



## Frequent Falling of Containers Trucks and Safety of Motorist in Lagos

*Sule Abiodun*

*Research Scholar, Niomr Research Lagos, Nigeria*

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### Abstract

The road transport sector encompasses the commercial use of many different vehicles including lorries, light vans, taxis, buses, private cars, trucks being driven for work purposes, company cars, construction and agricultural machinery, emergency service vehicles, and motorcycles. Work pressure in the transport sector is often a result of 'just-in-time' management: goods have to be delivered at the point in the production process when the customer needs them. Motorist safety is an important issue in the road transport sector. In Nigeria and other African countries in general, work-related motor vehicle crashes are estimated to cause between one-quarter to over one-third of all work-related deaths. The following features of heavy good vehicles increased the accident risk of trucks in comparison with passenger cars. Container trucks can contribute to situations arising that can develop into accidents situations that would not arise with passenger cars; the reduced braking and evasive abilities of container trucks can contribute to situations more often developing into collisions, and the collisions occur at higher speed; the size and weight of container trucks may mean that collisions result in more serious personal injuries than similar collisions involving passenger cars. Driving mistakes made by container truck drivers may be more serious because of the weight, size, shape, manoeuvring abilities, braking abilities, etc., of the vehicle. Transport drivers which comprise motorist and commercial bus drivers are not only at risk from road accidents. It has become common today in Nigeria particularly in Lagos that there is frequent falling of container trucks which affect the safety of both private cars and commercial vehicles in the state. Strategies were provided to mitigate the frequent falling of container trucks on Lagos road and it was recommended among others that the Federal road safety corps should work with the Nigeria port authority in conducting special training for container truck drivers on the use of road signs.

**Keywords:** Containers, Truck, Ports, Motorist, Drivers, Safety

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### 1 Introduction

The road transport sector encompasses the commercial use of many different vehicles including lorries, light vans, taxis, buses, private cars, trucks being driven for work purposes, company cars, construction and agricultural machinery, emergency service vehicles, and motorcycles. The sector is dominated by small companies and male workers, although female employment is increasing, especially in certain areas such as bus drivers like the BRT buses in Lagos.

The road transport sector is a highly competitive one. In order to maintain their market share, companies have to work more efficiently, provide higher quality services, and offer additional services than their rivals (European Foundation for the Improvement of Living and Working Conditions, 2004). Work pressure in the transport sector is often a result of 'just-in-time' management: goods have to be delivered at the point in the production process when the customer needs them (European Agency for Safety and Health at Work (EU-OSHA), 2010). Motorist safety is an important issue in the road transport sector. In Nigeria and other African countries in general, work-related motor vehicle crashes are estimated to cause between one-quarter to over one-third of all work-related deaths (ERSO, 2007). According to Vanguard's (2021) report on the analysis of road traffic accidents, the following features of heavy good vehicles increased the accident risk of trucks in comparison with passenger cars. Container trucks can contribute to situations arising that can develop into accidents situations that would not arise with passenger cars; the reduced braking and evasive abilities of container trucks can contribute to situations more often developing into collisions, and the collisions occur at higher speed; the size and weight of container trucks may mean that collisions result in more serious personal injuries than similar collisions involving passenger cars. Driving mistakes made by container truck drivers may be more serious because of the weight, size,

shape, manoeuvring abilities, braking abilities, etc., of the vehicle. Transport drivers which comprise motorist and commercial bus drivers are not only at risk from road accidents. It has become common today in Nigeria particularly in Lagos that there is frequent falling of container trucks which affect the safety of both private cars and commercial vehicles in the state. This is evident in (Premiumtimesng, 2020; Vanguardngr, 2011, 2021) report of some of the frequent falling of trucks on Lagos road without adequate measures put in place to mitigate it.

Therefore, this paper looks at the evidence of the falling of trucks on Lagos road. Causes of container falling trucks and safety measures to be implemented to circumvent disastrous impact on the life of motorists and strategies to be used to mitigate the incessant falling of container trucks on Lagos road metropolis.

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## 2.1 Evident of Falling of Container Trucks on Lagos Metropolis

It has been well established that there is proof of container trucks falling on Lagos road. According to Guardianng (2021), it was reported that motorists and commuters in Lagos lament the incessant falling of container trucks which killed 4 people. The deaths occurred when unlatched containers fell on vehicles in two different locations. The presence of these heavy-duty container trucks has continued to elicit fear in road users, due to the recklessness of some of the drivers and the poorly secured containers, which usually fall off at the slightest opportunity, thereby sending victims to an untimely death. Another report by Premiumtimesng (2020), stated that an empty 40 feet container claimed the lives of people in the Ijesha area of Lagos. It was revealed that a truck loaded with an empty 40 feet container that had brake failures had rammed into a stationary commercial truck and fell. Another report by Vanguardngr (2021), stated how a 40 feet container fell on a stationary car and a tricycle. The accident occurred due to the recklessness on the part of the truck driver who lost control of the vehicle. It was also reported that another container truck fell on a car that wasn't occupied. How it happened was unknown.

The incessant falling of container trucks on Lagos road has been happening for years without any proper measures to contain it. The Lagos state government during the administration of Babajide Sanwo-Olu banned the movement of all container trucks from plying Lagos State road during the day. They were restricted to movement at night but the falling of container trucks remains persistent. There have been reported issues of some of these container truck drivers been unreliable and sometimes drive under the influence of alcohol and hard drugs, some under fatigues and others aggressive, with most of them popularly referred to as 'agents of death' giving little or no consideration to the safety of motorists in the state.

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## 3.1 Causes of Frequent Falling of Containers Truck

### 3.1.1 Overloaded, Unbalanced Load and Inadequate Cargo Securing

It has been estimated that up to 25% of accidents involving container trucks are caused by inadequate cargo securing. In Germany, about 2,300 accidents occur involving heavy good container vehicles which is a result of improper or insufficient cargo securing (German road safety council, 2008). A study carried out by KVR (2005) in Austria found out that light lorries in particular are involved in accidents due to improper cargo securing. According to an analysis by KVR (2005), 40% of all heavy container trucks had insufficient, improper or no cargo securing. And about 70% of the professional drivers had never been trained in cargo safety (KVR, 2008). Rules on cargo securing exist in several many European countries but often differ in content and scope. This can't be spoken about in most African countries especially Nigeria where rules are implemented but are not being followed. If cargo is not adequately secured, it can be a danger to the drivers (both private cars and commercial vehicles). The cargo can fall off the truck and form an obstacle that in turn may hurt or kill the driver or other road users. The cargo may even fall directly onto another vehicle. During strong braking or a crash, the risk of cargo falling off the vehicle is increased. In addition, the steering of a vehicle can be affected by how the cargo is balanced and/or secured, and this can lead to difficulties in controlling the vehicle (European Commission, 2006). Overloaded cargo, or cargo that is not loaded properly, can cause serious traffic accidents. The balance point (centre of gravity) of overloaded vehicles moves to a bad position: too much weight can cause top-heaviness that may cause the truck to overturn when negotiating curves on the road.

#### Advisable preventive measures:

- Training and instruction for drivers about the safe loading of cargo on the truck.
- Sensitizing drivers of light lorries or small vans to load risks and hazards.
- Training and instruction of drivers and workers who load the truck.
- Checking of cargo by specially trained workers before starting the journey.
- Follow load distribution plan and safe tie-down of cargo.
- Provide load distribution plans for Container truck

### 3.1.2 Dangerous Substance

Truck drivers may be required to carry goods that pose an additional hazard to the driver. Dangerous substances carried in container lorries pose different risks. On one hand, these risks may arise from handling the substance (e.g. health effects, or explosions); in addition, substances carried may exacerbate the effects of a 'normal' vehicle crash (OVV, 2006).

According to the study carried out by (OVV, 2006), he noted that collisions and fires involving trucks carrying containers containing dangerous substances occur fairly regularly, although his research shows that tankers carrying flammable goods have a 70-80% lower risk of crashes than container trucks in general. Factors may include more stringent training of container drivers of tankers carrying flammable goods, stricter standards for vehicles, and differences in the road and traffic environment in which tankers carrying flammable goods and other container driverstravel (ERSO, 2006). Nevertheless, the effects of this type of collision can be very dramatic and for that reason, it is advisable to implement appropriate policy action (OVV, 2006).

**Advisable preventive measures:**

- Implementation of time frames during which dangerous substances can be transported.
- Better protection of the cargo by use of different materials or different locations on the truck.
- Selection of appropriate route.
- In addition, issues may include:
  - Measures to promote safer driving, especially concerning road works
  - Checking the signing and traffic management near road works

### 3.1.3 Road Conditions/ Weather Conditions

#### 3.1.3.1 Road Conditions

In many countries, mountainous terrain poses an additional challenge for professional drivers, particularly on the downhill when container trucks and lorries gain momentum and may be difficult to control. A major concern here is overheating the brakes through continual use. Preventing this situation requires drivers and companies to plan routes wisely (e.g. using lighter vehicles when appropriate) and drivers to use appropriate techniques (e.g. engine braking and low maximum speed) (Office of Transport Safety Investigations (OTSI), 2006). The potential consequences of hilly terrain for safety are illustrated in the accident example included below. According to the study by IRU(2007), 5% of accidents are related to road conditions, but the road type has also an influence. Heavy container truck drivers are more likely to be involved in accidents on highways than other drivers (bast, 2004). Different research shows that there is a connection between traffic volumes and accident occurrence: the increase of traffic on the road increases the likelihood of road accidents (Pöppel-Decker et al. 2003; Pfundt, 2001). More traffic leads to more congestion and hence the number of accidents is far higher (Blankennagel, 2006). Accidents involving heavy load vehicles due to congestion accounted for 20% of the total; rear-end collisions are predominant (bast, 2004). Roadworks on major highways were identified as accident hazards for heavy container trucks(bast, 2004).

**Advisable preventive measures:**

- Management of safety risk (route selection and container truck familiarisation for drivers).
- Driver training for professional drivers.
- Selection of appropriate routes and roads.
- Regular container truck inspections and maintenance of trucks.

#### 3.1.3.2 Weather conditions

The risk of accidents increases when container trucks travel under hazardous conditions (European Foundation for the Improvement of Living and Working Conditions, 2004). Rain, sleet can cause slippery roads. Heavy rain can limit visibility for the drivers. Several factors are known to affect visibility for drivers: especially the intensity of rain, but also droplet size, wiper speed, ambient light and splash and spray from other vehicles. According to a Canadian survey, weather conditions have an influence in the following areas (taken from Andrey et al., 2001):

- i. Collision risk usually increases from 50 to 100% during precipitation.
- ii. Snowfall has a greater effect than rainfall on collision occurrence, but snowfall-related accidents tend to be less serious than others.
- iii. Risk varies according to both the type and intensity of the precipitation. Risks appear to be greatest for freezing rain and the first snowfalls of the season.
- iv. Elevated risk during rainfall appears to be related to visibility since collision rates quickly return to near-normal after the rain has stopped, even if roads continue to be wet. Snowfall-related risk often remains elevated for an extended period, suggesting that frictional effects dominate.
- v. High winds are associated with a small proportion of crashes but generally increase the risk of a traffic collision, whether acting alone or in combination with precipitation.
- vi. Few studies have considered the effects of sunlight glare, heat stress, and barometric pressure on collision risk, and the evidence is too sparse to draw any definitive conclusions. Few studies consider the interaction between inclement weather and other risk factors, but there is some evidence that weather effects are particularly acute at night and on roadways.

Driving in bad weather conditions requires careful attention and the vehicles have to be properly equipped to drive in those conditions. Special training and instruction of drivers are also crucial. Work pressure due to 'just-in-time' management increases the risk of dangerous manoeuvres despite bad conditions, and thus increases the risk of accidents.

**Advisable preventive measures:**

- Regular vehicle inspections and maintenance of container trucks.
- Planning journeys adapted to weather and road conditions.
- Special training and instruction for drivers.

### 3.1.4 Vehicle condition

Defective truck parts such as tyres, brakes, and lights can lead to tragic accidents by affecting the driver's ability to maintain control of his vehicle. Safety products designed for vehicles, such as warning lights, that don't work properly, may also cause serious accidents. Inspection and maintenance of tyres, lights, and braking systems are crucial to ensure the safety of drivers and other road users. According to a study by the Department for Transport in the UK (2005) accidents resulting from a vehicle account for only 1.5% of total accidents. The most common defect was found with braking systems. The German Institute for accident research identified failures in the braking system as the most common technical defect in heavy goods vehicles. This is often due to insufficient maintenance (German Institute for accident research, 2008). Brake failure can lead to very severe accidents. Defective tyres can also lead to driver loss of control and severe accidents. Reasons for defective tyres may be insufficient tyre pressure (lack of maintenance), load weights exceeding the tyre specifications, bad installation, bad fabrication of tyres (German Institute for accident research, 2008).

#### Advisable preventive measures:

- Regular vehicle inspections
- Maintenance of vehicles.
- Special training and instruction for drivers.
- Selecting appropriate routes

### 3.1.5 Loss of Control

Research carried out in Sweden (Kharazzi & Thomsen, 2008) identified three critical manoeuvres that led to the loss of control of heavy trucks and subsequent accidents. One of the main causes of loss of control is driving around a bend, followed by avoidance manoeuvres, and manoeuvres where drivers try to regain get back on the road after sliding off onto the verge. According to Kharazzi and Thomsen loss of control was associated with almost a fifth of trucks involved in accidents. Most accidents caused by a loss of control (84%) involved only a single vehicle.

#### Advisable preventive measures:

- Regular vehicle inspections and maintenance of vehicles.
- Special training and instruction for drivers.
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## 4.1 Strategies to Mitigate Frequent Falling of Container Trucks

In order to ensure the safety of motorists and commuters in Lagos state due to the incessant falling of container trucks, the following strategies are to be employed by the federal government of Nigeria.

1. Since the Federal government of Nigeria has been vested with the power to protect the lives and properties of the citizens of the country, the government should chasten the management of Nigeria port authority to undergo thorough scrutinization of every container truck leaving the port.

Some of this scrutinization includes:

- Regular container truck inspections
  - Maintenance of container truck
2. Special training and instruction should be given to container truck drivers.
  3. Visual activity tests should be done before obtaining a driver's license for trucks container drivers.
  4. The federal government of Nigeria should launch an agency to arrest and prosecute container truck drivers of articulated trucks with unlatched containers.
  5. With the implementation of all container truck drivers playing Lagos road at night been observed, any violator should be severely punished

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## 5.1 Conclusion

Incessant and frequent falling of container trucks remains high which unfortunately causes road accidents and serious casualty on the road. The examples covered in this research demonstrate the variety of factors involved in causing road accidents involving container trucks. The cases of falling container trucks justify the fact that it causes problems to the well-being of commuters and motorists in Lagos state. Since the container truck accident causes lots of casualties, the government must take drastic measures in containing the problem and find a lasting solution to the container truck falling menace. The strategies provided in this research will go a long way in reducing falling container trucks on the road and will improve the safety of life and properties. This underlines the continuing need for the various actors involved in road safety to work together to gain a clear understanding of the issues, set objectives, and determine coordinated strategies for action.

The frequent falling of container trucks is a menace that must be stopped. Only the government can end it if they listen to the plight of commuters and motorists and consider their safety which is the number one priority of the Federal Government of Nigeria.

## 5.2 Recommendation

The following are recommended:

1. Government should fix all major roads from the port down to the federal highway
2. Lagos state Government should further restrict container truck drivers to driving at midnight.
3. All stakeholders in Nigeria port authority need to be consulted on problem areas and solutions to ensure that driving risk management is likely to be effective among the container truck drivers.
4. Federal road safety corps should work with Nigeria port authority in conducting special training for container truck drivers on the use of roads signs.
5. The federal government of Nigeria should launch an agency to arrest and prosecute container truck drivers of articulated trucks with unlatched containers.

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