

Original research Article

**ASSESSMENT OF TRUCK DRIVERS' LITERACY AND PERFORMANCE
EVALUATION IN HAULAGE OPERATIONS IN NIGERIA**

Abstract

Education is important in all works of life. For truck drivers, the need to understand road signs, signals, documentation procedures, negotiations and readings of certain descriptions on equipment like fire-extinguisher cannot be carried out properly without certain level of education. Data collected at randomly selected Trailer Parks in Nigeria were analysed using Chi-Square and PPMC analytical techniques. Results revealed that, calculated value of 10.7643 is less than tabulated value 15.507; therefore, null hypothesis was accepted. i.e (Most Truck drivers are not educated). Also, drivers with higher academic qualification has higher correlation value of $r = 0.555$ at $p < 0.05$ level of significance which indicated higher level of performance. Again, lower academic qualification has a positive correlation with performance with $r = 0.331$ at $p < 0.05$. In order words, drivers with higher academic qualification has $R^2 = 0.308$ which is about 31% in relation to their driving performance. Lower academic qualified drivers accounted for approximately 11% of drivers' performance. It must be pointed out that, training breeds experience, and experience leads to better performance.

Keywords: *Challenges, Literacy, Truck drivers, Performance and Haulage operations.*

1.0 Introduction

Roads by far handle the largest freight transport share in Nigeria. The highways in the country generally account for about 70% of the movement of goods and persons in the country (Ubogu, 2011). Transporting goods from one place to another to ensure there is a balance from surplus to deficit areas is the bedrock of sustainable economy. Oyedijo (1984) did observed that it is a common view that the problems in the distribution of goods contribute significantly to the rate of inflation, high selling price and other socio economic hardships. This cannot be achieved without drivers that will ensure these deliveries. The Nigerian haulage and logistics industry is seriously embattled with challenges relating to high level of uneducated truck and trailer drivers, lack of proper maintenance, inefficiency in costing and accounting procedures and fleet management operational procedures. Tanker and trailer drivers faced challenges of unwarranted tax demands at local and state government levels at different places throughout the country. It has been argued, for instance, that trucker by their nature indulge in long distance driving and so experience sleepless nights that are fundamental for the explanations of risks and subsequent accidents (Savage, 1989). Loeb

and Clark (2007) commenting on accidents of truck drivers have very well acknowledged that, indeed, the miles driven on roadways, alcohol consumption by truck drivers, and age of truck drivers have been shown to be positively linked to accidents. From series of research in Nigeria (Oni, 2000; Oni and Okanlawon, 2006; Ubogu 2005; World bank, 2007; Ubogu et al 2011) suggested that poor roads, narrow bridges, menace of armed robbery on highways, harassment by security officials, touting, delays occasioned by traffic congestion, outright non-delivery of consignments consequent upon accidents, shortage or scarcity of fuel, incessant vehicle breakdown and traffic hold-up in the city centers are some of the operational difficulties confronting goods haulage in the country. However, experiences of drivers differ from one another depending on the policy of the company or organization they work with. The main freight-related issues affecting the region mentioned in the various freight reports are a shortage of drivers, rising wage, fuel and insurance costs, and environmental restrictions and regulations which increase the financial burdens on freight companies. This is because the economic regulation of rates, entry and standard of practice influences the operating practices in the industry (Harper and Johnson, 1987). Other than the type of vehicle used, the driver is the single biggest factor affecting fuel costs and emissions. Speeding, harsh acceleration, harsh braking and idling are all drivers' behaviours that increase fuel consumption and can have an impact on NOx emissions. Each of these behaviours is also likely to increase the risk of accidents and vehicle wear and tear, including increased tyre and brake wear. Anything that modifies poor driver behaviour is likely to reap significant benefits in terms of reduced fuel costs, accidents and insurance premiums, and reduced vehicle wear and tear. The major concern of most truck drivers in Nigeria is remuneration and they tend to move quickly from one company to another most especially if the wages or salary is higher. Regrettably however, no matter how they are well paid, some of them have certain attitudes that can not make them stay long in a particular company. Drivers sell goods on the road, the lie about the condition of vehicle and make unscrupulous arrangements with road side mechanics when vehicle develops fault. On the part of companies, drivers are seen as worthless being and most paid stipend.

In recent times, there has been a great deal of interest in the use of Global Positioning Systems (GPS) for freight demand modeling. Among other benefits, these data are: very accurate, increasingly common as the number of companies using GPS devices is increasing, and free as they are the byproduct of vehicle tracking and navigation systems. Meanwhile, a fundamental

limitation that has not been overcome is that GPS cannot collect key data that traditional surveys provide (e.g., commodity type, shipment size, trip purpose). To this end, this paper was set out to address the issue of truck driver's literacy and observe the performance of drivers through their academic qualifications.

2.0 Review of Literature

In the road transport sector, as with any other, it is important to pay attention to working conditions in order to ensure a skilled and motivated workforce. Certain characteristics of the sector make it more difficult to practice risk management than in other sectors. But by taking account of how the sector operates in practice, and the characteristics of drivers themselves and the way they work, risks can be successfully managed. Drivers work independently and away from a fixed base. They may be self-employed and often have long experience as drivers. This means that it is not always easy to communicate with them and consult and involve them, and they are not always open to change. Employers of drivers can find it difficult to ensure the safety of their employees whilst they are working at customer premises. Kaneko and Nojiri (2008) reported that in the face of challenging global competition, business firms are concentrating more on the needs of customers and seeking ways to reduce costs, improve quality and meet the ever-rising expectation of their customers. To these ends, many of them have identified Just-in-Time (JIT) management approach as an area to build cost and service advantages (Chase, *et al.*, 2006). And the competitive nature of the business makes haulage firms reluctant to make demands of their customers, who may wrongly assume that driver safety is not their responsibility.

According to (European Agency for Safety and Health at Work, 2011), road haulage drivers are regularly exposed not only to the dangers of the road, but also to the risks associated with activities such as loading and unloading. These activities may involve manual handling or working with mechanized lifting equipment, working at heights and exposure to dangerous substances. It is also often necessary for drivers to work at customers' premises and in unfamiliar environments, which may have hidden hazards. Parking is another area of challenge for truck drivers in Nigeria. Most truck drivers park along the major highways and constitute problem to other vehicles and in most cases their dangerous post results in avoidable accidents.

Speed limit is one of the most important criteria to achieve driver's safety. A researcher found out that keeping to 80km/h speed reduces fuel consumption by about 10% depending on road

conditions, driver and terrain. The reduction in speed positively influences the drivers' health and safety; drivers were less stressed because they drove at a constant speed and did not need to think about overtaking other vehicles (Copsey, 2011).In order to have standard safety features available on new mass-produced trucks, the followings are included according to (EU-OSHA, 2011):The concept truck features include:

- Reversing camera, parking sensors and audible warning
- Air bags, seatbelt pre-tensioners and seatbelt wearing compliance system
- Warning system to alert driver to faulty bulbs
- Remote tyrepressure monitor / run flat tyres
- Automatic maximum height indicator and bridge strike prevention system
- Onboard weighing system
- Truck-based satellite navigation
- Blind spot solutions – camera
- ASTiD driver fatigue system
- Trailer tracking system
- Ground-level coupling, additional lighting and coupling sensors to ensure correct engagement
- Improved access/egress – anti-slip coatings, improved handrails, steps to rear trailer
- Powered rear shutter and landing legs
- Adaptive cruise control
- Ice warning device
- Additional lighting and reflective materials
- Additional spring brake and auto park brake
- Spray suppression
- All large goods vehicles have a blind spot alongside the cab on their passenger side, which makes it difficult to see other vehicles especially when changing traffic lanes. This is a particular

problem for Left Hand Drive (LHD) Large Goods Vehicle (LGVs) operating in the UK, as their largest blind spot is along the side where other vehicles overtake. These blind spots are believed to be responsible for a significant number of ‘side-swipe’ incidents (collisions with other vehicles travelling alongside when changing lanes).

3.0 Materials and Methods

There are over 160 transport and haulage companies in Nigeria (Alfred, 2012). This study was conducted with a structured questionnaire with the understanding to simplify the languages to enable all respondents participate in the research. Therefore, the questionnaires were structured to elicit the questions in the three major languages in Nigeria. The researchers selected Trailer Parks along OPIC-Ogere Remo, Ogun State; Trailer Park at Akinyele Local Government, Ibadan along the Northern part of Nigeria and Trailer Park along the Eastern part of the country.

Table 3.1: Population of drivers among selected haulage companies

Companies	Area	Population
Trailer park (OPIC-Ogere)	Ogun	Drivers 93
Trailer park (Akinyele, LG)	Ibadan	Drivers 88
Trailer Park (Easter part)	Along Benin Highway	Drivers 213

Source: Field survey (2015)

Sampling Method and Sampling Size

The sample size for the study was determined by the Traffic Appraisal Manual London (1981) and Okoko (2006)

$$n = \frac{P(1-P)N^3}{(E/1.96)^2 (N-1) + P(1-P)N^2}$$

Where,

n = Sample size;

N = Population size;

158 P= the proportion of households with the attributes of interest.

159 and E = Level of Significance (at 5%).

160 $44+8+1+41+10+2+51+17+4+20 = 198$

161 The total number of estimated three logistics and haulage companies =198

162 Therefore for the population of 160 logistics companies it can be estimated to be 198
163 $\times 160/3 = 10560$

164 N=10560

165 P=198

166 E=0.05

167 Therefore $n = 198 (1-198) 10560^3 / (0.05/1.96)^2 (10560-1) + 198(1-198)10560^2$

168 Sample size = 152

169 4.0 Results and Discussion

170 Table 4.1: Drivers sampled

Companies	Area	Population
Trailer park (OPIC-Ogere)	Ogun	Drivers 44
Trailer park (Akinyele, LG)	Ibadan	Drivers 41
Trailer Park (Easter part)	Benin	Drivers 51

171 Source: Output result based on field survey (2015)

172 The average number of driver expected $= 38+2+29+4+1+44+6+1 = 125/5 = 25$

173 Using Chi-Square;

174
$$X^2 = \sum (O - e)^2 / e$$

175 Where X2= Chi-Square

176 O= Observed frequency

177 e =expected frequency

178 Table 4.2: Qualification of drivers of the selected companies

	SSCE	OND	NCE	HND	Bsc	Total
Trailer park (OPIC-Ogere)	38	2	0	0	0	40
Trailer park (Akinyele,LG)	29	4	1	0	0	34
Trailer Park (Easter part)	44	6	1	0	0	51
Total	111	12	2	0	0	125

179 Source: Result output based on field survey (2015)

180 To determine the expected frequencies for each company using Chi-Square

181 Expected= Row Total X Column Total/ Grand Total

182 Table 4.3: Chi-Square Analysis

	Below SSCE &SSCE holders	OND	NCE	HND	Bsc
Trailer park (OPIC-Ogere)	$(40 \times 111) / 125$ 35.52	$(40 \times 12) / 125$ 3.84	$(40 \times 2) / 125$ 0.64	$(40 \times 0) / 125$ 0	$(40 \times 0) / 125$ 0
Trailer park (Akinyele,LG)	$(34 \times 111) / 125$ 30.192	$(34 \times 12) / 125$ 3.264	$(34 \times 2) / 125$ 0.544	$(34 \times 0) / 125$ 0	$(34 \times 0) / 125$ 0
Trailer Park (Easter part)	$(51 \times 111) / 125$ 45.288	$(51 \times 12) / 125$ 4.896	$(51 \times 2) / 125$ 0.816	$(51 \times 0) / 125$ 0	$(51 \times 0) / 125$ 0

183 Source: Result output based on field survey (2015)

$$X^2 = \sum \sum (O - e)^2 / e$$

$$(38-35.52)^2 + (2-3.84)^2 + (0-0.64)^2 + (29-30.192)^2 + (4-3.264)^2 + (1-0.544)^2 + (44-45.288)^2 + (6-4.896)^2 + (1-0.816)^2$$

$$(2.48)^2 + (-1.84)^2 + (-0.64)^2 + (0.736)^2 + (0.736)^2 + (0.456)^2 + (-1.288)^2 + (1.104)^2 + (0.184)^2$$

$$6.15 + 0.41 + 0.542 + 0.542 + 0.208 + 1.659 + 1.219 + 0.0339 = 10.7643$$

$$\text{The degree of freedom} = (3-1)(5-1) = 2 \times 4 = 8$$

The tabulated value is 15.507 at $p < 0.05$. Since the tabulated value is lower than the calculated value, then we accept the null hypothesis. It therefore means that, majority of Nigerian truck and trailer drivers are illiterate or semi-literate. Somuyiwa (2015) opined that; when a set of people in society are well informed about safety rules and regulations; and others know little or nothing about safety rules, the resultant effects will still be un-safer roads. Unfortunately, many drivers on our roads cannot decipher road markings, road signs and signals not to talk of reading Highway codes, traffic acts and traffic regulations. Perhaps this can be attributed to level of illiteracy especially among Nigerian commercial drivers.

In order to assess the performance of the truck drivers based on their academic qualification, PPMC analytical technique was used. Higher academic qualification starts from drivers with more than Secondary school certificate holders (Ordinary National Diploma OND, National Certificate of Education NCE, Higher National Diploma HND, First Degree Bsc and above) while Lower academic qualification is between Primary school leaving certificate holders and Senior Secondary School Certificate holders (SSCE). The result from the analysis is as shown below:

Table 4.4: Correlation Analysis

Correlations

		Drivers	Drivers with higher academic qualification	Drivers with lower academic qualification
Drivers' performance	Pearson Correlation	1	.555*	.331
	Sig. (1-tailed)		.000	.048
	N	152	152	152
Drivers with higher qualification	Pearson Correlation	.555*	1	.107
	Sig. (1-tailed)	.000		.040
	N	152	152	152
Drivers with lower qualification	Pearson Correlation	.331	.107	1
	Sig. (1-tailed)	.048	.040	
	N	152	152	152

*. Correlation is significant at the 0.05 level (1-tailed).

Source: Output results based on field survey (2015)

Table 4.4 provides a matrix of the correlation coefficients for drivers' performance, drivers' experience and drivers' training. Underneath each correlation coefficient both the significance value of the correlation and the sample size (N) were stated. Each variable is perfectly correlated with itself and so $r=1$ along diagonal table. Driver's performance is positively correlated with driver's higher academic qualification with Pearson correlation coefficient of $r=0.555$ at significant value $p<0.05$. The result also indicated that, driver's performance is positively related with driver's lower academic qualification with coefficient value $r=0.331$ at $p<0.05$. Finally, drivers with higher academic qualification are correlated with drivers with lower academic qualification with correlation value of 0.107. In order words, drivers with higher qualification has $R^2=0.308$ which is about 31% in relation to truck drivers' performance. Lower qualification accounted for approximately 11% of drivers' performance. However, it must be pointed out that, training breeds experience, and experience lead to better performance. Most importantly, the better performance may not only be attributed to educational qualification of the driver but in

negotiation, writing and communication that may be demanded and require driver's level of education while on a trip which perhaps may be difficult if level of education is otherwise. Again, ability to read instructions, road signs and signals, traffic rules and regulations are the areas where education seems to enhance the operational capabilities of truck drivers.

5.0 Summary, Conclusion and Recommendations

5.1 Summary

Most companies of course employ drivers with experience, but unfortunately these drivers do not stay long when they get better offer. Most of the truck drivers learn driving as a motor boy following their boss on routes before they become truck drivers which is good. Unfortunately because of how society and educated employers perceive the job, no literate person will want to work as a truck driver. Because of this, drivers need to be intimately involved in solutions – solutions need to be developed by drivers for drivers using participatory methods, in order to use their experience and gain their acceptance. It is also crucial to allow sufficient time to discuss, plan, trial and introduce changes. The experience of drivers can also be harnessed by using them as advocates, trainers and mentors. The usual practice of recruitment is that a motor-boy will eventually graduated to becoming a truck driver. As good as this process is, the processes involved and the procedure lacks proper educational requirements and fundamental academic prerequisites.

5.2 Conclusion

This research concluded that; the haulage system in Nigeria lacks adequate competent drivers and driving is seen as a job to be done by school “drop outs”. The incentives and remunerations of drivers despite the challenges they are facing like securing the vehicles even when the environment is not conducive, protecting the goods and their own life, the inability to see their family, and the compensation for all these sacrifices are meager salaries. This perhaps does not encourage the elite to take appointments in this direction.

5.3 Recommendations

The researchers recommend that, there should be a truck and trailer driving school and the policies that will enhance safety at work. Similarly, the wages or salary of drivers should be reviewed and possibly the government should introduce policies for the employers of labour by initiating a concepts that will favor both the practitioners and their drivers. Due to the number of illiterate drivers on our roads, traffic laws manuals should be printed in all languages we have in Nigeria. Although, safety clubs have been established in Nigerian schools, there is need to incorporate safety education into the curriculum just like other subjects like Mathematics and English Language (Somuyiwa, 2015). There is also need for database or an account that will showcase the historical records of all truck drivers where employers can identify who they wish to employ.

Road Safety Authority (2006) provided the benefits derived from using well trained and educated drivers as follows:

- Drive more safely than a driver who has not received proper training;
- Work more efficiently than a driver who has not received proper training;
- Contribute to your overall profitability; make risk assessments and understand risk management;
- Provide good customer service; and
- Contribute to the positive image of your transport business.

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