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## Predominant Causes of Road Traffic Accident among Commercial Vehicle Drivers in Ekiti State, Nigeria

Adebayo Lawrence OJO.

Nigerian Educational Research and Development Council, Sheda-Abuja, Nigeria

### **Abstract:**

*The study examined the predominant causes of road traffic accidents among commercial vehicle drivers in Ekiti state. Three hypotheses were tested based on the variables of drivers distraction, dangerous overtaking and over speeding in relation to road traffic accidents. Structured questionnaires were administered to 525 commercial vehicle drivers at motor parks in study area. Inferential statistics of linear regression was used to analyze data collected. The level of significance was set at 0.05 alpha level. The results revealed that drivers distraction F-ratio was 3.014,  $p < 0.05$ ; dangerous overtaking F-ratio was 1.854,  $P < 0.05$ ; and over speeding F-ratio was 2.349,  $P < 0.05$ . Drivers distraction was the most significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State. Based on these findings, it was recommended among others that the drivers tendency of using cell phones while driving should be stopped and face misdemeanor fines ranging from 50,000 to 100,000.*

**Keywords:** Accidents, Distraction, Overtaking, Over speeding

### **1. Introduction**

Road accidents have become a regular phenomenon. Everyday Nigerians die on the road and many are injured. In such circumstances, the role of medical institutions became important, as the first few minutes after the accident, termed the "Golden Hour" are very precious and crucial. Many lives could be saved and disabilities prevented by providing immediate treatment to accident victims. Among the accidents resulting from the development of air, land, sea and river transport, road accidents predominate both in respect of their frequency and seriousness and in terms of human and economic cost. Road transportation, with its economic and social benefits are very important activities in every society. Commercial drivers are anyone who drive vehicles to provide transportation services in exchange for money. Road accidents are unintentional or unforeseen event involving vehicle and or passenger on road that may result into death or injuries. World Health Report (2004) viewed that road traffic accidents kill at least 5,000 and injure 12,000 persons in Nigeria every year. Road traffic accidents are an important yet preventable cause of death and disability in Nigeria.

Most studies on public transportation has focused exclusively on both the vehicle and its associated cost (World Bank, 2005), affordability and level of service (Carruthers et al, 2005; Benmaamar, 2003) as well as on some other indices such as access, waiting and journey time. Similarly, studies on commercial transport in the country have focused on vehicles' characteristics, socio-economic, operation management as well as funding (Adeniji, 1987; Olusuyi, 2009; Adesanya and Adeniji, 1998 and Ogunsanya, 2004). Few studies have attempted to view the predominant causes of road traffic accidents among commercial vehicle drivers. This issue was examined in this paper. Ekiti State was surrounded by hills which make it difficult to have a straight roads, because of this it has bend and sharp corners, blind spot that leads to accidents by commercial vehicle drivers.

Distracted driver are quietly causing a staggering amount of serious car accidents. In fact, driver distractions are the leading causes of most auto accidents. Driver distraction is the diversion of attention away from activities critical for safe driving toward a competing activity (Regan, Lee and Young, 2009). Distraction has been identified as an emerging road safety issue in Towards Zero Western Australian's road safety for 2008-2020 (Road Safety Council, 2009). It is also being increasingly ranked by road safety authorities around the world as significant contributing factors to road traffic accidents (Regan, Lee and Young, 2009). There are four type of driver distraction: physical, visual, auditory and cognitive distraction (Regan, Lee and Young, 2003). A distracting activity involves one, or more, of these. The act of operating a hand-held mobile phone, for example, may involve all four types of distraction; (dialing) visual distraction; (looking at the display); auditory distraction (holding of conversation with the other person); and cognitive distraction (focusing on the topic of conversation) (Young, Regan and Hammer, 2003). There are evidence that young novice drivers and older drivers (i.e. 55 years and older) are particularly vulnerable to the effect of driver distraction (Regan, 2007). For young novice drivers, this is due to the fact that they have less have not yet automated many driving task and thus have less intentional capacity to devote to other tasks. Older drivers are more vulnerable to the effects of distraction because they have less attention to distribute between competing tasks, require more glances at mobile phone and other devices to road information, require more time to complete tasks (Synovate, 2010).

Dangerous overtaking responsible for about 45% of all crashes, careless overtaking and poor judge combine to cause road traffic accident (FRSC, 2008). Bad overtaking has been ranked the most annoying driver behavior by American Association members, so there is a clear need for more driver education on how to use passing lanes and overtake correctly. American Associations ranked bad overtaking, slow drivers and tailgating as the three most annoying driver behaviors in March 2006 survey. Dangerous overtaking is thought to increase accident risk (Mock, Amegashie and Dareth, 1999). It is however difficult to estimate how large the increase in risk on dangerous overtaking will give. Dangerous overtaking usually involves speeding, and of course driving in the lane of oncoming cars, both activities found to increase accidents risk. In-depth road traffic accident studies carried out by Swedish, Israeli and UK police force have estimated that dangerous overtaking is the most probable cause of 2-5% of all traffic accidents investigated by the police (Aderson, 1999; Israeli police, 2000; Broughton and Quimby, 1999; all cited in Zaidel, 2001). Over speeding in its simplest meaning is an act or state of moving swiftly, swiftness, velocity, rapidly; rate of motion. Speeding is defined as exceeding the posted limit or driving too fast under stipulated or normal condition. Over speeding is deemed to have occurred when an individual is traveling above the accepted legal speed limit on any city or urban road. It is an obligation by the law of any sovereign country, that is traffic authority (lead agency) whose their principal objective is to save lives and reduce related road traffic accidents and trauma have to signify and change in speed between roads. Abubakar (2012) viewed that over speeding is an important factor in one third of all fatal crashes on our roads. Over speeding has been researched to a deliberate and calculated behavior where the driver knows the risk but ignores the danger that might be involved. Some drivers have been used to the habit of over speeding due to effect of taking alcohol, drugs and other prohibited substances (Adewale, 2012). Over speeding has contributed to major fatal road accidents in developing countries as most of the roads are bad and unmarked or signed which also applicable in Ekiti State. The Road Safety Authority (RSA) of Nigeria asserts speeding travelling too fast for the prevailing conditions or above the posted speed limit (NSW Roads and Traffic Authority, 2008), is a factor in about 40% of road deaths (NSW Roads and Traffic Authority, 2008).

## 2. Research Design and Methodology

### 2.1. Hypotheses

Three null hypotheses were formulated and tested for this study.

- Drivers distraction will not be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State.
- Dangerous overtaking will not be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State.
- Over speeding will not be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State.

### 2.2. Study Population

The study population consisted of all commercial vehicle drivers in Ekiti State. Descriptive survey research design was employed in selecting respondents across the Local Government used for this study.

### 2.3. Sample and Sampling Technique

The sample for this study was 525 respondents selected from 6 (six) Local Government Area of Ekiti State. Proportionate sampling technique was used to select 50% (525) of commercial vehicle drivers from existing and functioning 1050 registered as commercial vehicle drivers with National Union of Road Transport Workers (NURTW) at motor parks in each Local Government selected for the study. Purposive sampling technique was used to select 2 (two) Local Government representing constituencies by virtue of central locations. Data were therefore collected in the following towns: Ado and Efon representing Ekiti Central; Gbonyin and Ikere representing Ekiti South; while Ikole and Moba representing Ekiti North. Stratified sampling technique was used to select 90 (ninety) respondents from Ado, Efon and Ikere while 85 (eighty five) respondents from Gbonyin, Moba and Ikole respectively.

### 2.4. Research Instrument

The instrument for this study was self developed questionnaire titled "Predominant causes of Road Traffic Accidents among Commercial Vehicle Drivers Questionnaire (PCRTACVDQ) in line with the variables under study.

### 2.5. Validity of the Instrument

To validate the research instrument, the draft of the questionnaire was made available for criticism by experts in the Nigerian Educational Research and Development Council, Abuja. Comments, suggestions and modifications from experts was studied carefully and explored for improving the quality of the instrument in relation to the stated hypothesis.

### 2.6. Reliability of the Instrument

The reliability of the instrument was determined through the test-retest method. The interval between the tests was two weeks, 10 (ten) commercial vehicle drivers who are not part of the sample of this study was selected from Ekiti west (Aramoko) Local Government Area of Ekiti State. Pearson Product Moment Correlation Co-efficient (PPMC) was used to determine the value (r) for the data.

### 2.7. Method of Data Collection

The instrument was administered personally with the help of four (4) self trained research assistants at motor parks in the study area. The purpose of the study was explained to the respondents. The researcher and assistants assisted the respondents in translating the difficult areas of the questionnaire which the respondents find too difficult to understand. The completed questionnaire was collected from the respondents immediately to minimize lost.

### 2.8. Method of Data Analysis

The completed questionnaires were collected, coded and analysed using inferential statistics of linear regression to test the hypotheses at 0.05 level of significance.

## 3: Result and Discussions

### 3.1. Hypothesis 1

Drivers distraction will not be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	10.017	6	2.876	3.014	.007 <sup>a</sup>
Residual	501.629	518	.954		
Total	511.646	524			

Table 1: Drivers distraction among commercial vehicle drivers.

Table 1 above shows the hypothesis 1 results on drivers distraction among commercial vehicle drivers. The F-ratio calculated was 3.014 while level of significance was 0.05, the null hypothesis 1 was rejected. Therefore drivers distraction will be a significant causes of road traffic accidents among commercial vehicle drivers in Ekiti State. This statement was in line with the opinion of FRSC (2008) that passengers contribute to road traffic accidents by engaging the driver in discussions and arguments, shows the driver interesting things inside and outside of the vehicle. This is an agreement with Atubi, (2012) that the act of operating a hand-held mobile phone, involve physical, visual, auditory and cognitive distraction of the drivers lead to road traffic accidents. Also, Road Safety Council, (2009) distraction played a role in 32% of all road crash deaths and serious injuries supported by Banyikwa, (2005); Rune, (2006); and Vasconcellos, (2001) driver's ability to focus on the road come in a wide range of forms, from visual distractions when using electronic devices, texting on communication devices is often recognized as the riskiest behavior, seeking for prefer music or attending to personal grooming can significantly divert a drivers attention.

### 3.2. Hypothesis 2

Dangerous overtaking will not be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	10.759	6	1.793	1.854	.87 <sup>a</sup>
Residual	500.886	518	.967		
Total	511.646	524			

Table 2: Dangerous overtaking among commercial vehicle drivers.

Table 2 above shows the hypothesis 2 results on dangerous overtaking among commercial vehicle drivers. The F-ratio calculated was 1.854 while level of significance was 0.05. This indicates that F-ratio was higher than level of significance, therefore, the hypothesis that dangerous overtaking will not be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State was rejected. Hence, the researcher concluded that dangerous overtaking will be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State. Allinson-Madueke (2008) reported that overtake dangerously at sharp bends create double lanes especially where there is a frequent traffic hold up that always lead to road traffic accidents. Freeman, Geshen, and King, (1990) observed that some drivers also tend to be in hurry, especially when they carry passengers from motor parks, they overtake on top of hills and head-on collisions and eventually result to death of innocent passengers. FRSC (2008) reviewed that most drivers overtake dangerously at pedestrian crossing, at bus station, road junction, a corner or bend, a narrow bridge and where the road narrows, the crest of a hill lead to road traffic accidents.

### 3.3. Hypothesis 3

Over speeding will not be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State.

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	13.805	6	2.301	2.394	.27 <sup>a</sup>
Residual	497.841	518	.961		
Total	511.646	524			

Table 3: Over speeding among commercial vehicle drivers.

Table 3 above shows the hypothesis 3 results on over speeding among commercial vehicle drivers. The F-ratio calculated was 2.394 while level of significance was 0.05. This indicates that F-ratio was higher than level of significance, therefore, the hypothesis that over speeding will not be a significance cause of road traffic accidents among commercial vehicle drivers in Ekiti State was rejected. Therefore, the researcher concluded that over speeding will be a significant cause of road traffic accidents among commercial vehicle drivers in Ekiti State. This statement is in line with the opinion of Okafor (2012) that over speeding is a very deadly weapon of road accident has sent and its still sending people to early grave, a lot of careless drivers over speed for no just good reasons, either to meet up with time or beat the next driver or to show how he skilled he can drive but at the end of the day he will not be alive to continue the story and it works together with reckless driving, when the driver is careless and does not care and the dangerous consequences of this kind of driving and its common with drivers who embark on long journeys.

#### 4. Conclusion

Road Traffic Accidents (RTAs) are increasing with rapid pace and presently these are one of the leading causes of death in developing countries. The recognition of RTAs as a crisis in Nigeria inspired the establishment of the Federal Road Safety Commission (FRSC). Based in the findings of this study, it was concluded that drivers distraction, dangerous overtaking and over speeding were predominant causes of road traffic accidents among commercial vehicle drivers in Ekiti State. It is also established that road traffic accidents can be ameliorated by embarking on various strategies such as enhanced transport coordination, road capacity expansion, improved road infrastructures, drivers enlightenment and application of Intelligent Transport System.

#### 5. Recommendations

- The drivers tendency of using cell phones while driving should be stopped and face misdemeanor fines ranging from 50,000 to 100,000.
- There is need of establishing a permanent control unit (vehicle examination unit) for regular vehicle inspection of all vehicles at least once a year and certificate of approval should be provided to the qualified vehicles.
- The government under responsible ministries should make sure road signs are repaired and replaced every time when needed especially in small towns and in high population areas.
- All drivers of heavy goods vehicle and public service vehicles should participate on refresher driver training courses so that the inevitable bad habits acquired can be reduced at a relatively early stage.
- All drivers should attend regular mandatory driver education and training courses, annual driver examination to upgrade their driving skills.
- They should always obey the advocated speed limits and preventive techniques instituted by the Federal Road Safety Corps (FRSC) against car accident.

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