nigerian cities (Oluwaseyi and Gbadamosi, 2017; Olubomehin, 2012, Ogunbodede, 2008 and Gbadamosi, 2006). For instance, Motorcycle owners used their motor bikes as taxis at part time basis to overcome the difficulty terrains especially at the riverine areas with sparse feeder roads that ordinarily mini-buses and cars could not pass through, this gradually became a source of passive income and trade to many (Ogunbodede, 2008). Today, the Nigeria's big cities such as Lagos, Ibadan, Abuja, Kano and Kaduna uses this mode as a means of public transport (Gumel, Adam, and Rilwan, 2017). Commercial motorcycle riders have different names in relation to the location and locality of their operations. In sokoto, they are called the 'Kabu-Kabu', Bauchi, Jos, Yola and parts of Kaduna 'Achaba', Lokoja 'going' and Delta, Benin city- Edo 'Okada', Kafanchan, cross river and Akwa Ibom 'last flight' (Odumosu, B. and Yaro, D. (undated) cited in Oluwaseyi, Edward, Eyinda and Okoko, 2014) .

Oyesiku and Odufuwa (2002) and Cerevo (2000), Oluwaseyi, Edward, Eyinda and Okoko (2014) further revealed the predominance of commercial motorcycle mobility on Nigeria's urban roads and large patronage of about 70%-80% of urban residents on daily basis. This also means that numerous challenges associated with the mode of transportation seems to be in the increase from non adherence to traffic/ safety rules, attitudinal problems from intake alcohol and drug abuse by some motorcyclists or riders, increase in road crashes between motorcycles and cars/buses that often time led to conflicts between road users competing for road space use and right of way, mechanical faults of bikes, and bad conditions of roads (Oluwaseyi, Edward, Eyinda and Okoko, 2014; Ogunmodede, Adio, Ebijuwa, Oyetola, and Akinola, 2012,).

University campuses possess the uniqueness to determine the circulatory system of its activity systems (land use) within and between its adjoining community (Millard, Siegman and Kaplan, 2015; Tumlin, 2004, and Larkham, 2000). Campuses seemingly generates most of the traffic in its community and to a large extent influences the mode, infrastructure and facilities that may be required to achieve a sustainable transportation system ( Kaplan, 2015; Delmelle and Delmelle, 2012). Barata, Cruz, and Ferreira (2010) observed that issues

relating to mobility on campuses is not only limited to generation of more traffic volumes and increasing needs for parking spaces but also inducing noise, road crashes, environmental degradation and loss of aesthetics. This therefore implies that campuses with motorised modes of transportation are liable to the foresaid, especially when academic sessions are on and within the peak hours of movement. Bustillos, Shelton, and Chiu (2011) agreed with the foresaid thought that as high traffic volumes increase during peak hours of hours, especially at the parking areas, entry and exit points, a substantial backlash creates congestion on neighbouring or major arterials linking into the campuses. Toor and Havlick (2004) added that the activity systems in campuses most likely generate traffic from three stakeholders or active members of the community which includes members of staff, non-staff members and students, because campuses have a complex and yet an amalgam of learning, socialising and living environments. By implication, the existence of commercial motorcycles on campuses would increase patronage by members of the university community that increases traffic volume at peak periods, therefore, the demand for parking spaces and other challenges as established by past studies in cities experiences, if not curtailed are bound to suffice in campuses.

The facilities required for efficient motorcycle operation is not any different from the conventional geometric requirements for any good transport system. Agunloye (1993) identified good road and complementary facilities as requirement for a wholesome operation of motorcycle. Adequate Motorcycle parking area is required for pick up and alight of passenger, and this must be at intervals of a quarter mile (about 4 meters) in proximity to a major arterial road and must be away from pedestrian crossing, hill or intersections to promote safety (Agunloye, 1993). Lay-bye are to be provided to pull over motorcycles from busy traffic streams, it should be less than 30m long and 3m width. Motorcycle terminals are to be provided for aid turning around points after a trip. The criteria for a standard terminal include not less than 60m parking space to accommodate at least 20 motorcycles, trees and plant or hard element that provides canopies for shade (Deborah, 2008). Motorcycle service area: These are designated areas where motorcycles are maintained, kept overnight, fuelled and served. It could be a private or public premise with restricted access.

The Nigerian Highway code on motorcyclist as stipulated in the Federal Road Safety Act of 2007 S.10 (4)(II) provides that; Most road crashes that is associated with motorcyclist is as a result of motorists not being able to see them on time, this makes them more vulnerable to accidents The Act therefore prescribes that, Motorcyclist before riding must ensure; that the Motorcycle is in a good working condition with particular attention to its brakes, tyres, clutch and throttle, trafficators, mirrors, horn, headlamps and rear lights. Wear on smart and reflective coloured clothing, avoid the use of flowing garments and slippers. Use of helmets must be adhered to even if it is a short trip because it usually would help riders' and passengers' chances of surviving any crash. The National Road Traffic Regulations (2012) S.1 61 section 1 (v) and Section 2(1) provides motorcycle for hire must possess vehicle registration by duly completing the appropriate forms as published by the Joint Tax Board, JTB. Section S.1D (4)(t)(x) of the FRSC Act 2007, further prescribe that riders must ensure sitting comfortably and holding the handle bars of the bike firmly, glance behind before pulling out of traffic for safety, avoid carrying more than one passenger and

outsized objects or persons per trip. No Motorcyclist shall carry any person or object in front of him on the motorcycle... (Section 194 (1 (a)) National Road Traffic Regulations, 2012). All motorcycle registered for commercial purpose must be painted in accordance to the state approved colour (Section 194 (1 (f)) National Road Traffic Regulations, 2012). No rider shall be under the influence of alcohol or drugs to an extent as to be incapable of having proper control on the motorcycle, otherwise shall be guilty of an offence and liable to conviction and a fine of N3, 000- or 3-months imprisonment or face both (Section 194 (1 (f)) National Road Traffic Regulations, 2012). Motorcyclist must avoid Blind spots where other Motorists may not see them and always take positions where other road users may see you (Section S.1D (4) (t) (x) of the FRSC Act 2007). Always keep to safe distance that is the two-four seconds rule not riding too close to other vehicles to avoid crashes from sudden swerve and doors opening. Slow down at all intersection points and always maintain a maximum speed limit of 50km/hour for built up area and manoeuvre with care as motorcycles move at same speed with other vehicles at such areas and are more vulnerable and unprotected during crashes (FRSC Act, 2007 (3) n(4)(p)). Azagba (2004) also adds that in motorcycle traffic regulations, commercial motorcycle passengers must be boarded at specific points that may not cause obstruction.

The provisions of the regulations discussed above are meant to guide the operations of commercial motorcycles on safety principles, to riders and other users of Nigerian roads, which applies to all roads in Nigeria including institutional communities such as Schools, Military bases, Hospitals, etc. where the operations of commercial motorcycle exist.

## **2. The Study Area**

Ahmadu Bello University, Samaru Campus, Zaria was established on the 4<sup>th</sup> of October, 1962 ([www.abu.edu.ng/history](http://www.abu.edu.ng/history)). It is situated in Samaru District-Sabon Gari Local Government Area-Zaria of Kaduna State, and located on latitude 11°15'N to 11°3'N of the Equator and Longitude 7°30'E to 7°45'E of the Greenwich Meridian see figures 1.0, 1.1 and 1.2 (Abbas and Arigbede, 2012). With an altitude of 680m asl. . It is 13km north west of Zaria and bounded to the North by Kubani River (Ampitan, 2010). The campus covers a land area of 182.2 ha with a vegetal cover of largely Northern Guinea Savannah. The ABU samaru campus, houses eleven (11) faculties, sixteen (16) research institutes and one college of Agriculture. The current population of the university is 82, 394 persons which includes both members of staff and students which grew from a population of 4,000 persons in 1962 (MIS, ABU, 2019). The staff and Student housing/ residential areas occupies about 307 hectares and 36.75 hectares of land respectively(MIS, ABU, 2019).

## **3. Material and Methods**

The study employed mixed approach (qualitative and quantitative) research methods. Secondary data were obtained from the Master plan of ABU, published, published online material, relevant to the subject matter, which was used to formulate the study intent, conceptual framework. Google earth maps, and other maps were obtained from internet-based sites and were edited and digitised using the ARCGIS 10.5 to suit the purpose of the study. For the primary sources of data; Field surveys and observations were conducted that

included origin destination surveys, traffic volumetric counts, parking survey in order to understand the characteristics of the operations of the motorcycle taxis. The Volumetric counts were done at the major arterials of the university that either brings in or takes out traffic into or out of the university, they include the Alexander Road (North gate), Kashim Ibrahim road (Main gate), NUGA/ NAERLS gate, Area A road 1, Tafawa Balewa road, Phase II road, Queen Amina road, Ring road, and security office road (Figure 1.4). The survey was carried out at 12 hours daily from 6am-6pm it aided the determination of the daily traffic volume, peak periods of traffic, modal split, and general traffic characteristics. The Origin Destination Survey was done to estimate the distribution pattern of commercial motorcycle in the cordoned area, this was used to obtain the trip generation and destination of traffic at the activity systems of the university that the study zoned as A-F base on land use, it helped to establish where most traffic is generated within the campus. Face to face interviews were conducted with the officials of MIS and Security office who custodians of information and operations of the motorcycle operations in Ahmadu Bello University, Zaria, respectively to provide information of their operational policies. Descriptive statistics was adopted for analysing data, and were presented in tabular summaries, percentages and frequencies of occurrences from respondents.

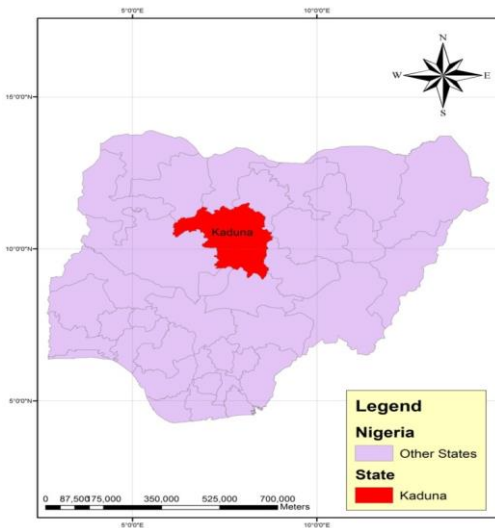


Figure 1.0. Kaduna in the context of Nigeria.  
*Source: KADGIS, 2019.*

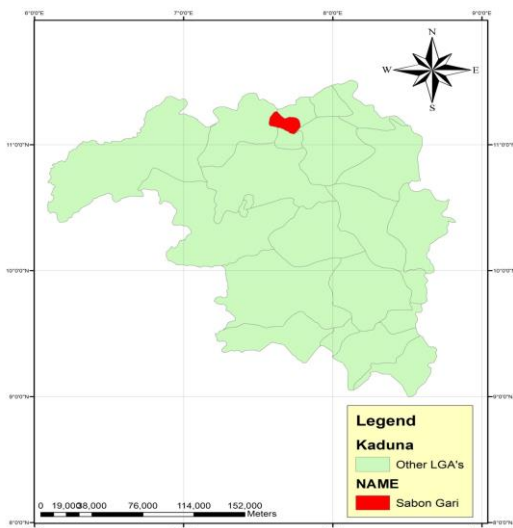
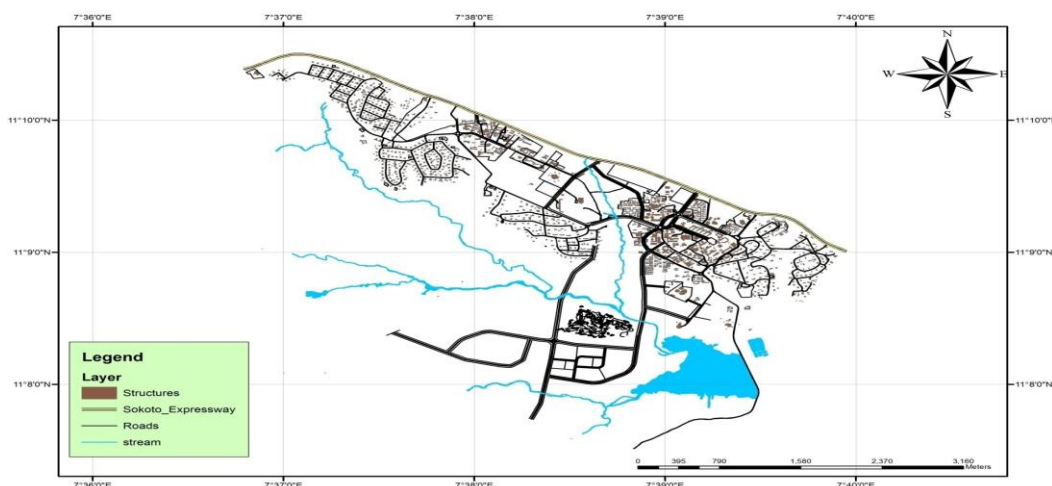


Figure 1.1: Zaria in the context of Kaduna  
*Source: KADGIS, 2019.*



**Figure 1.2: ABU Main Campus Samaru, Zaria.**

*Source: Google earth, 2019 and Modified using Arc GIS, 2019.*

## **4 Findings and Discussion**

### **4.1 Characteristics of Commercial Motorcycle operations in Ahmadu Bello University**

#### **4.1.1 Policy issues**

An interview with the Traffic section of the University Security services revealed that before now, the commercial motorcycle was operating on campus, but the emergence of security threats and other problems warranted their ban on campus. Their services were re-introduced after an appeal letter written by the Association of commercial motorcycle riders to the Vice Chancellor, who granted approval of their plea via the university security services. The security office registered 1,300 operators for the Samaru campus and were issued reflective safety jackets (see plate II) that shows their registration status with the university management via the security services department. The operations were not really tied to any gazetted policy from the University senate, but the Security office regulated their activities via the leaders of the union of the motorcycle operators without any form of written agreement between both parties as claimed by the security office. However, a licensed operator must be registered through a committee who ensured the following; proof of motorcycle ownership, purchase of jacket at ₦1500 at the initio, but currently at ₦7, 500 due to increasing applicants and demand, and acquisition of membership Identity card from the Operators union. Some of the operational guidelines on operators from the security office includes; Non-consumption and abuse of substances such as cigarettes, alcohol and all other drugs that will compromise the safety of riders, passengers and other road users, this agrees with the provisions of the national highway code Section 194 (1 (f) National Road Traffic Regulations, 2012). All operators must adhere to the university dress code, that is the general university dress code and at all times on the reflective jacket; they did not specify the dress code as required by the National road traffic regulations on the specific dress code on non-flowing dress (Federal Road Safety Act of 2007 S.10 (4) (II)) for motorcycle riders, this may be undermined by operators and may cause traffic safety on riders, passengers and other road users. The operators were to operate between the hours of 6am and 6pm daily on all routes

and roads on the campus, this is to perhaps control and reduce the security risks associated with commercial motorcycle operations in the university community. The Security Rapid Response Unit (SRRU) was mandated to ensure moderate behaviour of all operators, while the Provost office was in charge of issuing and seizure of reflective jackets for new applicants/ replacement and offenders respectively. They also banish operators who grossly defaults the set-out rules and misbehaviour from campus. By the foresaid revelation, there was a guidance from the security offices on the operations of the commercial motorcycle riders, without a gazetted policy document that should be a legal framework for their operations. The dress code of riders was left to chance of rider's choice which may undermine the motive of safety highway codes.

### 5.1.2 Traffic Volume of Commercial motorcycle in ABU main campus

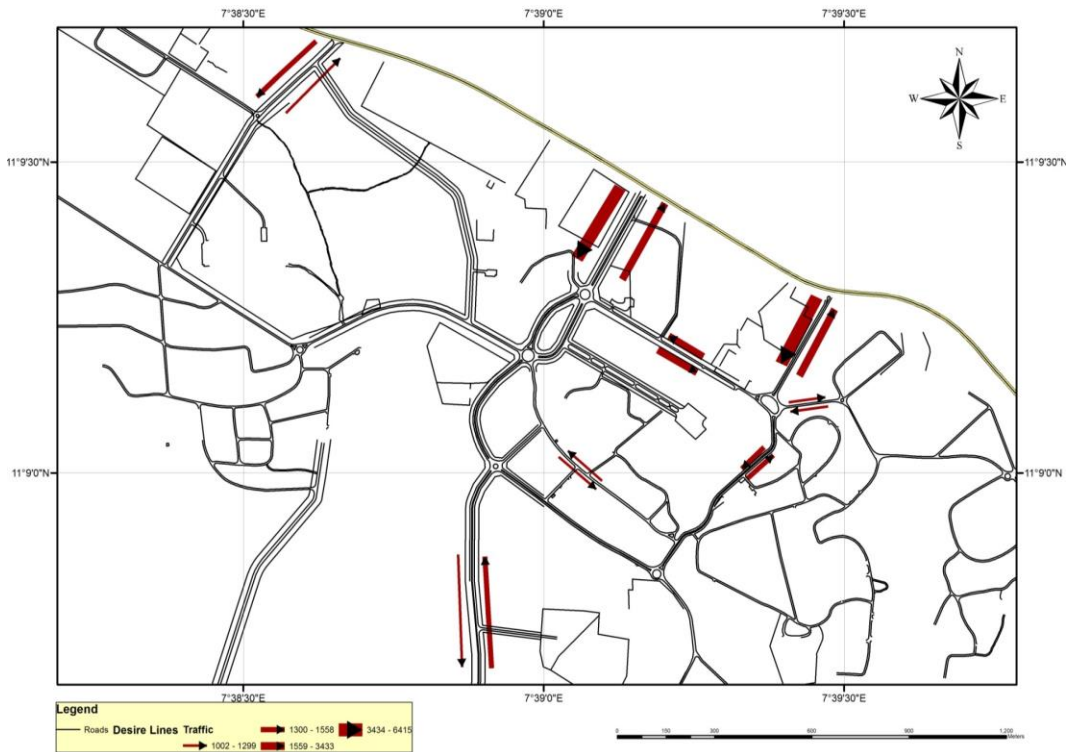
The inflow and outflow of commercial motorcycles established via volumetric count in table 1.0 revealed that the University Main Gate survey station generated the highest traffic volume of 9,858 bikes, followed by the North Gate with 9,214 and the least volume at the Tafawa Balewa road with a traffic volume of 581 motorcycles. By this revelation, it is not too far from the fact that the main gate and the North gate were the major arterial for entrance and exit routes of the entire university community. However, the Tafawa Balewa Way being a route to residential quarters (Area A) generated less activities of commercial motorcycles of the Principal Officers of the university and that they patronised less and in use of other modes of transportation than the foresaid. Therefore, Figure 1.4 illustrates a summary of the desire lines graphical expression of commercial bikes traffic volume in ABU main campus. It clearly showed the entrance point of ABU's Main Gate and North Gates had the highest traffic flow than the exit point as evident by thicker desired lines as shown in Table 1.0 and Figure 1.3. The least desired line was at the Tafawa Balewa Way with inflow of 365 entities and 216 entities as outflow of traffic.

**Table 1.0: Commercial Motorcycle Traffic Volume survey**

<i>S/No.</i>	<i>Station</i>	<i>Inflow</i>	<i>Outflow</i>	<i>Total</i>
1.	Main Gate	6415	3443	<b>9858</b>
2.	North Gate	6349	2865	<b>9214</b>
3.	Nuga gate	1518	1453	<b>2971</b>
4.	Tafawa Balewa	365	216	<b>581</b>
5.	Ring Road	1246	1151	<b>2397</b>
6.	Area A road 1	1088	1002	<b>2090</b>
7.	Phase II Road	1299	1536	<b>2835</b>
8.	Amina Road	3201	3214	<b>6415</b>
9.	Security office road	1384	1558	<b>2942</b>
<b>Total</b>		<b>22865</b>	<b>16438</b>	

*Source: Field Survey, 2019*





**Figure 1.3 Desire Line for commercial motorcycle traffic volume in ABU main campus**  
 Source: Field Work, 2019

**5.1.3 Trip generation and destination of commercial motorcycles within ABU campus.**

Figure 1.2 shows the outcome of the origin destination (O-D) survey at the zones cordoned by the study as shown in Figure 1.4. The Zone of high trip generation of motorcycle taxi within the campus is Zone F with 37% grade which was off campus zone (light green color as shown in Figure 1.4) this agreed with the volumetric traffic count of Table 1.0 where the Main gates and North gates accounted for the highest traffic volumes and were the major arterials that brought traffic into the campus from off campus in this case Zone F. The least zone of commercial motorcycle trip generation was at zone C with 5% rating which consists of Area A quarters, Akenzua Postgraduate Male Hostel and university Dam area, they were basically residential quarters with walkable distance, and this perhaps explained why the patronage of commercial motorcycle was seemingly low. Zone D which consisted of Alex/ Ribadu female Hostel, students’ social centre, university Senate building, Community market and the academic faculties (departments, lecture rooms and theatres etc.); had the highest grade of 41% that attracted the commercial motorcycle trips/ services and as destination points. While the least trip attraction with 6% was Zone A that was the Faculty of Medicine, Pharmacy and Veterinary medicine, Danfodio Hostel, University Stadium, Area G,F, E and BZ staff living quarters, Divisional Agricultural College and National Agricultural Extension Research Liaison Services (NAERLS)). By the foresaid it could be inferred that the areas of high traffic attractions were areas where the university’s functions

of learning and administration were largely domicile. While the areas of low traffic commercial motorcycle attraction were the staff and students' living quarters that were perhaps, close to the active areas of learning and administrative activities; and due to short distances, most of the students would just walk to their lectures, while the members of staff used their private vehicles and some for instance, occasionally walked to their offices as shown in the low commercial motorcycle traffic volumes generated at the Area A staff housing quarters. This would imply that areas of intervention on problems or challenges related to the operations of commercial motorcycle would be predominant in such areas without immediate interventions.

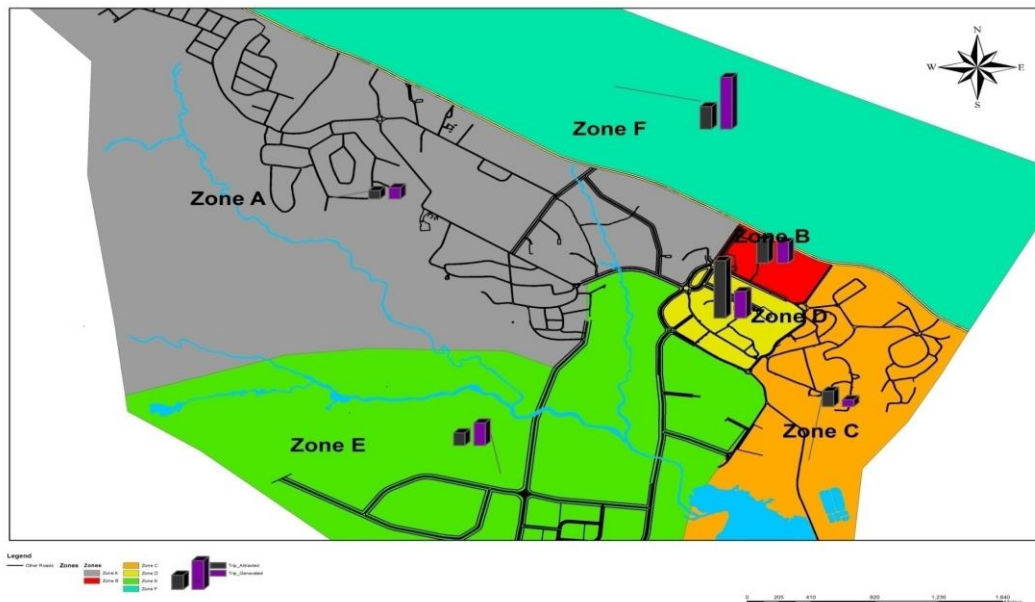


Figure 1.4: Zones for Origin and Destination Survey

Source: Field Work, 2019

Table 1.1: Trip Generation and Attraction

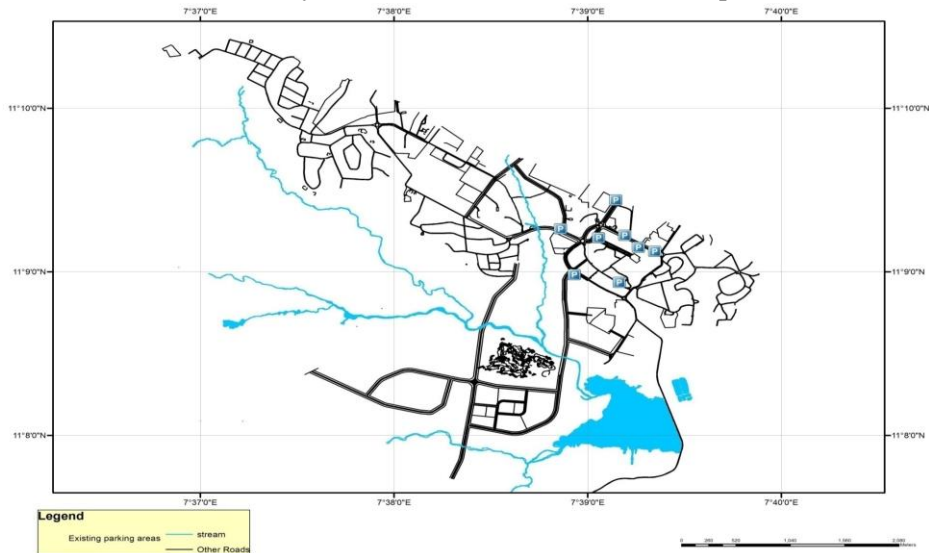
Zones	Origin (Generated)	Percentage (%)	Destination (Attracted)	Percentage (%)
Zone A	8	8	6	6
Zone B	15	15	17	17
Zone C	5	5	11	11
Zone D	19	19	41	41
Zone E	16	16	9	9
Zone F	37	37	16	16
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Field Survey, 2019

#### 5.1.4 Parking features of commercial motorcycles in ABU Main Campus

The Parking points of commercial motorcycles in Ahmadu Bello University main campus were mostly located at road intersection points and activity areas where the operators anticipate higher patronage as shown in figure 1.5. The designated points were some of the

available spaces within the existing parking lots of other vehicles as shown in Figure 1.5 and Plate 1. The parking area at Alex/ Ribadu Female Hostel is grossly inadequate. Most operators did on-street parking as shown on Plate 2 while others roam around seeking for passengers just like the practice in any Nigerian town, where motorcycle taxis were operating. By the observations made above, it could be inferred that the parking provision for commercial motorcycles was ad-hoc and haphazard because the master plan of ABU is exclusive to the operations of the foresaid, this would have impact on the existing road design that did not suit their operations, increase in traffic flow and conflicts at the intersection points where the parking points were currently located. Also, the onsite parking by operators created nuisance and disharmony with other road users due to inadequate road infrastructure.



**Figure 1.5: Existing parking spaces for Comm. Motorcycles in ABU, Main Campus.**  
*Source: Field Survey, 2019*



**Plate 1: Parking area around Alex/Ribadu Hostel**  
*Source: Field Survey, 2019*



**Plate 2: On Street Parking along Amina Road**  
*Source: Field Survey, 2019*

### 5.1.5 Transport Fare on commercial motorcycle in ABU main Campus

Table 1.2 shows the motorcycle fare for journeys from the activity areas. The fare from Hostels to the exit and entrance points that is the Main gate and North gate was ₦50 while trips to site II, Gymnasium hall/ Stadium costs N70, All staff quarters at ₦100, while journeys from campus to off campus was negotiable depending on the distance of destination or origin location. It could be inferred that the fare for student bound areas seemed uniform at N50 which was an intervention of the Student Representative Council to ease the price hike for students, it may also be to the close distance to the destination points. Therefore, the fares were in relation to the distances. However, several conflicts had been experienced by students and members of the university community due to disagreements in fares between operators and passengers that usually lead to fights, attracting the intervention of the security response unit in most cases as shown in Plate 3.

**Table 1.2: Commercial motorcycle Fare in ABU main campus.**

S/no	Destination	Price (₦)
1.	Hostel – Main Gate	50
2.	Hostel – North gate	50
3.	Hostel – Site II	70
4.	Hostel – gymnasium/ stadium	70
5.	Hostel – Staff quarters	100
6.	Campus – Off Campus	Negotiable

*Source: Field Survey, 2019*

### 5.1.6 Safety issues and behaviours of commercial motorcycle operators

The operators of the commercial motorcycle were seen riding without safety helmets, proper foot coverage as shown in Plate 1, and some did not have proper dress code, and indiscriminate overtaking is a common practice as complained by some motorists In spite of the existence of traffic sign on campus see plate 4. These had the potential of compromising the safety of both commercial motorcycle riders, passengers, other riders and other road users



**Plate 3: Security personnels settling transport dispute between user and motorcycle operator**  
*Source: Field Survey, 2019*



**Plate 4: Existing traffic sign in the study area**  
*Source: Field Survey, 2019*

## **6. Conclusion and Recommendations**

It was found from the study that the operations of the commercial motorcycle lack a gazetted policy that should guide operations of commercial motorcycle, traffic volume and trip generation survey reveal high traffic generation from off campus trips from the main gates and north gates of the university, internal trip generation was more from the core activity areas that is the faculties (academic areas) and the community market; characterised by high traffic congestion in such zones. Also, parking areas were not properly sited and were largely located at intersection points and some Motorcycle operators wore non-compliant dress code for motorcycle riders which constituted a problem and a means its non-inclusion in the dress and safety codes of the University. The transport fare had no policy backing of the University Management but SRA's agitation towards softening the suffering of its members only.

In conclusion, this paper has established the status of commercial motorcycle in the Ahmadu Bello University main campus, Zaria. The status was established from six (6) features of their operations which includes; Policy issues, Traffic volume, trip generation and destination, Parking character, Transport fare issues and safety behaviours of operators. Their operations from aforesaid were found dissatisfactory and requires quick intervention for improvement

It was recommended that; Gazetted policy must be provided to include the national highway codes of the Federal Road Service Commission for effective management of motorcycle operations on campus. The aforesaid must include enforcement guide for the Security response unit in order to promote safety of riders, passengers and all other road users. Restriction of commercial motorcycle must be placed in some zones (especially the academic areas) by providing appropriate routing to reduce congestion on already congested routes or expand the roads. Parking areas should be relocated from such points to less conflict points in order to promote safety and reduce congestion. Transport fare, in spite the private nature of motorcycle taxi, a level of regulation and control of fare should be incorporated into the policy documents of the University to avoid conflicts between service recipients and providers. Dress code mode must be provided and complied to by the motorcycle operators. Holistically, Commercial Motorcycle Operations can be sustainably achieved if the aforesaid are addressed and a smooth operation realisable in meeting the needs of the university community on commercial motorcycle transport.

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