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Vehicles Accident In Tanzania: Causes And Control Challenges

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Abstract

This study was conducted to assess the causes of vehicle accidents in Tanzania and its control challenges. It was guided by fur specific objectives; being to assess human factors involvement in accidents in Tanzania, Road and road environment factor involved in accidents in Tanzania, Vehicle involvement factor in accidents in Tanzania, and to evaluate strategies to solve road accidents in Tanzania and propose way forward

The data were analyzed using STATA. The study analysis followed a quantitative approach. It uses Dynamic Factor Model (DFM) analysis technique. The data was sourced from SUMATRA. The data covers the years 1990 to 2017. The analysis-involved 8 time series factors, namely reckless driving, vehicle defects, driving speed, external factors, alcohol/intoxication, careless motorcyclists, careless cyclists and careless pedestrians. The estimation used Maximum Likelihood Estimator (MLE).

The findings indicate that accidents have been increasing over time since 1990 towards 2017. All the 8 factors loaded significantly and were positive except for external factors which negatively contribute to road accidents. All the variables are economically large in terms of magnitudes of contribution to total road accidents. The factor path trace indicates that the accidents have been persistent and especially in 2010 to 2012 period.

Factor path analysis indicates shows that the path over the years for the corruption index. The factor with the largest magnitude index is reckless driving; other factors that are significant are external factors, vehicle defects and driving speed. Alcohol intoxication contributes the least to accidents in the index.

Therefore, since the factors identified above contribute to accidents in Tanzania, there is a need to establish measures and policies that will directly address these factors. The accident index indicates that the degree level of accidents are declining since 2012, that means more can be done to push the downward trend of the decline in accidents, especially by looking at the factors that are contributing more to the accident index as above.

1.BACKGROUND TO THE PROBLEM

The general effects of road accidents on the people and nations are Loss of life, Loss of property, Economic effects, Environmental effects, Social effects (Abhari, *et al,* 2018). The high rate of road accident in the country had become a great problem and the government effort through police force to overcome the problem had shown less positive effect (Gilyoma and Chalya, 2014). There are strong beliefs in many Tanzanians that accidents occur due to acts of God where faith based organization conduct prayer to ask for GOD intervation to solve road accident problem. Others relates road accident to traditional beliefs such as bad spirit, curses, act of gods, failure to honor ancestors wishes and ghosts where they undertake traditional prayers to ask the intervention of those forces to solve road accident (Mtatito, 2018 Juma, (2018) Tanzania government emphasis on enforcement of traffic law and regulations through big penalties and demotions of traffic officers only could not solve the problem (ibid) Studies shows that road accidents are caused by human factors, state of road and vehicle factors (Turki, 2014; Akhtar, 2012). Failure to have compressive short and long-term plans to address those three factors could be one of the causes of the persistence of the problem (Juma, 2018). It must be clear that the solution should address comprehensively all three factors and not one at a time. When there problem on one of those factors or combination of both probability of road accident occurrences is greater (Mtatiro, 2018). Poor roads and road environments such as Poor road condition, Poor road engineering and alignment, Lack of road signs and markings, Erratic traffic signals due to frequent power cuts, poor road infrastructure, lack of proper road maintenance and poor placement of relevant signals are one cause of road accidents (Juma,2018). Poor driving issues such as Misjudgment, Excessive speed, Overtaking errors, Negligent, pedestrians, passengers, cyclists and cart pushers, Alcohol and drugs consumption, Reckless driving, Overloading of passengers and goods, Parking errors and Driver fatigue are among human factor cause of accidents. Vehicles condition related factors such as vehicle defects, lack of proper repair and uses of substandard/fake spare parts are other causes of a road accident. Worldwide in order to minimize road accident, it's vital to have deliberate effort to overcome those causes. There are several methods of minimizing

the rate of accident. Measures for Roads: This can be executed by building new Modern roads where possible financially and spatially and make proper and planned maintenance on the existing roads and to reduce traffic congestion and the like. Measures for drivers; this can be executed by improving driver's driving techniques etc. and measures for Vehicle; this includes the maintenance of vehicles in safe, pollution-free conditions.

Road traffic crashes and injuries are threatening human, social, and economic development in many African countries. Recent statistics show that more than 100 people die in road traffic crashes per 10,000 vehicles in African countries compared to the 1.7 fatalities per 10,000 vehicles in the USA (Greg Chain, 2009). Much needs to be done to slow and/or reverse the trend. The rate of road accident in Africa calls for more studies on the issue of road accident in the continent. This study is expected to contribute valuable information on the cause of road accident and go further on provision of professional opinion to solve the road accident problem in Tanzania. The study objectives are

(i) To assess human factors involvement accidents in Tanzania
(ii) To assess Road and road environment factor involved in accidents in Tanzania
(iii) To assess Vehicle involvement factor in accidents in Tanzania
(iv) To evaluate strategies to solve road accidents in Tanzania and propose way forward

2. Situation Of Road Accidents In Tanzania

2.1 Reported Road Traffic Accidents in Tanzania 1990 – 2017

The police road accident data in Tanzania captured through completing an accident form for those accidents reported to traffic offices. There substantially a number of minor road accidents are not reported The Police are not informed of all road accidents involving personal injury, especially when minor injuries are involved and so mainly fatal accident reporting is complete

Narrated Causes of those accidents for the period under review are:

2.2 Public Transport State Accidents in Tanzania

Studies show that factors caused an accident by public transport in Tanzania are Human factors – 72%, External factors – 18%, Lack of enforcement – 2.5%, Vehicle condition – 7.5%. If one has to uses those statistics extra effort required to solve human factors, external factors, and vehicle conditions.

The human factor is perceived to be the principal cause of most bus accidents. However there are a number of sub factors within the human factor, those sub factors are: Misjudgment; Excessive speed; Overtaking errors; Negligent pedestrians, passengers, cyclists, and cart pushers; Alcohol and drugs consumption; Reckless driving; Overloading of passengers and goods; Parking errors and; Driver fatigue

The traveling public blames deregulation of the public transport system for the increased number of accidents occurring on both urban and long distance services. Inevitably this has led to an increase in the number of buses servicing the network, although demand has not similarly increased consequently, buses competing for passengers by speeding.

Reckless driving, over speeding and driving errors were cited as the most common causes of bus accidents with respect to long distance and urban buses.. Some drivers and respondents ironically revealed that passengers encourage drivers to speed without considering the increase in accident risk. However other drivers use speed as a marketing tool to encourage passengers to travel with them.

Other factors contributing to accidents include poor parking and buses stopping especially Daladalas little respect for other drivers and the influence of alcohol and drugs to combat tiredness. The contribution of human error in causing accidents is not only confined to drivers. Passengers and pedestrians also contribute to accidents. It is common for passengers to try to disembark from a bus while it is in motion or to distract the attention of the driver. Pedestrians, especially in the rural areas, are also not very conversant with traffic regulations governing the use of the road. Some fatal bus accidents may occur during the rainy season when drivers often make irrational decisions and attempt to cross flooded rivers. Drivers are often encouraged by passengers to cross flooded bridges and as a result often make errors in judgment resulting in the bus being washed away. In brief, human error is perceived by most respondents to be the main cause of bus accidents in Tanzania.

The external factors mentioned by both sets of respondents include Poor road condition; Poor road engineering and alignment; Lack of road signs and markings; and erratic traffic signals due to frequent power cuts. There are signs that the existing infrastructure is increasingly being overloaded as the number of vehicles increase. Many roads outside urban areas are in a very poor state of repair. Even those in the urban areas are frequently narrow, ill-maintained and lack adequate bus stands. A number of bridges on roads outside urban areas are also very narrow and can only accommodate one vehicle at a time. Potholes and sandy soils on roads were mentioned also as contributing to accidents. Both individuals and organizations appeared to share the consensus that there is a lack of adequate provision of road signs through the network. In urban areas, power shedding is common and so traffic signals may fail to result in accidents at high volume intersections. According to statistics from police records, approximately 20% of bus accidents were caused by bus defects. This figure

was significantly reduced to approximately 17% in 1997 due, in part, to ongoing economic reform changes that have led to a growth in vehicle sales and hence a younger but fleet being operated. The state of Tanzania operating vehicles poses a problem not only in a road accident but also environmental problems.

3. Research Methodology

Data for undertaking the study were collected from different sources to respond to the above research objectives. For the research objectives one to three secondary data collected from Police force and SUMATRA were used. The data obtained covering reported road accident for the year 1990 to 2017. The data were analyzed using STATA. The study analysis followed a quantitative approach. It uses Dynamic Factor Model (DFM) analysis technique. The analysis-involved 8 time series factors, namely reckless driving, vehicle defects, driving speed, external factors, alcohol/intoxication, careless motorcyclists, careless cyclists and careless pedestrians. The estimation used Maximum Likelihood Estimator (MLE). The exact DFM expresses *Xt* as a distributed lag of a small number of unobserved common factors, plus an idiosyncratic disturbance that itself might be serially correlated: Let *Xt* be a *n*×1 vector of stationary time series variables observed for *t* = 1,…,*T*.

$$X_{it} = \tilde{\lambda}_i(\mathrm{L}) f_t + u_{it},\ i = 1,\ldots,n, \quad \text{..... (1)}$$

$$u_{it} = \delta_i(\mathrm{L}) u_{it-1} + v_{it}, \quad \text{..... (2)}$$

where *ft* is the *q*×1 vector of unobserved dynamic factors, $\tilde{\lambda}_i(\mathrm{L})$ is a $1 \times q$ vector lag polynomial, called the "dynamic factor loadings," and *uit* is the idiosyncratic disturbance which we model as following an autoregression. The factors and idiosyncratic disturbances are assumed to be uncorrelated at all leads and lags, that is, *E*(*ftuis*) = 0 for all *i*, *t*, *s*. In addition, the idiosyncratic terms are taken to be mutually uncorrelated at all leads and lags, that is,

$$E(u_{it}u_{js}) = 0 \text{ for all } i, j, t, s, i \neq j \quad \text{..... (3)}$$

For the fourth research objective the study uses expect opinion from fourteen transport expert used to evaluate Tanzania strategies to solve road accidents its weakness and area for improvement and propose way forward.

4. Data Analysis And Discusion

4.1 DYNAMIC FACTOR MODEL ANALYSIS AND DISCUSSION

In order to assess human factors, road and road environmental factors and vehicle involvement factors dynamic factor model were used The time series lines in the figure below indicates that on a type level the cause of accidents have been increasing over time since 1990 towards 2017. Figure 1 and 2 below indicated the series before and after differencing.

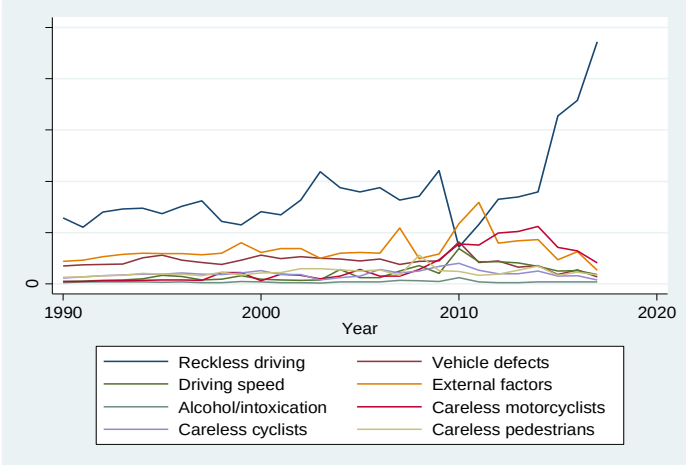

Figure 1: Before differencing:

Figure 2 shows that after differentiating the variables were stationary and significant. The findings also shows an increase in road accidents due to the related factors such as reckless driving, driving speed, alcohol/intoxication, careless cyclists, vehicle defects, external factors, caress motorcyclists and careless pedestrians.

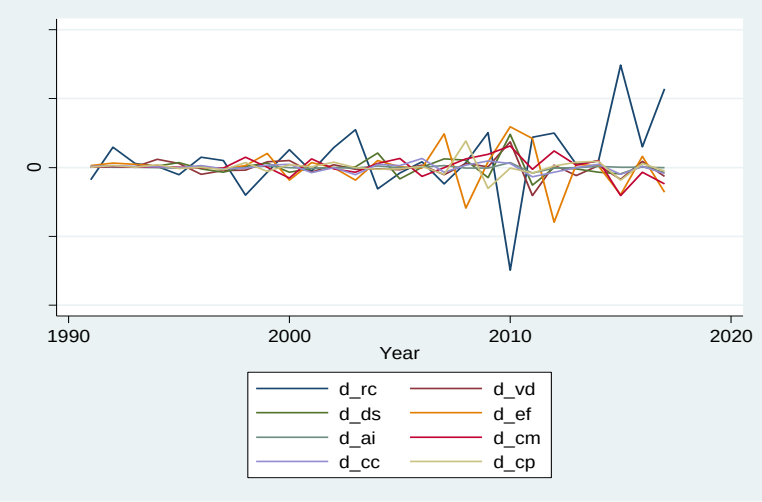

Figure 2: After first differencing:

The model (in table 1) was statistically significant (most of the variables at .0000 and only one variable at .0002), which means the results are reliable. The results were statistically significant. All the 8 factors loaded significantly and were positive except for external factors which negatively contribute to road accidents. All the variables are economically large in terms of magnitudes of contribution to total road accidents.

Table 1: Factor loadings and weights

Dynamic-factor model

Sample: 1990 - 2017 — Number of obs = 28

Log likelihood = -1683.4911 — Wald chi2(18) = 7393.64 — Prob > chi2 = 0.0000

		OIM Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
rc	f	-1980.514	432.6185	-4.58	0.000	-2828.43	-1132.597
vd	f	457.7488	85.84117	5.33	0.000	289.5032	625.9944
ds	f	478.4045	102.0207	4.69	0.000	278.4476	678.3613
ef	f	746.0116	136.7918	5.45	0.000	477.9047	1014.119
ai	f	40.51573	8.720219	4.65	0.000	23.42441	57.60704
cm	f	372.9892	119.6192	3.12	0.002	138.5398	607.4386
cc	f	212.5791	39.91647	5.33	0.000	134.3442	290.8139
cp	f	236.724	45.90771	5.16	0.000	146.7466	326.7015

Table 2: Variance Loadings

Variance						
e.rc	1614444	883076.3	1.83	0.034	0	3345242
e.vd	139108.3	51670.14	2.69	0.004	37836.64	240379.9
e.ds	124603	52896.15	2.36	0.009	20928.42	228277.5
e.ef	688874	220224.5	3.13	0.001	257241.8	1120506
e.ai	5226.265	1542.333	3.39	0.000	2203.349	8249.181
e.cm	326303.5	96494.03	3.38	0.000	137178.6	515428.3
e.cc	46331.95	13821.75	3.35	0.000	19241.81	73422.08
e.cp	170337.8	47732.33	3.57	0.000	76784.16	263891.5

The factor path trace in figure 3 indicates that the accidents have been persistent and especially in around 2010 to 2012.
Factor path analysis indicates an index showing the path over the years for the corruption index. The factor with the largest magnitude seem to be reckless driving, other factors that are significant are external factors, vehicle defects and driving speed. Alcohol intoxication contributes the least to accidents in the index.

Figure 3: Factor Path Trace

Therefore, since the factors identified above contribute to accidents in Tanzania, there is a need to establish measures and policies that will directly address these factors. The accident index indicates that the degree level of accidents are declining since 2012, that means more can be done to push the downward trend of the decline in accidents, especially by looking at the factors that are contributing more to the accident index as above.

5. Assessing On Existing Traffic Control Measures And Its Challenges In Tanzania

The analysis of research objective one to three above shows the seriousness of the problem of vehicle accidents in Tanzania .The results above indicates need specific measures to minimize the accident. The research objective four focused on discussion of various measures taken to curb the problem of vehicle accident by the Police force, SUMATRA, and training institutions. The study looks on measures for vehicle inspection, driver licensing, and driver training, roads constructions and maintenance separately. Its believed compressive strategy to curb problem of road accident should effective strategies on all factors. The measures and its strength, weakness, and challenges are discussed below.

5.1 Vehicles inspection measures in Tanzania

Vehicle inspections in the country are conducted through police force where both annual checkup and spot check up undertaken. There two major operational problems on how the police force undertake vehicle inspection in the country. First, vehicles inspection in Tanzania undertaken aimless without proper operational planning to make sure that all vehicles and motorcycles are thou roughly checked. Second vehicle inspection method does not guarantee the roadworthiness of the vehicles. Traffic polices only uses their eyes to inspect those vehicles without any specialized vehicle inspection equipment. It is difficult if not impossible to ascertain

vehicle roadworthiness through eyes checkup. There is a need to incorporate existing machines technology in vehicle inspection. Statistics show that most of the vehicles undergone vehicle inspection through machines at NIT despite its outside condition look good found with defections while undergone machines vehicles inspection. The exercise of vehicle inspection in the country conducted once per year mainly during the road safety week whereby it caters only for awareness purpose. Stickers are only sold to vehicle owners without inspecting the vehicle. The fact that over 95 percents of privately imported vehicles are used one magnifies the importance of mandatory vehicle inspection.

5.2 Drivers training and licensing in Tanzania

Other aspects need special attention is the driver's training and licensing in the country. The process resulted in unqualified drivers. As the statistics show above over 75% of the causes of the accident in the country are the human factor**.**

Drivers training

Driver training in the country is undertaken mostly with private owned schools without approved harmonized national curricula, certification of the trainers as well as control of assessing procedures. Training lack of control on who qualifies to be a trainer and to be a trainee. The profit motive interest surpasses the need for qualified trainees in terms of knowledge, skills and appropriate attitudes. Focus had been a number of students undertaken the course rather than the quality of the trained people. Much blame is for the regulators NACTE and VETA for allowing the free market forces to control the industry. It is high time to look at how the drivers are trained and what is control measures should be in place to have qualified and accident-free drivers. It's advised to consider how other countries offer its driver training. The use of driving simulators could assist to improve on the quality of our drivers.

Driver's license

The procedure for drivers licensing in the country had undergone various changes, where initial were only under traffic police but currently involve traffic police, Tanzania revenue authority and training institutes. Before focus were both technical knowledge, experience and drive attitudes. Current system despite taking account of training institute certification, it fails to consider other factors such as age, driving experience, attitudes, and skills. Driver trained from VETA accredited institute which does not have proper control on how to examine their skills and attitudes undertake four weeks training course can obtain certification for competence and use it to obtain vehicle driving license class D or E. After having that license for one year without checking wither he /she had actually driven the car for that time he/she qualify for undertaking advance driving course for six weeks from NIT or VETA and qualify for driving license class C. . The major problem for that system is it fails to consider an important aspect such as age, driving experience and candidate attitudes. The attitudes to maximize profit by those driver training Institutes compromise the quality of drivers completing those training. One could wonder other institutes no anyone fails drivers exams.

5.3 State of Tanzania Roads

The country has a roads network of 87,581 kilometres in which tarmac roads 10,025 kilometres and 77,556 kilometers of untamed. It is worth to appreciate the government high investment in the construction of the roads in the county. Various road users express concern on durability, maintenance, and marking of those roads. Most of those roads lifespan of three to ten years only may be due to the pressure of high needs for the tarmac roads or political one. Those roads are poorly maintained as it takes a long time before road maintenance undertaken either due to poor road maintenance plans, lack of maintenance culture, and lack of funds or long procurement procedure. The existence of pit holes in our roads it one of the causes of a road accident in the country. Another aspect is our highways wrongly designed as it passes mostly in the centers of towns and villages. Lack of bypass roads, pedestrian overcrossing and freeways in the country hinder efficient users of roads. The problem causes a lot of speed limits to cater for both of human, animals and vehicles movement in our high ways. That problem has mainly two issues one it causes drivers fatigue and second, it causes a lot of peoples establishes various recreation centers along our highways. The common practice for other countries are the towns and villages are located distant from the high way and vehicles are just divert to that town and villages as the need arise. Kenya story had been very successive in both accident reduction and efficient usage of the roads. Kenya road network are well designed with sufficient by pass, intersect, pedestrian overcrossing and cross bridges. It gives drivers wide spectrum during the long safari and it reduce accidents. . Poor marking of our roads noted as the problem causing accidents. There is a need to be clear where to put Zebra crossroads. As one going through the UDART network you will find a lot of confusing marking. How one could put Zebra crossing one meter after the traffic light. When drivers allowed moving through a green light as they approach the end of traffic light they find Zebra cross. In Tanzania road network especially high ways you may find along the highways immediately after 120-speed mark there 30-speed limit without proper managing speed reduction.

5.4 General challenges of Vehicle Accident in Tanzania

Over and above the three major factors of the road accident in Tanzania namely human factors, vehicle factors and state of the roads the country facing below general challenges

Vehicle control Institution Framework

In Tanzania, vehicle regulation is under TANROADS, SUMATRA and traffic police. Despite the laws and regulation stipulate clearly the role of each organization on vehicle control regulations still the public and even government fail to separate the role of each of them. One may find blames put in one organization while the actual cause is under other institution. For example, after the Mbeya Mbalize accidents most of blames were on traffic police where actual problem was state of the road which falls under TANROADS.

Vehicle regulations challenges

The current vehicles regulation does not differentiate road users where motor vehicles and motorcycles drivers are subjected to the same regulations and other road users such as bicycles drivers and pedestrian are related as none offender which is not true. The regulations should design in such a way that it covers all source of a road accident.

Lack of voluntary abide by traffic regulations in the country

The degrees of voluntary abide by traffic regulations and laws still are very low. In order to decrease the rate of a road accident in the country, it's important to increase awareness program so as drivers and vehicles owners are voluntary to abide by traffic regulations. The study observed that t is common to find Bodaboda and other motorcycles drivers pass red traffic light without no any action taken by traffic police. That tendency had become a tendency and according to them, they do so to avoid city enforces agent who mostly uses traffic light as a point to catch them. Also as long as our defense forces drivers (police, Prisons, defense forces) being the major breakers of the traffic laws as if they are above of the laws causes other drivers to undermine traffic laws too. It is high time ore forces to be a good example involuntary abides by the traffic laws to improve the voluntary abide by traffic laws in the country.

Uses of a mobile telephone while driving

The problem of mobile phone usage during driving had become common phenomena. It had gone to the extent that most trucks and bus drivers can chart and sending massage during driving. Our traffic regulations does not charter for that. Its high time our traffic regulation and low enforcers to control the problem of phone usage to all drivers including Bodaboda drivers.

BODABODA challenges

Introduction of BODABODA as ways of improving movement of peoples and employment for our youth has both advantages and risks. Currently in the country, as statistics above show motorcycles contribute a lot to road accident in the country. The major challenges of BODABODA are lack of political will to address the issue of BODABODA safety and security, Government officials resistance for change, How to transfer effective traffic safety measures from developed countries, BODABODA drivers culture, Low level of awareness on safety and security for BODABODA drivers and users, Lack of sufficient financial investment on road traffic safety for motorcycles so as to create separate lane for them , Lack of coordinated efforts toward road accidents and who is champion of the road safety and security for the BODABODAs, Low enforcement on aspect of safety and security, How to create serious long-term decision on traffic safety and security

Corruptions attitudes and culture

Despite current government efforts to face the corruption problem in the county yet the attitudes and culture of traffic police towards decision influenced by corruption still very high. The tendency needs more investment to reduce the dependency of traffic on the sole decision without machines. Installation of CCTV cameral alongside our roads could automatically record the offenders of traffic law.

5.6 PROPOSED MEASURES TO ADDRESS THE CHALLENGES

In order to address the challenges of a vehicle accident in the country it important to make sure the comprehensive approach to overcome both human factors, road factor, vehicle factor, and general factors as indicated above. The solutions should short, medium, long term. Basically, the key main measures to address the above problem is to introduce professionalism, impart competency-based skills to practitioners of transport and logistics business and Control practices of practitioners for ethical conduct in their daily business, proper vehicle inspection, and defensive driving.

Measures to overcome the problems of vehicle inspection

In order to improve the state of vehicle inspection in the country, it is proposed to have appropriate curricula for vehicle inspector to cater to both private workshop owners as well as enforcement inspectors. The matter requires for appropriate vehicles inspection equipment and facilities if the country is to reduce the number of accidents and to keep vehicles operating environmentally friendly. Tanzanians import mainly used vehicles which are attended in a private workshop throughout the country. Most of these workshops are manned by untrained mechanics. The situation poses the need to train them so that they can be able to inspect and maintain the vehicles. Hence the country needs to have mandatory vehicle inspections with a high level of

enforcement of traffic regulations. Further the nation need effective penalties systems for offenders of traffic law to create voluntary adhering of safety measures.

Measures to improve Tanzania Road Safety and Defensive Driving

In Tanzania, Drivers are trained mostly on private owned driving schools situated in all major cities and towns. The country lacks a national drivers training curriculum and qualified drivers instructors. Furthermore, there no standard training tracks and the training schools have inadequate training facilities. Also, there is no unified monitoring mechanism for the motor vehicle drivers training. The country needs to address the challenge by developing standard driver's curricula in the country, training driver instructor and develop simulation track for the use of private driver training schools. The fact that the drivers are aware of the effect of accidents only after accidents happen to call for simulator training to increase drivers awareness of the effect of accidents. The training is intended to cater to both drivers and other road users.

Measures for Transport Management

There is a need for enhancing technical and managerial capacity in the transport sector. The ongoing reforms in the sector necessitate further human resource development to face challenges posed by developments in science and technology as far as the transport sector is concerned. A deliberate move is necessary to:-

(i) Ensure availability and sustainability of local technical and managerial capacity to man the transport sector;

(ii) Ensure the private sector allocated a certain percentage of the operational budget to human resource development;

(iii) Review training program to meet needs for local capacity building

The World Bank is already supporting the East African Community (EAC) and its members in infrastructure development and trade and transport facilitation along the regional corridors. The Bank is also supporting developing countries in capacity building of the private sector. It is against this background that there's need to give the capacity to transport and logistics agencies in order to make the Central Corridor an efficient and economic trade route.

Measure to improve Vehicle Inspection

Measure to address vehicle inspection problem in the country involves the need to have mandatory machine checked inspection n the country. The country should have well planned operational vehicles inspection plan whereby all vehicles in the county must undergo vehicle inspection to prove its roadworthiness. Vehicle inspection should separate to mandatory vehicles inspection to be undertaken inspection institutes and spot inspection to be undertaken by traffic police. Traffic police should only conduct spot inspection as control tools only.

It is proposed that there should be four (4) Categories of Mandatory Vehicle

Inspection where;

Initial Inspection: to undergo when initially operating the vehicle or to undergo when re-operating a vehicle that had been suspended (e.g. Accident rehabilitated vehicles).

Renewal Inspection: to undergo when operating the vehicle after the expiration of the valid term of the Motor Vehicle Inspection Certificate.

Modification Inspection: To undergo when Modifications are made concerning the length, width, height, maximum

Roadside Inspection: Carried out on the roadside to bar out vehicles with poor maintenance and vehicles with unauthorized modification

NB: Inspection No. 1 – 3 should be carried out by vehicle inspection centers such as the one at National Institute of Transport (NIT) Inspection Centres. Roadside inspections should be carried out by the Traffic Police (Law enforcers).

6. CONCLUSIVE REMARKS

Review of the causes and challenges of exist road accident in the country indicate for the need of compressive action to tackle the problem.

The following actions are proposed for solution;

i. political will to adopt scientifically proven measures on safety and security
ii. Government officials should remove its resistance for change such as separation of mandatory and roadside vehicle inspections
iii. To put in place a proper method of o transfer effective traffic safety measures from developed countries
iv. Change of Culture of considering road accident an act of Gods or other forces more than what studies indicate
v. Improve awareness on vehicle safety and security risks
vi. Invest in CCTV alongside our roads
vii. Put in place coordinated efforts toward road accidents
viii. To find a champion of the road safety and security in the country

ix. Improve enforcement of laws and regulations of safety and security in the country
x. Create serious long-term decision and plans to improve traffic safety and security
xi. Promoting Defensive Driving and mandatory vehicle inspection through TV & Radio discussion, presentation.

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