Factors Influencing Non-compliance Behaviour of Unauthorised Drivers on Bus Rapid Transit Lanes in Lagos Metropolis

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ABSTRACT

The bus rapid transit lanes in Lagos are threatened by drivers of unauthorised vehicles. These vehicles could break down or be involved in a crash thereby causing delay and frustrating the major objective of constructing special lanes for the smooth operation of the bus rapid transit scheme. This study therefore employed observation method by carrying out a physical count of drivers exhibiting non-compliance behaviour on the bus rapid transit lanes for the purpose of identifying the categories of drivers that exhibit non-compliance behaviour on the lanes, and the factors responsible for their behaviour. The observation was carried out on four working days of the week, and two factors were predicted to motivate the behaviours of the drivers; traffic congestion and day of the week. In all, 652 drivers of different categories of vehicles were observed. Four hypotheses were tested using t-test and One-Way ANOVA statistics to analyse obtained data. The results revealed that drivers of private vehicles exhibited higher non-compliance behaviour compared to other categories of drivers. Additionally, traffic was a factor for non-compliance behaviour but days of the week was not a significant influence. The results are crucial for enforcement strategies, for change in policy formulation and for installation of road furniture to inform and deter unauthorized use of the bus rapid transit lanes.

Keywords: Bus rapid transit lanes; non-compliance behaviour; unauthorised drivers; danfo drivers; Lagos metropolis.

INTRODUCTION

Globally, the Bus Rapid Transit (BRT) system has been reported to be one of the most popular and efficient mode of transportation adopted by urban cities with a population of medium to large size [1]. The BRT system was set up to compliment other transport modes in moving passengers from one point to the other. The BRT system was conceived in the city of Chicago in 1937 [2]. Later on, special bus lanes or segregated lanes [3] were made manifest in 1966 and in 1972 in St. Louis (USA) and in Lima (Peru) respectively. Buses driving on these special lanes were high capacity vehicles that provided mass transit services to passengers in cities with high population to enable lesser cost and travel time. The benefit of less travel time associated with these buses increased their popularity [4], [5]. Thus, other cities such as Sao Polo, New York, Bogota, Paris, Lagos and so on implemented the BRT system.

Lagos traffic is peculiar and unique. It is characterized by long queue of vehicles. It is not uncommon to spend hours in traffic on a typical day in Lagos. This situation hits harder on road users who depend on mass transportation operated by vehicles that could be held in traffic for hours before arriving at bus stops. Thus, passengers at bus stops wait for long hours to board buses to their destinations. This situation can be frustrating and injurious to health. Scenarios where passengers rush for seats on available buses could be motivated by this situation. Thus, this ugly picture may have necessitated the Lagos State government to seek and provide better alternatives for commuters in Lagos State.

The take-off of the BRT scheme in Lagos was faced with challenges associated with non-compliance with the rules associated with the special lanes. Non-compliance behaviour on the BRT lanes translates to unauthorized driving of non-designated buses and other types of vehicles on the special lanes. This behaviour renders the effectiveness of the BRT scheme very low [6]. Unauthorized vehicles on the BRT lanes could break down or be involved in a crash. The consequence is that the BRT lanes will be delayed, thus frustrating the objective of constructing special lanes for the smooth operation of the scheme. When passengers experience frequent delays due to breakdowns, it may discourage them from relying on the BRT buses, thus defeating the purpose of setting up the scheme. An efficient scheme will encourage other road users who drive their own personal vehicles to prefer and patronize the buses on the BRT scheme.

Literature on studies relating to observation and counting of unauthorized vehicles utilizing the BRT lanes in other countries is scarce. This is surprising because many countries in the western world operate the BRT scheme. A possible explanation for the paucity of studies for this may be that non-compliant behaviour to the rules guiding the usage of the dedicated lanes has not posed a serious challenge to the effectiveness of the BRT scheme in other countries. Secondly, the volume of vehicles on the roads in other countries may be comparable to the road network, thus a situation of unauthorized use of the BRT lanes may not arise. Also, road furniture such as road signs, educating drivers on the limitation of vehicles on the special bus lanes are available in most cities operating the BRT scheme. Thus, literature has limited resources on non-compliance to the special bus lanes and thus not focused on this area because the problem is not so overwhelming in highly developed countries.

BACKGROUND
Non-compliance behaviour
In traffic, non-compliance behaviour refers to an action taken by a road user to deliberately or otherwise disobey formally or socially prescribed standards of road traffic behaviour. Non-compliance behaviour in traffic is universal and occurs in everyday life. In low-middle income countries and in traffic parlance, [7] defined non-compliance as lack of compliance with traffic signals and signs. In this present study, non-compliance behaviour on BRT lanes is conceptualized as unauthorized driving on the BRT lanes. Behaviour can become a problem at the point where it interferes with normal daily activities and when other law abiding road users are negatively affected. According [8] non-compliance behaviour on the BRT lanes may be attributed to high traffic on the general lanes and inefficient enforcement of the rules guiding the use of the special lanes. Thus, effective enforcement is a challenge as long as heavy traffic is experienced. [9] described the concept of non-compliance as a negative action. In law, non-compliance is related to the positive outcome of behaviour [10]. Thus, it is expected that perception of positive reward attached to

complying with a law will enhance compliance and deter non-compliance. Therefore the likelihood of non-compliance will be less if the benefits expected outweighs the deficits. This perspective is supported by [11] in their explanation of deterrence theory as an offshoot of rational-choice perspective of human behaviour. Thus, people behave, or choose to act in ways that will produce positive outcomes for them. Therefore, because people are rational beings and think rationally, they consider the benefits of their actions before engaging in behaviour [12]. In this wise, unauthorized drivers will decide to drive on the BRT corridors because of the benefit of gaining time to arrive at their destinations.

BRT Scheme
In some countries where special lanes are constructed for buses, different concessions are given to some vehicles based on hours of the day and utility of the vehicles. For instance, in Kenya, ambulances and vehicles transporting visiting heads of states are allowed to drive on the BRT lanes [13]. In another study, it is reported that access to the BRT lanes should be given to emergency vehicles such as fire fighting vehicles [14]. However, in some countries too, mixed traffic is allowed on the BRT lanes. For instance in Vancouver, seven types of vehicles are permitted on BRT bus lanes, while in Istanbul, two types of vehicles are legally allowed on the BRT bus lanes. In Portugal, cyclists have authorized access to the BRT bus lanes while Lisbon does not grant access to cyclists. Emergency vehicles have total access to BRT lanes in Barcelona, Dublin, London, New York and Singapore. Such a privilege is however indicated by sign posts positioned along the BRT routes. In Lagos metropolis, there are no sign posts to reveal the type of vehicles permitted to drive on the BRT lanes. This is a major problem in the Lagos BRT scheme. Absence of sign posts indicating authorized users of the BRT special lanes may be a contributory factor in the unauthorized use of the lanes.

In Lagos metropolis, careful observation indicates three types of drivers who flaunt the use of the BRT special lanes. These are drivers of private vehicles, armed forces personnel vehicles and danfo commercial mini buses. The danfo mini buses are yellow commercial buses that provide public transportation services in Lagos metropolis. The drivers of these vehicles are sighted driving on the BRT special lanes. This may be a reflection of traffic violation characterized by Nigerian drivers generally. The traffic behaviour of armed forces personnel have been documented in some studies. In a study by [15], only 52 percent of the study respondents who were British forces in Iraq used seatbelts. In another study, traffic behaviour such as driving fast, seat belt violation and rapid lane changes were common driving behaviours among deployed military personnel [16], [17] also affirmed that military personnel who have been deployed are susceptible to risky driving behaviour.

The agency in charge of monitoring the BRT scheme in Lagos admits that vehicles on special services are authorized to drive on the BRT lanes. The problem is that such vehicles are not specified. The information obtained from the agency confirmed that emergency vehicles such as fire-fighting trucks, ambulances and security personnel in charge of monitoring compliance are allowed to drive on the BRT lanes. However, drivers of unauthorized vehicles exhibit non-compliant behaviour by driving through the Lagos BRT lanes especially when traffic is heavy at peak periods. Peak periods are represented in this present study by hours of the day, usually few hours (7.00am to 9.00am) before resumption of work in the mornings, and after close of businesses in the evenings (4.00pm

to 6.30pm) when traffic is heavy due to high volume of vehicles on the road. Thus, other types of vehicles plying the BRT lanes are deemed to be doing so illegally.

In view of the challenges posed by unauthorized driving on the BRT special lanes in Lagos metropolis, and the need to identify unauthorized drivers, the following hypotheses are proposed:
1. Non-compliance behaviour of private drivers will be significantly higher on the BRT lanes during heavy traffic period than during light traffic period.
2. Non-compliant behaviour of armed forces drivers will be significantly higher on the BRT lanes during heavy traffic period than during light traffic period.
3. Non-compliant behaviour of danfo commercial bus drivers will be significantly higher on the BRT lanes during heavy traffic period than during light traffic period.
4. Private drivers, armed forces drivers and commercial danfo bus drivers will exhibit significantly higher non-compliant behaviour on Tuesdays, Wednesdays and Fridays compared to Thursdays within the period of observation.

METHOD
Observation Site
The observation site for this study was Obanikoro Bus-stop, along Ikorodu Road, Shomolu Local Government Area, Lagos State. Ikorodu road is an expressway that runs on a 24.5 kilometer stretch of 4 lanes on either way. Ikorodu road crosses other major expressways with great relevance to connectivity and mobility. Thus, Ikorodu road was considered by Lagos State as one of the first major roads for the construction of BRT lanes and bus/stops. This is because the road serves as a mop-up of passengers transiting from other major expressways such as Lagos/Ibadan expressway, Ikeja, Ojota and Apapa Oworonshoki expressway. Also, due to the purpose of connectivity on Ikorodu road, road users usually experience traffic congestion along the road especially during the early morning rush hours and the evening rush hour period. Obanikoro bus-stop is selected for the observation of non-compliant behaviour of drivers because it is one of the very few BRT bus/stops where other drivers apart from BRT bus drivers display non-compliance behaviour by gaining entry and driving on the BRT lanes. Observations were made between the hours of 7am and 8.30am on Tuesday, Wednesday, Thursday and Friday during traffic build up around Obanikoro bus-stop onward Yaba and Ojuelegba (the two major roads where vehicles divert at the end of Ikorodu road). The traffic build up signifies that traffic congestion may be a significant factor in the non-compliant behaviour on unauthorized use of BRT lanes located in Obanikoro bus-stop.

Participants
Study participants were 652 drivers who drove on bus rapid lanes in obanikoro bus stop. They were categorized as private, armed forces and danfo drivers. Private drivers are defined as individuals who own and drive their personal cars or who drive the owner of a vehicle sighted on the BRT lane. Armed forces drivers are defined as those who wore military uniform while driving, irrespective of their role in the army, navy or air force. Danfo drivers are defined as those who drive yellow mini buses for commercial purpose.

Data collection procedure
Two trained research assistants observed drivers who exhibited non-compliance behaviour on the BRT lanes at observation point. The instruments for data collection were a notebook and a ball pen. Two research assistants were engaged to record data. One of the research assistants observed the

drivers and called out the category of driver to the hearing of the second research assistant who made the recordings.

Prior to the observation day, the author contacted traffic officers stationed at Obanikoro bus-stop to notify them of the study. The observation was conducted on two different periods: during heavy and light traffic. Heavy traffic period refers to the period that schools were in session. There are usually more cars on the roads when schools are in session. Light traffic refers to the period when schools were on vacation. Schools here refer to all schools; that is, from kindergarten to high schools. This is based on the observation for years that traffic is usually light when schools are on vacation. The first observation was made from the 31st of July to the 3rd of August, while the second observation was made from the 9th of October to the 12th of October, 2018. Observation days were made on 4 days of a week; from Tuesday to Friday. Monday was omitted due to a heavy rainfall that was experienced on the first Monday (30th July) and that affected observation for that day. The research assistants arrived at the observation site by 6.40 am and commenced observed from 7am till 9am on observation days. The categories of drivers that were observed were explicitly explained to the research assistants. It was also stressed that drivers of ambulances, firefighting trucks, the LAMATA and the Police were not to be observed. In the first period of data collection (light traffic) which occurred from 31st of July to the 3rd of August, the trained assistants observed three categories of drivers who were not authorised to drive on the BRT lane. The same observation was made for heavy traffic period in the second period of data collection between Tuesday 9th of October to Friday 12th of October, 2018.

RESULTS

The first hypothesis was tested with a t-test for independent sample. Result is presented in table 1.

Table 1: Summary of t-test analysis showing non-compliance behaviour of drivers on BRT Lanes when traffic was light and heavy

Type of Drivers	Periods	N	Mean	S.D	Std. Error Mean	Df	T	P
Private Drivers	Light Traffic	4	13.50	5.06623	2.53311	6	-0.929	> .057
	Heavy Traffic	4	41.25	59.50000	29.75000			
Armed Forces Drivers	Light Traffic	4	17.50	11.09054	5.54527	6	-0.978	< .043
	Heavy Traffic	4	69.00	104.77595	52.38798			
Danfo bus Drivers	Light Traffic	4	0.00	0.00000	0.00000	6	-1.639	< .002
	Heavy Traffic	4	21.75	26.53771	13.26885			

The results showed no significant mean difference in non-compliance behaviour of private drivers on BRT lanes when traffic was light and heavy (t = -.929; df = 6; p > .057). However, observation of the values of the mean differences revealed that non-compliance behaviour of private drivers on

the BRT lanes was higher when traffic was heavy (M = 41.2500) compared to when traffic was light (M = 13.5000).

The second hypothesis was confirmed in table 1 which revealed a significant mean difference of non-compliance behaviour of armed forces drivers on BRT lanes when traffic was light and heavy (t = -.978; df = 6; p < .043).

For the third hypothesis, the results in table 1 also revealed a significant mean difference of non-compliance behaviour of danfo commercial bus drivers on BRT lanes when traffic was light and heavy (t = -1.639; df = 6; p < .002).

It was also stated that private drivers, armed forces drivers and commercial danfo commercial bus drivers will exhibit significantly higher non-compliance behaviour on Tuesdays, Wednesdays and Fridays compared to Thursdays within the period of observation. This hypothesis was tested with a One-Way Analysis of Variance (ANOVA) statistic. The results of the analysis are presented in table 2.

Table 2: One-Way ANOVA Showing the Difference in Non-compliant Behaviour of Private, Armed Forces and Danfo Drivers at Different Days of Observation

Type of Drivers	Source	SS	Df	MS	F	P
Private Drivers	Between Within Total	5282.375 6955.500 12237.875	3 4 7	1760.792 1738.875	1.013	> .475
Military Drivers	Between Within Total	15280.500 23327.000 38607.500	3 4 7	5093.500 5831.750	0.873	> .525
Danfo Drivers	Between Within Total	1056.375 2002.500 3058.875	3 4 7	352.125 500.625	0.703	> .598

The results in table 2 did not suggest any significant influence of different days of observation on non-compliance behaviour of private drivers (F (3, 7) = 1.013; p > .475), armed forces drivers (F (3, 7) = 0.873; p > .525), and danfo bus drivers (F (3, 7) = 0.703; p > .598) due to days of the week.

DISCUSSION.

This study set out to investigate the non-compliance behaviour of drivers of private, armed forces and danfo commercial buses on the BRT lanes during light and heavy traffic periods, and on different days of the week. The result of the first hypothesis revealed that for private drivers, there was no significant mean difference in their non-compliance behaviour during heavy and light traffic. The interpretation of this result is that drivers who drive private vehicles will exhibit non-compliance behaviour by using the BRT lanes during heavy and light traffic periods. Thus even when there is no traffic congestion, drivers of private vehicles will not comply with the rules of the BRT lanes. The result of this study is in agreement with that of [18] where drivers who drive employees of banks in private vehicles exhibited comparable level of compliance behaviour while they drive. That is, their level of compliance to traffic rules and regulations were not significant.

Private drivers, who are conceptually described in this study as those who drive their own vehicles or those who drive private individuals in the capacity of chauffeurs, consist of people with various socio-demographic variables. Perhaps, these drivers have formal jobs in private or public organizations. It is expected that they possess formal education and should possess the knowledge of the rules guiding the use of BRT lanes.

This finding is in disagreement with the result obtained in the study of [19], where they reported that workers with higher education perceived a higher work safety compared to workers with a lower education. The implication of the result of this study is that traffic enforcement officers should stop assuming that drivers who possess a higher education and also drive their vehicles perceive a higher safety conscious. That erroneous assumption can be counter-productive because it will create a situation of lawlessness since these drivers may not be apprehended for non-compliance behaviour. This is even more necessary due to the significant increase in the volume of private vehicles over other types of vehicles on the road [20];[21]; [22]. Thus, the result of this study has contributed to the knowledge of traffic literature.

Further results suggested that among armed forces personnel, a significant mean difference was observed for heavy and light traffic. This indicates that when traffic was heavy, a higher number of military drivers exhibited non-compliance behavior compared to when traffic was light. Incidences of traffic violations have been reported for military personnel in literature. The behaviours associated with military personnel in Lagos have been a subject of discourse and a serious challenge to the Lagos State government. Drivers of military vehicles and drivers in military uniforms driving private vehicles are common sights on BRT lanes in the early hours of the morning on week days. In 2012, the then Lagos State Governor, Babatunde Fashola personally stopped a military officer for unauthorized use of the BRT lanes. This incidence became a sensation, but did not end further abuse by armed forces personnel. Also, a report credited to Pulse.ng [23] revealed that ten military vehicles were found on the BRT lanes on the 10th of December, 2015 in Lagos. This is a common sight and occurrence on BRT lanes in Lagos.

A significant mean difference was also reported for danfo mini bus drivers during heavy and light traffic periods. During heavy traffic, danfo mini bus drivers exhibited non-compliant behaviour but did not do same when traffic was light. Thus, during light traffic, commercial danfo mini bus drivers did not exhibit non-compliant behaviour at all at the time of the investigation. This result is indicative of the need to device ways of ensuring free traffic on the roads. It is always surprising to find out that all things being equal, danfo mini bus drivers are law abiding but would disobey the laws when they become challenged with congestion that causes time delays. These results are in line with the affirmations of [8];[24]; [22] who reported that non-compliance to authorized uses of dedicated BRT lanes are due to heavy traffic on general lanes. The result of the study of [25] & [26] reiterated further support for the non-compliance behaviour of commercial danfo mini bus drivers during heavy traffic. [26] revealed that professional drivers have heavy workload and thus are vulnerable to working within tight schedule of time. Also for danfo mini bus drivers, the urgency to make several rounds and earn adequate income puts pressure on them to find any available space to move. This makes them to search for, and engage in any available means of reaching their destination within a short time period.

The second hypothesis stated that private drivers, armed forces drivers and commercial danfo mini bus drivers will exhibit significantly higher non-compliant behaviour on Tuesdays, Wednesdays and Fridays compared to Thursdays within the period of observation. As indicated in tables 2, this hypothesis was not confirmed. This is because observations of non-compliant behaviour for all categories of drivers for the different days of the week were not significantly different. The hypothesized prediction that drivers will exhibit less non-compliance behaviour on Thursdays is due to the weekly sanitation exercise that comes up at all the markets in Lagos State from 7am to 10am. Traders stay back home much later in the mornings on Thursdays thereby reducing the number of vehicles on the roads on Thursday mornings [27]. Thus, due to fewer cars on the roads on Thursday mornings before 10am, one may reliably predict that there would be light traffic. Hence, building on the first hypothesis, private drivers, armed forces drivers and commercial danfo mini bus drivers would be expected to exhibit less non-compliant behaviour on Thursdays compared to the other days of observation. The non-confirmation of this hypothesis may be due to the general lethargy of Lagos road users towards traffic rules and regulations. As a matter of fact, habitual users of the BRT lanes may be oblivious of light traffic on the general lanes, thus drive through the BRT lanes unconsciously.

CONCLUSION AND RECOMMENDATIONS

For this study, observations were made to identify the rate of non-compliant behaviour of unauthorized vehicles on the BRT lanes at Obanikoro bus stop along Ikorodu road, Lagos. The result of the analysis of data revealed that during heavy traffic congestion, armed forces personnel and commercial danfo bus drivers exhibit non-compliant behaviour on the BRT lanes while for private drivers, non-compliant rate was the same irrespective of the level of traffic congestion.

It is highly recommended that the agency in charge of traffic enforcement should be consistent in ensuring effective compliance to traffic rules and regulations. Thus, only authorized vehicles must be permitted to drive on the special bus lanes. The presence of traffic patrol officers and vehicles may deter unauthorized use of the lanes.

Concerted effort should be geared in the direction of causing a shift in travel modes whereby drivers of private vehicles and armed forces personnel would prefer to travel by the high occupancy vehicles registered under the scheme.

The Lagos State Transport Management Authority can upgrade the categories of authorized users of the lanes to include other categories of vehicles at off peak hours. For instance, all vehicles whose capacity are more than four may be allowed to drive through the lanes. This will considerably reduce the number of vehicles on the road, and thus reduce congestion.

The erection of visible infrastructure such as signage furniture to display authorized users of the lanes at strategic locations at the entry and along the lanes is germane for effective compliance to lane use. Additionally, cameras should be installed to identify and record non-compliance and apprehension of violators. Several studies have affirmed the effectiveness of painting the lanes with visible bright colours to be effective in ensuring that only authorized users of the lanes actually use the lanes. Therefore, Lagos LAMATA may consider this as an option in ensuring compliance.

Furthermore, military personnel should be made to undergo retraining on traffic behaviour. This is particularly important for combat soldiers who have been deployed to the war zones and are back to the society. Such officers should be encouraged to relearn driving within civilians and be made to understand that compliance to traffic rules and regulations are mandatory.

The result of this study is relevant in providing the law enforcement agencies with the best time to deploy enforcement personnel to the lanes. Peak periods when traffic is usually heavy at different hours of the day should be targeted as the best hours to ensure total enforcement of the use of the lanes. Thus, in off-peak periods, enforcement officers may be utilized or deployed to other areas of need.

This study is the first to conduct observation of non-compliant behaviour of private, commercial danfo mini bus and armed forces personnel drivers. Because this study data was obtained through observation, the author could not explain other factors responsible for the non-compliant behaviour. Thus, future investigation may conduct a paper and pencil study or a qualitative research where interview sessions to identify these factors would be adopted.

Secondly, days of the week has been identified as a factor in traffic congestion which may ultimately affect the rate of unauthorized use of the BRT lanes. Hence, irrespective of the day of the week, all categories of drivers and vehicles will use the BRT lanes without authorization.

Reference

[1] Jiang, Y., Zegras, P. C., and Mehndiratta, S., Walk the line: station context corridor type and BRT walk access in Jian, China. Journal of geography, 2012. 20(1): p. 1-14.

[2] Maeso-González, E. and Pèrez-Cerón, P., State of art of BRT transportation. European transport research review, 2014. 6: p. 149-156.

[3] Institute for Transport and Development Policy, Rea Vaya operational design: executive summary, 2007. Retrieved on 13th September, 2019 at http://www.tandfonline.com/doi/ref/10.1080/01441647.2010.492455?scroll=top

[4] Kathuria, A., A review of BRT implementation in India. Cogent engineering, 2016. 3(1): p. 1-23.

[5] Deng, T., and Nelson, J. D., Recent developments in BRT: A review of literature. Transport reviews, 2011. 31: p. 69-96.

[6] McNaughton, M., "1779 cheats spotted in single morning using bus lane", 2006. The New Zealand Herald. Retrieved from wikipediahttps://en.wikipedia.org/wiki/Bus_lane.

[7] King, M., Traffic behaviour and compliance with the law in low and middle income countries: are we observing "pragmatic driving"? Proceedings of the 2015 Australasian Road Safety Conferenc, 2015., 14-15 October, Gold Coast, Australia

[8] Kepaptsoglou, K., et al., Bus lane violations: an exploration of causes. European transport, 2011. 48: p. 87-98.

[9] kleinsinger, F., Noncompliant behaviour: Definitions and causes. The permanente journal, 2003. 7(4): p. 18-21.

[10] Stover, R. V., and Brown, D. W., Understanding compliance and noncompliance with law: the contribution of utility theory. Social science quaterly, 1975. 56(3): p. 363-375.

[11] Cornish, D., and Clarke, R. V, "Introduction." In The Reasoning Criminal. Cornish, Derek and Ronald Clarke (eds), 1986. New York: Springer-Verlag, p. 1-16.

[12] Barnes, M. A., Robert Chin and Kenneth D. Benne: Change Management Biography. In : Scabla D., Pasmore W., Barnes M., Gipson A. (eds) The Palgrave handbook of Organizational Change Thinkers, 2017. Palgrave Macmillan, Cham.

[13] Wanambisi, L., Kenya: Lane dedicated for buses, emergency vehicles on Thika highway, 2018. Retrieved from http://allafrica.com/stories/201804060307.html.

[14] American Public Transportation Association, Operating a BRT system. APTA Standards Development Program, 2010. https://www.apta.com/resources/standards/Document/APTA-BTS--RP-007-10.PDF.

[15] Okpala, N. C., Ward, N. J., and Bhullar, A., Seatbelt use among military personnel during operational deployment. Military medicine, 2008. 172(12): p. 1231-1233.

[16] Fear, N. T. et al., "Risky driving among regular armed forces personnel from the United Kingdom," American Journal of preventive medicine, 2008. 35(3): p. 230-236.

[17] Macfarlane, G. J. et al., Lont-term mortality amongst Gulf war veterans: is there a relationship with experiences during deployment and subsequent morbidity? International journal of epidemiol, 2005. 34: p. 1403-1408.

[18] Balogun, S. K., and Malomo, B. I., Influence of age, educational achievement and marital status on compliance behaviour of bank drivers. African journal for the psychological studies of social issues, 2011. 14(1&2): p. 316-332.

[19] Gyekye, S. A., and Salminen, S., Educational status and organizational safety climate: Does educational safety influence worker's perceptions of workplace safety? Safety science, 2009. 47: p. 20-28.

[20] O'Fallon, C., and Sulliva, C., Understanding and managing weekend traffic congestion, 2003. 26th Australasian Transport Research Forum, Wellington, New Zealand.

[21] Ohakwe, J., Iwueze, I. S., and Chikezie, D. C. 1. Analysis of road traffic accidents in Nigeria: A case study of Obinnze/Nekede/Iheagwu road in Imo State, South-eastern Nigeria. Asian Journal of Applied Sciences, 2011. 4: p. 166-175.

[22] Gavanas, N. et al., Assessment of bus lane violations in relation to road infrastructure. traffic and land-use features: the case of Thessaloniki. Greece european transport, 2013. 55(2): p. 1825-3997.

[23] Udodong, I., "Over 10 vehicles of the military were found on the corridor", 2015, December 10 Retrieved from https\://www.pulse.ng/news/lagos-state-traffic-management-authority-over-10-vehicles-of-thhe-military-were-found/9b8235d.

[24] SFMTA Municipal Transportation Agency, Church Street Lane Final Report 2013. Retrieved from 6-2-15 item 12 Church St. Rapid Pilot-Final Report.

[25] Dorn, L. et al., Development and validation of a self-report measure of bus driver behaviour. Ergonomics, 2010. 53(12): p. 1420-1433.

[26] Balogun, S. K., Shenge, N. A., and Oladipo, S. E., Psychological Factors influencing aggressive driving among commercial and private automobile drivers in Lagos metropolis. The social science journal, 2011. 49(2012): p. 83-89.

[27] Economic Intelligence Unit, The socio-economic costs of traffic congestion in Lagos. Ministry of Economic Planning & Budget, working paper series No. 2, 2013. Retrieved from http://www.sparc.nigeria.com/RC/files/1.1.16_Traffic_Lagos.pdf.