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Developing Company's Performance by Improving Employee Satisfaction in Transportation Economy

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Bachelor's thesis
February 2020
Degree Programme in Logistics Engineering
School of Technology

Jyväskylän ammattikorkeakoulu
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jamk.fi

Description

Author(s)	Type of publication	Date
Gitari Kelvin Muchira	Bachelor's thesis	February 2020
		Language of publication: English
	Number of pages: 51	Permission for web publication: x

Title of publication

Improving Customer Services & Reducing Operational Costs in Transportation Company

Case: PJ Petroleum Equipment Ltd, Kenya

Degree programme

Degree Programme in Logistics Engineering

Supervisor(s)

Tommi Franssila, Mikko Somerla

Assigned by

PJ Petroleum Ltd

Abstract

The two major ways in which firms can increase profits is either by increasing revenue or reducing cost. With stiff competition, high fuel prices and other external factors impacting profit negatively, logistics firms are obligated to come up with innovative ways of reducing costs whilst maintain profitability and maintaining or increasing customer satisfaction.

The aim of this research is to investigate and improve logistics operations in Kenya using the case of PJ petroleum Equipment Ltd. The three objectives that will be covered in this research are; Ways in which PJ Petroleum can reduce fuel costs of its fleet, reduce driver turnover rate which has plagued the company as a result of employing dishonest drivers and on improving customer satisfaction overall.

The research used a mixed method approach. Primary data was collected using questionnaires whilst secondary data was gathered from use of articles, books journals and other publications. Excel and SPSS were the preferred primary tools used to analyse data.

Findings as a result of the study showed that drivers were unhappy with the current treatment they got from their supervisors. This resulted many of them to act dishonestly as a way of revenge thus plaguing the whole transport industry in the country with high driver turnover rate. Methods of reducing fuel consumption were also study together with the biggest reasons why customers complain when receiving services and its projected costs to companies.

Keywords/tags

Customer satisfaction, route scheduling and optimization, telematics

Miscellaneous

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1 INTRODUCTION

“Transport as the bedrock of civilisation has enabled the spread of production, trade, ideas and the economic dominance of mankind all over the globe. Individual movement is among democracy's most treasured freedoms. It’s not that surprisingly that high proportion of our proceeds is dedicated to our movement and to the movement of the products that we buy. However, the systematic economic analysis of transport and logistics in general is relatively recent.” (Stubbs, Tyson & Dalvi 1984, 1).

General introduction to concepts and Kenya’s business environment as a subject of interest, are discussed here.

1.1 Background of the Study

When creating customer value, enterprises must look into logistics as one of the core competencies that contribute to the universal customer satisfaction. In today’s global business environment, companies that overlook either of these competencies; management of materials, information, transportation, network designs, inventory, warehousing and materials handling and packaging stand to lose in creating a concrete customer services experience, of which they are on high demand and expected in today’s business environment. Inherently, this could lead the company to lose customers and other business opportunities.

Logistics operations objectives include but not limited to, rapid response, minimum variance, minimum inventory, transportation, quality and life cycle support. However, on this paper, we shall only be concerned with rapid response and transportation. Rapid response is the ability of a company to satisfy and or exceed customers’ expectations in a required and timely manner. All this is possible due to increased information through the use of technology. On the other hand, transport is the movement of product or service from one geographical area to another where and when needed. Also called movement consolidation, recently, transportation has become one of the highest costs in logistics operations. The transportation cost is normally related to the type, size and distance covered of the products in transit. Per unit cost, the longer the distance covered and the bigger the size of the products being

transported, normally results to lower cost. It is therefore essential for companies to be innovative in this area especially if the consolidated shipments are smaller in size and the distance covered is longer (Bowersox & Closs 1996, 41-43).

1.2 Kenya transportation sector overview

The country's GDP from transportation sector in Kenya rose from KES 87676 million (€773 million) to KES 95613 million (€843.10 million) between the fourth and third quarter of 2018. Regardless of contributing to an average of 9% of the total GDP, the industry is one of the important economic sectors as it meshes other economic sectors together.

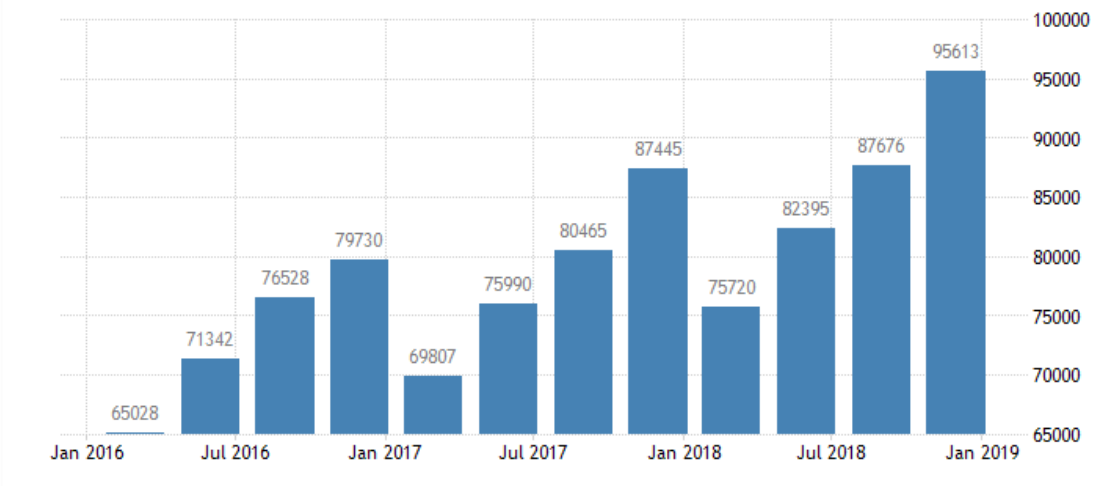


Figure 1 Kenya transport GDP2016-2019 (www.tradingeconomics.com)

Notwithstanding having a rail and water transport, according to Kenya Roads Board (KRB), the road sector accounts for over 80% of the country's total passenger traffic and 76% of the freight services. The road network is divided into different classes which are used to serve different purposes as seen in the figure below.

CLASS	DESCRIPTION	FUNCTION
A	International Trunk Roads	Link centres of international importance and cross international boundaries or terminate at international ports or airports (e.g. Mombasa)
B	National Trunk Roads	Link nationally important centres (e.g. Provincial headquarters)
C	Primary Roads	Link provincially important centres to each other or to higher class roads (e.g. District headquarters)
D	Secondary Roads	Link locally important centres to each other, or to more important centres or to a higher class road (e.g. divisional headquarters)
E	Minor Roads	Any link to a minor centre
SPR	G	Government Roads
	L	Settlement Roads
	R	Rural Access Roads
	S	Sugar Roads
	T	Tea Roads
	W	Wheat Roads
U	Unclassified	All other public roads and streets

Figure 2 Kenya roads classification and their functions

The total road network is over 170,000 km. 160,886 km of these roads are classified as shown from figure 2. Of the classified roads, 149,689 km or 93% of the total classified roads are not paved. Below are the road classes and their current status.

ROAD CLASS	PAVED	UNPAVED	TOTAL
A	2,772	816	3,588
B	1,489	1,156	2,645
C	2,693	5,164	7,857
D	1,238	9,483	10,721
E	577	26,071	26,649
SPR	100	10,376	10,476
U	2,318	96,623	98,941
TOTAL	11,189	149,689	160,886

Figure 3: Current status of classified road conditions, Kenya (adapted from wikip

Kenyan roads also serve as gateway to Indian ocean for other East African land-locked countries such as South Sudan, Uganda, Rwanda, Burundi and DRC. The effectiveness of this role the country has, relies heavily on road, other infrastructure and services placed by the GoK and other stakeholders to ensure smooth transportation

of goods both in-coming and out-going for the host country and its aforementioned neighbouring countries. According to world bank Logistics Performance Index (LPI), Kenya's LPI's score was 2.81 as of 2018 ranking 68. The table below show how the country has performed for the past 8 years: Overall (1=poor to 5=best).

year	LPI Rank	LPI Score	Cus-toms	Infrastruc-ture	Interna-tional Ship-ment	Logistics Compe-tence	Tracking & Trac-ing	Time-liness
2018	68	2.81	2.65	2.55	2.62	2.81	3.07	3.18
2016	42	3.33	3.17	3.21	3.24	3.24	3.42	3.70
2014	74	2.81	1.96	2.40	3.15	2.65	3.03	3.58
2012	122	2.43	2.08	2.16	2.69	2.38	2.34	2.88
2010	99	2.59	2.23	2.14	2.84	2.28	2.89	3.06

Table 1 Kenya's LPI Rankings-Source: World Bank Group

The average distance covered by truck in Kenya was around **74,686 km** as of 2017, this low figure compared to the international standards of **120,000 km** annually was mainly caused by non-availability of cargo and turnaround time at port/border. In addition to those challenges, high cost of fuel has also caused the freight charges to be very expensive compared to such countries as Finland. Example, freight charges for a ≤12-ton consignment in Kenya is **1.189 €/Km** compared to Finland at **0.817€/Km** . (Northern Corridor Transit and Transport Coordination Authority [Facilitating Trade and Transport for Sustainable Development] May 2018) accessed May 2019.

World oil prices has been increasing since the 2000s and reached its peak in 2012 with $109.45 a barrel. These price increase ensured that fuel was one of the biggest costs accrued by both international and local transportation industry at large.

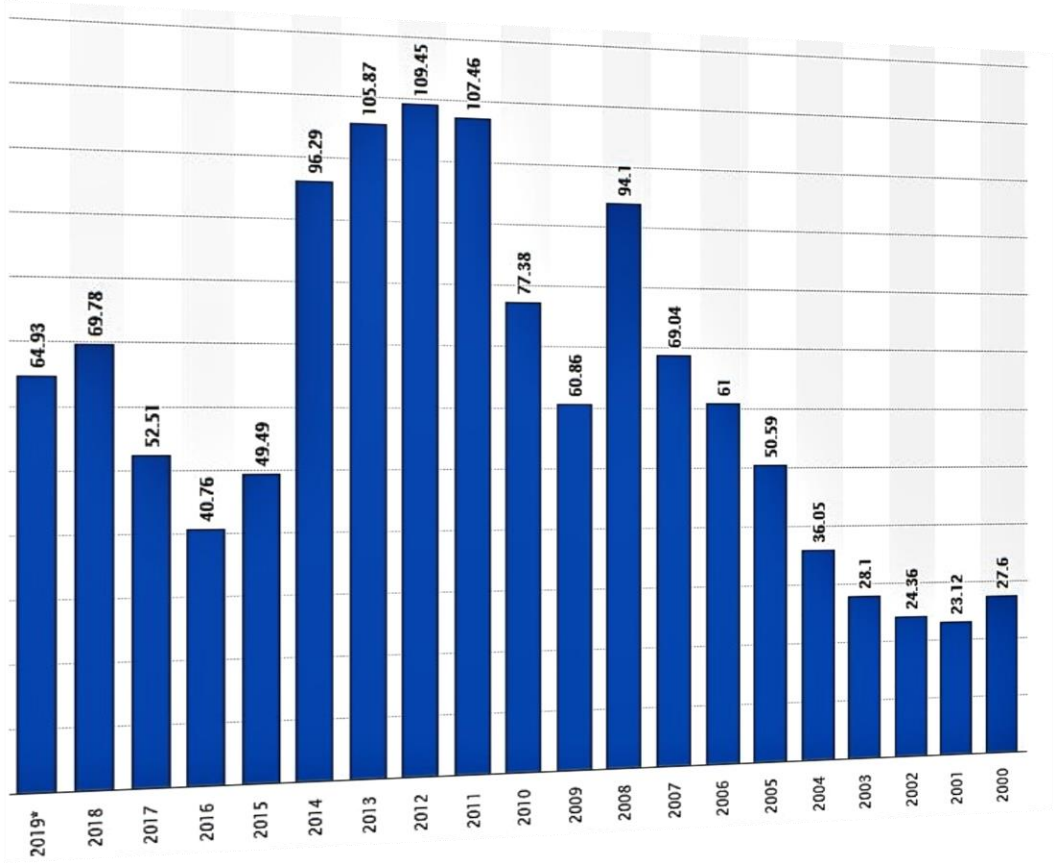


Figure 4. Mean Yearly OPEC Crude Oil Prices- Source: www.statista.com

In the face of increasing fuel prices, the country continued experiencing yearly growth of both private commercial vehicles (**fig 5** in units) due to economic growth and low bank interest. With this annual increase in vehicles, also meant increase in both freight and passenger earning shown in **fig 6** and **7** in KSH millions.

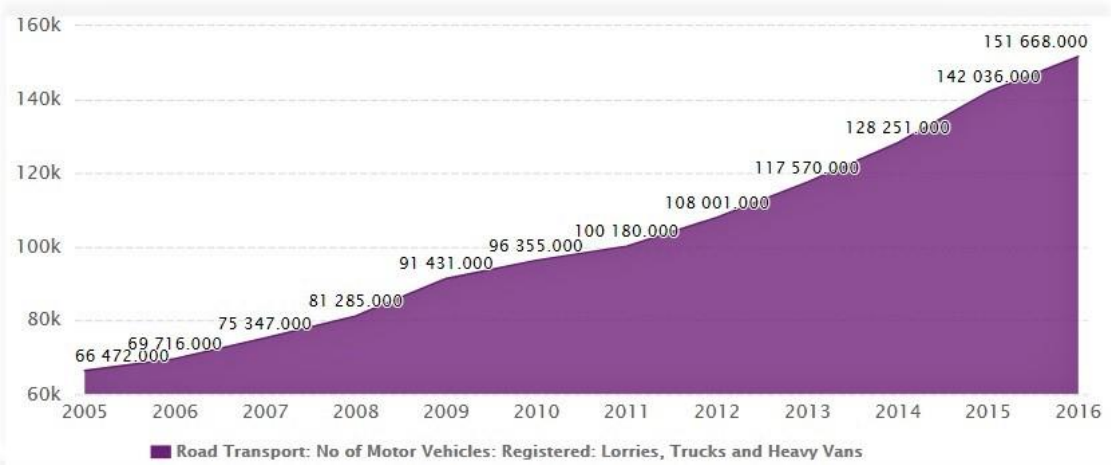


Figure 5, Number of Registered Motor Vehicles Per Year Source: WWW.CEICDATA.COM|Kenya National Bureau of Statistics

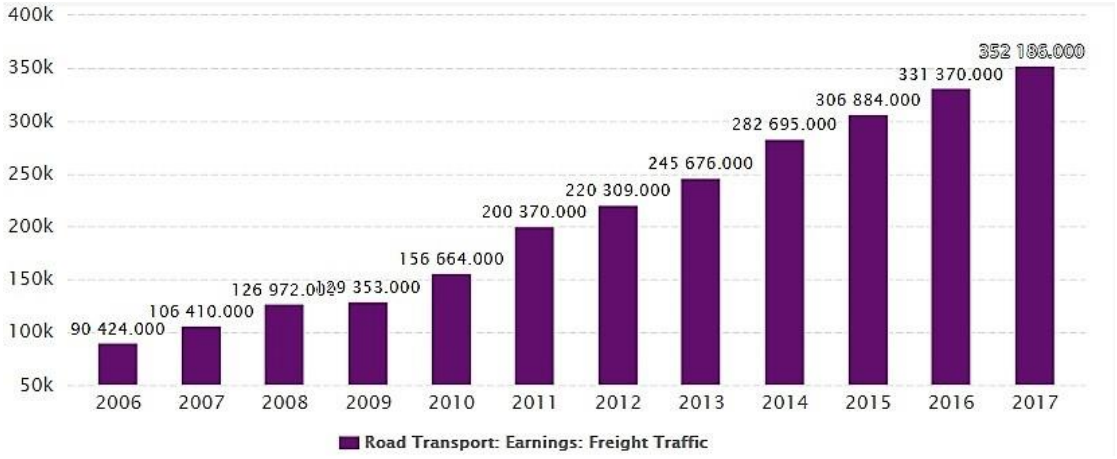


Figure 6- Freight Earning in Million Ksh Source: WWW.CEICDATA.COM|Kenya National Bureau of Statistics

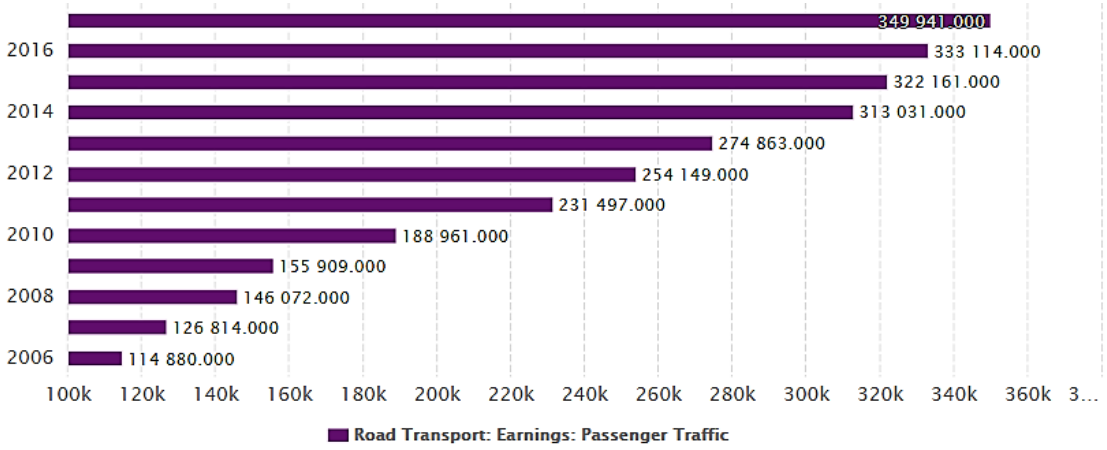


Figure 7- Passenger Traffic Earning in Ksh millions Source: WWW.CEICDATA.COM|Kenya National Bureau of Statistics

1.3 Statement of the problem

This research was undertaken in cooperation with PJ petroleum Kenya. The enterprise is one of the key players in the Kenyan market to deliver petroleum equipment solutions ranging from selling of equipment such as fuel pumps to building fuelling stations and offering maintenance and other services to their clients.

The company's headquarters are in Nairobi with branch offices in Eldoret, Kisumu, Mombasa and Kisii. In recent times, the company has faced issues ranging from driver shortages and retention issues, undisciplined drivers, fuel price inconsistency

(price hikes) in the country, and customers with high service-expectations with the least costs possible.

Therefore, the company would like to know ways in which they can hire honest, disciplined drivers and retain them, how to reduce transportation cost in general, and meet customer expectations.

1.3.1 General objective

The purpose of this paper is to find means to diminish transportation challenges and meet customers demand for PJ petroleum company.

1.3.2 Specific objectives

This study was funnelled by the following particular objectives.

Solutions to improving reduction of fuel cost

Measures in which the company can find and retain honest truck drivers

Improving customer-service through communication to meet their expectations

1.4 Importance of the study

Apart from finding solutions to PJ petroleum concerns, it's my sincere hope that this study will benefit all small and medium sized cargo haulage companies in the country. Also, Public Service Vehicles (PSVs) such as *matatus* which are mostly privately-owned stand to benefit especially in calculating the total cost of transportation expressed in Ksh/Km or Ksh/per hour instead of relying on rough estimates that are normally derived from thin air depending on people traffic and distance.

2 LITERATURE REVIEW

2.1 Introduction

Background of logistics operations that are relevant to this case are examined in this chapter with the goal of introducing the reader to the basics of logistics and its relevance to companies.

2.2 Transportation management

For an effective management of economic resources in logistics, managers are always reviewing department activities which may include carrier's evaluation, freight documentation and in-house activities. The aim of this kind of undertaking is to successfully be at upper hand when negotiating transport agreements with private customers or shippers (Bowersox & Closs 1996, 365). It is therefore essential for logistics managers to know the basics of transport economics and pricing as detailed below:

2.2.1 Economic factors

To minimize haulage costs, managers responsible should familiarise themselves with economic factors to be considered when deciding cost of transport. Characteristics of shipping goods influences freight cost. In detail, these economic factors include:

- Geography
    - Transit distance

Distance is directly proportional to freight cost. The longer the transit time, the higher the variable costs accumulates. These variable costs include, fuel, labour, maintenance, lubrication and tire costs.

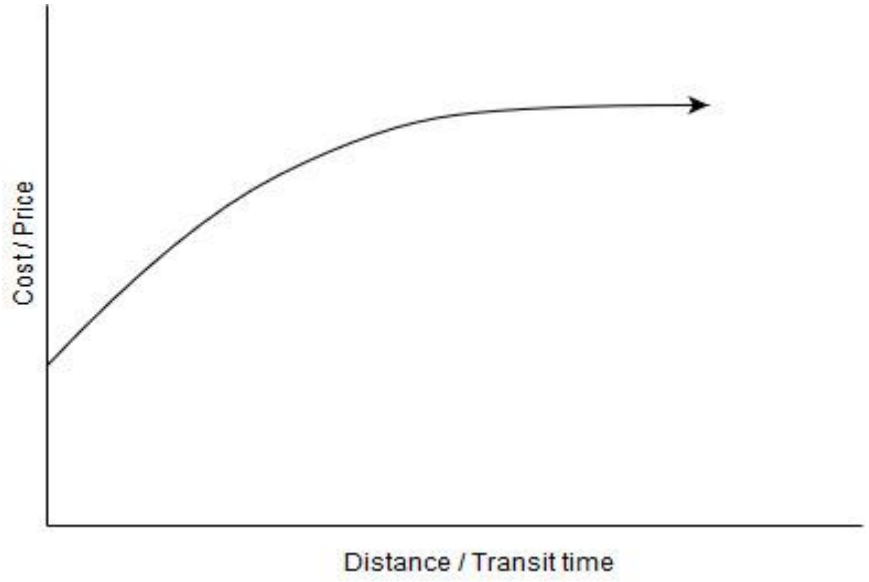


Figure 8: relationship between distance per unit cost

It should also be noted that urban mileage costs more than inter-states mileage. Frequent stops and frequent use of truck's low gear increases fuel consumption. This phenomenon will be discussed in later chapters.

Due to fixed costs such as administrative costs, the cost of goods in transit in relationship to distance covered cannot start at 0, regardless of the distance covered, long or short.

- Accessibility

Geographical characteristics of a place also determine the cost of transport. Examples include terrain (flat vs hilly), weather conditions (stormy vs sunny vs winter) and nature of road condition (even vs uneven surface). The difficult the terrain generally increases the transportation cost. i.e. during winter, fuel cost is normally high due to additives. Also, vehicles tend to consume more fuel when ascending than descending or travelling on flat surface due to constant resistance from gravity.

- Type of Products
  - weight

Opposite to the relationship between distance and costs, products weight is inversely proportional to cost. The bigger the products weight, the lesser the cost per unit. Also, due to fixed costs, administrative and insurance, haulage cost cannot start at 0 as shown in figure 5. Economies of scale can be achieved through consolidation of small weights.

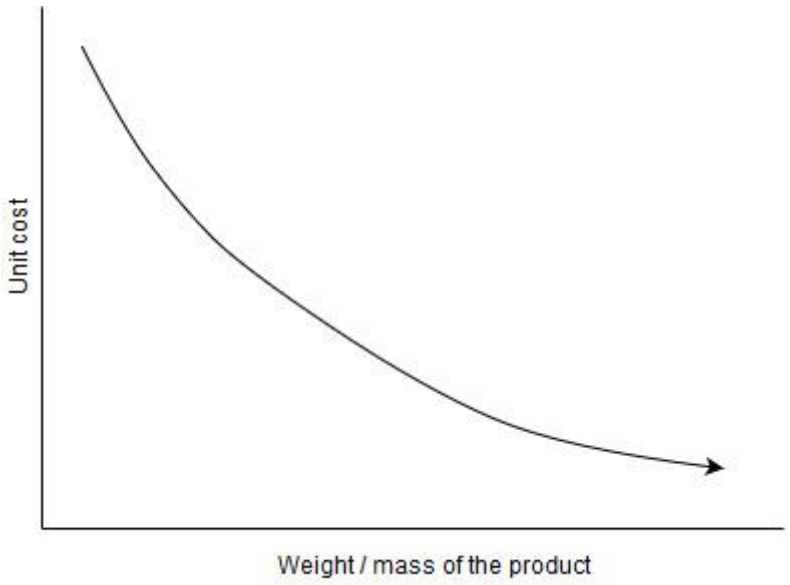


Figure 9: Relationship between unit cost and weight of the product

- Product liability

This include perishable vs non-perishable goods. Perishable goods often tend to cost more when transporting since they could need special equipment when on transit such as refrigeration. Similarly, frequently, perishable goods tend to be transported in less-than-container load (LCL) therefore reducing the efficiency of transportation if compared to non-perishable goods.

Perceived value of the goods could also affect transportation cost. Between equal weight of wood and electronics, transporting electronics would probably require specialized handling and more security in terms of packaging to deter effects such as theft or humidity thus increasing transportation cost.

- Density and stowability

When a considering the mode of transportation, space occupied and weight of the item to be transported should be considered carefully. A product can occupy a large space and weigh less and vice versa. Product density should therefore be considered

when utilizing the capacity of a limited space of a truck. Cost of transportation can be affected either by volume or weight of the product in transit. Product shape also affects space utilization. Oddly shaped goods will occupy a lot of limited space than goods with well-defined shapes.

- Handling

Special handling equipment such as truck cranes needs maintenance and power to operate. In general, handling equipment's are considered as fixed cost. Any cargo that needs special handling equipment will accrue larger transportation cost than those that do not need it.

- Liability

Similar products that cost differently could require additional insurance cover. E.g. when transporting a million-dollar vehicle compared to a thirty thousand vehicle, transportation cost will increase due to additional cover taken against uneventful events. Liability can be the obligation of either the sender, receiver or carrier (if applicable) to ensure that the goods in transit are well protected from elements, theft or accident. This is normally done by either of the party taking insurance cover on the goods to be transported. This obligation can, however, be divided by either of the party at different checkpoint on the transit route.

- Trade Imbalance

Every country experiences' trade imbalances between two or more cities within its borders. When a company is transporting goods to let's say region A to region B, mostly, the truck will make an empty mile back to region A. Since empty miles still costs the company in terms of fuel, labour and maintenance, the company should either add the empty miles costs to original front-haul or split the cost between the parties involved. Other ways to mitigate empty mile costs include (Loaddelivered, 2018):

    - Collaborating with other companies to find a consignment to bring back also known as back haulage.
    - Improving payload inefficiency through load consolidation with other companies, economies of scale (loaddelivered, 2018)

2.2.2 Cost accounting (cost break down)

Cost break-down analysis is the systematic way of identifying individual cost components that materialize to be the total cost of the goods or services. In transportation, these costs can be broken down into four main categories each with its own sub-categories.

Mainly affecting private fleet or carriers, cost accounting is necessary since it enables the involved companies to choose the best mode of transport such as road, waterways, rail or air. It also helps in decision making such as the right vehicle to be used, the right equipment and route optimization. For private fleet, cost structures can be used to offer specialised services and other offers. For carriers, it enables them to price rates and tariffs, contract negotiation and special offers.

- Variable costs

  These expenses are accrued during transportation. They increase and decrease depending on factors such total distance travelled. Examples include, fuel costs, maintenance and repairs, tire costs (and recapping) and other charges depending on route chosen such as tolls.

- Fixed costs

  These costs are independent of whether the truck is in use or not. Neither are they influenced by factors such as, size of the cargo or distance travelled. They include expenses such as, interest on capital, insurances, road tax, administrative costs and permits/licenses.

- Joint costs

  Even though joint cost is accrued by both private fleet and carriers, the cost is normally passed down to customers who seek services from carriers. These expenses occur on return journey after delivery has been made. They include fuel expenses, lubrication maintenance and tires. If not totally passed to the shipper, joint costs can be divided between the parties involved depending on contract or a back-haul shipper be found to cover the expenses. However, if this cannot be achieved, empty miles costs are normally taken as fixed costs as shown in figure 10.

- Labour costs

Normally separated from fixed costs if its costs are substantial for the company. These costs include, wages and salary, allowances and indirect labour costs such as vehicle cleaning.

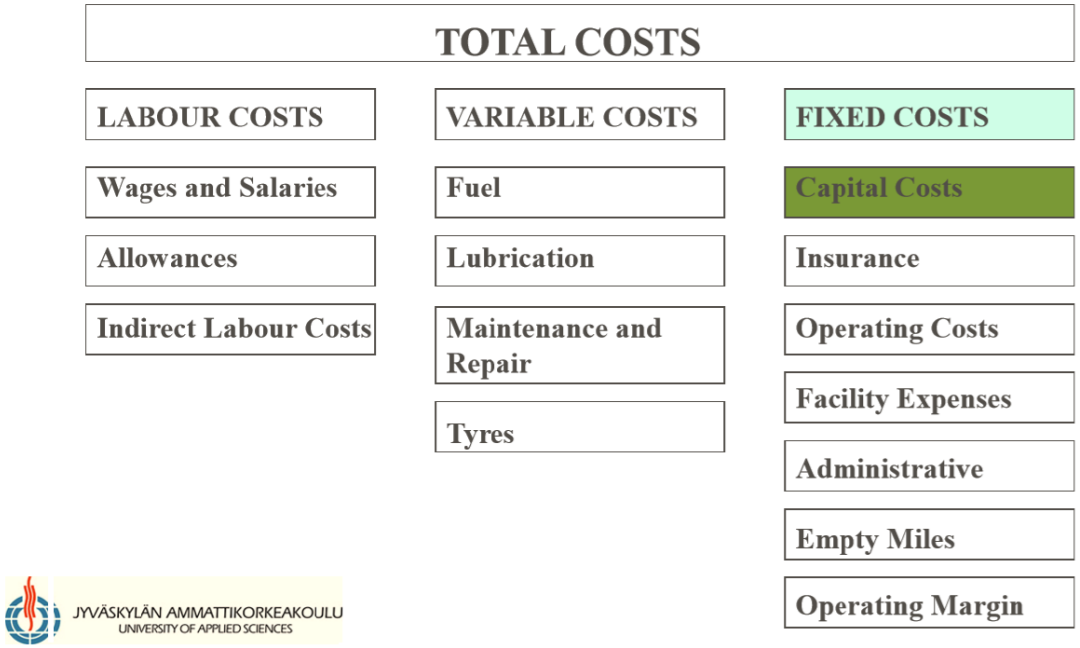


Figure 10 transport cost break-down

Source: www.jamk.fi

2.2.3 Pricing strategies

Freight costs are dynamic. These changes are attributed by factors such as area of delivery, the nature of product carried and fluctuating economic conditions (Jackie Lohrey, 2018). The author continues to state that "logistics companies with considerate pricing tactics are likely to achieve margins of 17% profit than competitors. In addition, successful logistics enterprises dedicate to creating effectual pricing policies yet at the same time implementing stern procedures to ensure that sales personnel cannot alter prices to meet their sales goals."

With increased competition and the rising costs of transportation, competitive pricing strategies which meet a set of individual customers' expectation based on differing situations, gets to be the only strategy of a company realizing profit.

According to Bowersox and Closs (1996, 369) the strategies are;

- Cost-of-service strategy

Is a pricing strategy based on the cost of service provided plus profit margin (i.e. total cost of transportation plus profit) Frequently used when competition is very stiff, or the value of goods is minimal. When this strategy is used to charge rates according to the percentage the goods occupies based on the full truck load, the strategy is normally referred to as revenue management pricing.

- Value-of-service strategy

Also known as yield management pricing, is a strategy used based on the perceived value of goods to be transported. The higher the value, the higher the pricing cost and vice versa. It can also be based on service provided by the company such as timely delivery of perishable goods.

It can also be used whereby the services provided i.e. use of specialised trucks, is limited or no high competition exists.

- Combination strategy

The combination of the two strategies establishes an intermediate pricing that many logistics firms use to negotiate prices with. It includes the middle ground of both the minimum of cost-of-service strategy and the maximum of value-of-service strategy.

- Geographical pricing/ Zone pricing strategy

Depending on different circumstances, companies may or may not account for factors such as wear and tear of the vehicle and to some extent differences in fuel costs depending on distances to be covered. These geographical distance differences are normally called zones and are normally based on a distance from a central point such as a warehouse or shipping sites.

2.3 Transportation hidden costs

These are costs not associated directly by the delivery/transportation of a consignment from one geographical area to the designated area.

2.3.1 Driver turn over

These are costs associated by a company losing its truck drivers either due to competition in the trucking industry, dismissal or retirement. Other costs associated with driver turnover rate include, costs of hiring a new driver and retraining them, inefficiency (production loss) of new truck driver and advertisement costs associated by acquiring new truck drivers.

2.3.2 Product return

Not to be confused with return logistics, product returns by customers do end up costing a lot if quality standards are not met. At this age of fierce competition and globalization, customers do expect free returns which can be a real deal breaker for a company to absorb the cost into their bottom line.

2.3.3 Customer satisfaction

Acquiring new customers costs more than retaining them. It's for the company's best interests to therefore offer impeccable customer service that will ensure that they retain their existing customer base and with a probability of increasing brand loyalty through positive word of mouth by their customers to other potential customers.

2.3.4 Indirect driving costs

These are costs associated by factors such as, truck drivers taking unnecessarily long breaks during shifts. Poor driving skills and poor route planning which end up increasing fuel and maintenance costs. Constant sick leaves by the drivers can also contribute to increased indirect driving costs.

2.3.5 Idle equipment costs

These are costs that accrue when the truck is in use (generating revenue) or not. They include:

- Monthly cost of interests on truck and or trailers

Interests on loans need to be paid irrespective of whether the vehicle is in use or not.

- Monthly costs of depreciation

Depreciation is the decrease in value of assets over its useful time. Depreciation costs are accrued if the vehicle is in use or not

- Monthly costs of insurance

Just as the above examples, insurance costs are also accrued irrespective if the vehicle is in use and thus generating cash or not.

Its therefore important for the management to ensure that their trucks are fully utilised all around the year to cover the above-mentioned costs, preferably 120,000km per year.

3 Fuel economy

There are many factors that affect business costs, labor geography being one of them. Compared to Finland, Kenya's workforce (drivers) is relatively cheaper. In Finland, the biggest transportation costs are labour (30%-60%) followed by fuel (20%…30%) and finally capital cost at around 20%...30% (Tonni Kokkonen, 2015). However, in Kenya the order is reversed and labour costs [according to the government of Kenya heavy commercial truck driver's minimum pay per month should be Ksh. 29169.00 (€253.64)] tends to be the lowest compared to fuel cost and capital costs (The labour institution act No 12 of 2007, 2019).

Following this, fuel costs is therefore the biggest cost that logistics companies in Kenya accumulate. It's also one of the areas firms can make changes that leads to savings and therefore be at a higher competitive advantage through offering competitive prices to their customers. Fuel economy is defined as the amount of fuel consumed per km travelled

Other factors apart from day-to-day driving, that can potentially increase fuel costs in Kenya, include:

- Drivers carrying extra luggage without their supervisor's knowledge. This extra luggage normally adds weight to the vehicle thereby increasing fuel

consumption. The luggage often does force the drivers to veer away from the intended route, to deliver the luggage. These extra km added surely adds to total fuel cost.

- Intentional fuel theft by drivers to sell fuel to other parties normally at a lower cost.
- Fuel theft by third parties, especially when the vehicle is parked and not properly supervised.
- Aggressive driving. Constant breaking, and hard accelerations increases fuel consumption by almost 50% (Tonni Kokkonen, 2015)
- Increasing speed from 80km/h to 90km/h increases fuel consumption by 6% (ibid, 2015).
- Excessive idling not only consumes fuel with no money being realized, but also ensures that wear and tear is prevalent and at the same time polluting the environment.

3.1 Increasing truck fuel efficiency

3.1.1 Efficient driving

Telematics devises can be used to monitor drivers driving dynamics such as breaking, acceleration and driving speed. Harsh breaking and hard acceleration not only increases fuel consumption but also introduces more wear and tear of the vehicle, thus increasing the operating cost of running the truck. Efficient driving can be achieved through the following:

Figure 11 Driver performance feedback device

Source: www.busandcoachbuyer.com

a. A study by the European commission found out that training a driver one day in a year could result into 5% fuel economy. This can result to savings costs up to Ksh. 132,000 (€ 1147.8) of fuel per year according to US environmental protection agency (EPA).

b. According to the US department of Energy, the driving speed sweet spot for most vehicles is about 80km/h. Also, increasing speed to 100km/h from 80km/h can reduce fuel efficiency by almost 20% (Debora Whistler, 2011).
c. According to US department of energy, rapid acceleration and aggressive breaking can reduce fuel efficiency by 15%-30% at highway speeds and 10%-40% in city traffic driving (ibid).

3.1.2 Vehicle condition

Improving vehicle aerodynamics by use of equipment such as roof fairings, cab extenders and side skirts can increase fuel efficiency by 15% and 5% respectively (Debora Whistler, 2011).

Reducing vehicle weight is another measure that can improve fuel efficiency. It takes a lot of energy to start moving a heavy mass than a light one. Thus, avoiding items with excessive and unnecessary weight in the vehicle will increase fuel efficiency by almost 1% per 45kg shed (US Department of Energy).

Improper tyre pressure below 10psi of the recommended levels can reduce truck fuel efficiency by 0.5%~1%. It can also cause uneven deterioration of the tyres resulting in failure such as puncture thereby increasing truck's operation downtime and other costs. Due to escape of air molecules through the tyre rubber, which is about 2psi a month, tyre manufactures recommend that tyre pressure be checked every week by use of a tyre gauge. This difference in pressure can also be caused by load and temperature changes (Debora Whistler, 2011).

The moving parts in the engine do need maintenance and lubrication to function properly. Using a low viscosity lubricant such as synthetic motor oil will ensure that, as the lubricant gets used over time, it will still retain its low viscosity properties compared to conventional/mineral motor oil. This is very crucial because if the viscosity increases especially during cold days, during vehicle start-ups, wear and tear will increase and thus sabotage fuel efficiency as fuel will start to leak inside the engine. Research has found that fuel efficiency will increase by 3%~5% by use of synthetic engine lubricants and save additional 1%~4% by use of synthetic transmission oil (ibid).

3.1.3 Route scheduling and optimization

Route scheduling and optimization is the process of combining orders and determining the most cost-efficient route based on factors such as time, distance, service time per stop, traffic cost limitation, driver skills and more to minimize operation cost. Inefficient route scheduling and optimization can lead to excessive fuel consumption, reduce productivity, increase time waste and underutilization of trucks.

3.1.4 weather

During hot weather, fuel can be saved by opening windows when driving at low speeds than using the air conditioner. However, at higher speeds, rolling up the windows and using the AC is preferred since higher speed with windows down will reduce vehicles aerodynamics and increase drag resistance which will result into higher fuel consumption.

4 Managing drivers

According to Terry Hill (2000, 530), people's (drivers') attitude towards work tend to change as economies develop and their inherent pledge towards company's goals do regularly change. Even more, many assigned jobs, tend to become repetitive and monotonous after a while, thereby making some of the workers feel dull and in need of an induced boost to work well. He further states that to improve the people's (drivers') jobs, managers responsible, should create opportunities that influence and improve working environment and consequently linking and sustaining workers (drivers) contributions to business results and thus reducing workers (drivers) turnover rate which is especially high in Kenya.

4.1 Approaches to managing drivers

4.1.1 Effective communication

On quoting Mercer transportation officials, Sean Kilcarr (2007) notes that companies must do more than meeting driver's financial needs but focus on their needs as

humans as well. The writer continues to state that companies should provide a channel where drivers can voice their complaints without fear of rejection.

Mercer's, a transportation company in the US, had driver turnover rate of 32% compared to 121% average rate of the transportation industry as of 2005. This was because of the company trying to figure out what worked best for their drivers by discussing candidates likes, dislikes, hobbies and family needs during driver's orientation. (ibid. 2007).

The various ways of communicating with drivers effectively include but not limited to:

- Being an effective communicator through providing consistent feedback to drivers and use of personal touch as much as possible such as using face to face communication.
- Engaging with drivers on a sincere discussion by mastering nonverbal communication cues. Mastering nonverbal cues will enable managers to dig deep into drivers minds if they are showing concerns where they cannot articulate their thoughts verbally.
- Becoming an active listener through cues such as attentiveness, minimal to no interruption, and not running high on emotions whenever things are not working properly.
- Improving driver's self-esteem by showing gratitude, being agreeable and giving them your time.

4.1.2 Enabling driver's growth

There are various ways a company can impact on driver's growth. The most common ways normally are driver retraining on new technologies, and on new rules and regulations impacting the transportation industry.

For veteran drivers, management position could also be the next necessary step. For a company with many drivers under their belt, a veteran driver of the company could be a 'connection' between upper management and the other drivers. This would ensure that there is constant communication between the management and drivers.

If no position of management is available, well performing drivers or veteran drivers could be given responsibility of training the other drivers while at the same time drive less distance in comparison.

4.1.3 Managing driver's performance

It's no secret that firms that provide reliable and on-time delivery services tend to do better than their competition. This kind of responsibility is solely based on driver's performance who more often than not, lack direct supervision thereby having greater control over their job. Metrics such as fuel efficiency, operational costs and delivery performance are directly influenced by how drivers operate their trucks (Saldanha, Hunt & Mello 2013, 15).

According to the research, improving drivers' performance requires that management introduce both formal and informal control for better logistics operations performance. Formal controls are the rules and regulations written by the management to guide employees' behaviour according firm's objectives. On the other hand, informal controls are unwritten mechanisms that are initiated by the employees (drivers) that influences their behaviour directed to meet firms' objectives (ibid., 15).

4.1.3.1 Formal controls

Operational and financial performance are some of the metrics that the formal control tends to influence. Formal control can be distinguished into two, mainly as **activity or behavioural control** and **output control** (ibid., 16). Activity controls are the specific rules set and behaviours encouraged which help employees (drivers) to meet their performance and company's goals. They normally focus on controlling actions. (Janice Edwards, COTR, David Try, NWCC, Dave Ketchen, Auburn University, Jeremy Short 2019).

Output control on the other hand includes evaluating performance of employees (drivers) against set standards by monitoring employees' results. Output control normally focuses on controlling results as compared to behavioural control which focusses on controlling actions (Flamholtz, E. 1979, 22). It also enables the employees(drivers) to receive feedback from the company thereby helping them to improve their individual goals aimed at improving firm's performance (Saldanha, Hunt & Mello 2013, 17).

4.1.3.2 Informal control

Finally, clan or informal control are often initiated by employees themselves and always tend to be unwritten and thus relies on shared traditions values and expectations with an aim of working towards the organization's goals (ibid.,17). These shared traditions and values rely heavily on how the employees observe the organization's commitment to their wellbeing (Steven Hutchison and Debora Sowa 1986, 500). The following types of informal controls are; **perceived organizational support** (POS): is the belief that a firm is genuinely concerned and contributes to the wellbeing of their employees. Examples include perceived impartiality, job conditions and organizational reward (Baran, Shanock, & Miller, 2012). **perceived supervisor support** (PSS): is the degree to which employees believe their supervisors value employee's contributions either by caring or helping them (Kelista Lea Burns 2016, 5). The observed relationship between PSS and POS has been shown that PSS leads to POS, however other findings have suggested that vice versa is true with POS increasing PSS (Robert Eisenberger, Florence Stinglhamber and Christian Vandenberghe, Ivan L. Sucharski and Linda Rhoades 2002, 565). **Professional controls** are the extent to which communication, feedback and evaluation among employees (drivers) is encouraged by the firm to foster a sense of accountability and informally motivate each other (Saldanha, Hunt & Mello 2013, 18).

The effect of informal control on employee's performance are *norm of reciprocity* and *enhanced firm reputation.* Norm of reciprocity is the tendency for employees (drivers) to feel obligated to work towards the firm's goals because they have experienced high level of organizational support towards their overall wellbeing. On the other hand, enhanced firm reputation is indicated through employees 'bragging rights' against employees of other companies as a result of downward comparison because of their firm's successful reputation. Drivers from successful companies also do experience enhanced feeling of belonging thereby creating powerful teams that aim at ensuring their organization stays on top (ibid., 18).

5 Customer Satisfaction Theory

To acquire and retain new and old customers requires that their expectations when purchasing or repurchasing services or products are met or surpassed. The link between sales, services satisfaction and profits is direct according to Richard Gerson (1993, 5).

Additionally, the author defines quality as “whatever the customer says it is” ibid (7, 1993) as every customer is different with varying degrees of use of the product or service purchased. Shep Hyken (2018) seems to support this statement as he writes that some CEOs of companies are emphasizing on customer satisfaction more than quality and price. Some of the reasons why customers, either in B2B or B2C, cease doing business with a company could be a single or a combination of factors such as:

- Unfulfilled promises leaving customers feeling unappreciated
- Other times, customers are not directed to the right customer service personnel with answers customers are looking for.
- Rude and unhelpful personnel according to customers
- Customers being transferred from one personnel to another, amounting to time wasting.
- Customers being put on hold on the phone for a longer period of time.
- Hidden information and costs

As Peter Drucker once said, what gets measured gets managed, companies should look into ways on how they can measure their customers satisfaction and point all their efforts and energy into fulfilling them. One of the first steps of improving customer service is the ability to identify and define current company’s definition of customer service and likening it to customers own definition of ‘good customer services’ and making necessary adjustments.

5.1 Cost of poor customer service

Cost of poor customer services can be broken down into three main categories. Lost customer revenue, lost opportunity revenue, customer replacement cost.

5.1.1 Lost customer revenue

As Aaron Pedersen (2015) explicitly points out, the direct cost of losing a customer can only be identified by knowing how much each customer is really worth through a customer's lifetime value (CLV) which is defined as "the amount of money a customer will spend at your business over their lifetime". Additionally, loyal customers drive 80% of the additional business even though they can represent 20% of the total customers. This claim is supported by McDonalds corporation which in 1995 found out that their frequent customers, males between ages of 18 to 34, eat at their stores an average of 5 times a week accounting for 77% of its sales. (Blattberg, Robert C.,) The formula of calculating cost of lost customer revenue according to Richard F. Gerson (1996,7) and based on U.S. Office of Consumer Affairs is

A. Yearly revenue Ksh._____
B. Total number of clienteles =_____
C. Percentage of unhappy clienteles (x%)
D. Number of unhappy clienteles (C×B) =_____
E. Percentage of unhappy clienteles likely to switch (y%)
F. Number of unhappy clienteles who will switch (E×D) =_____
G. Average revenue per customer (A÷B) Ksh._____

Proceeds lost through poor customer service (F×G) Ksh._____

5.1.2 Lost opportunity revenue

With the advent of social media like Facebook and twitter, it has become easier to disseminate and receive information to almost 0 costs. Poor customer experience will not only push your customers away but will also enable them to spread the word around among their friends and their digital friends thereby making your company lose on potential customers. According to Shep Hyken (2016), businesses have cumulatively lost $62 billion per annum through meagre customer service in 2016. He adds that 49% of the 2000 respondents by the NewVoiceMedia research, reported switching and of those 49% switched more than once.

A survey by Retail customer experience (2011) found out that people who tell others about poor customer service were nearly as twice as many as those who shared positive experience. A discontented customer will tell approximately 10 people about their experience with 13% of those initial disgruntled customers telling about 20

people (Richard F.Gerson. 1998, 8). Assuming a company has 10 unsatisfied customers willing to switch, and each customer spent Ksh.1000 per year, that would amount to a total of more than Ksh.126000 of customer lifetime value (CLV) lost by the company in a year.

To calculate the lost opportunity value (ibid., 6):

H. Number of other people unsatisfied clients will tell (F×10)
=_____

I. Potential new clients lost due to word of mouth (I÷ (B × 2%)) =_____

NB: 2% is an assumption of customers who will buy elsewhere.

J. Potential income lost (J× G) =Ksh._____

5.1.3 Cost of replacing a customer

According to Khalid Saleh (accessed 10/4/2019), it costs five more times to attract new clienteles than keep the current one. Amy Gallo (2014), agrees and states that depending on the industry, a company is between 5 to 25 more times likely to spend more in acquiring a new customer than keeping an existing one.

Figure 12: respondents agreeing retention is cheaper than acquisition

Source: www. invespcro.com

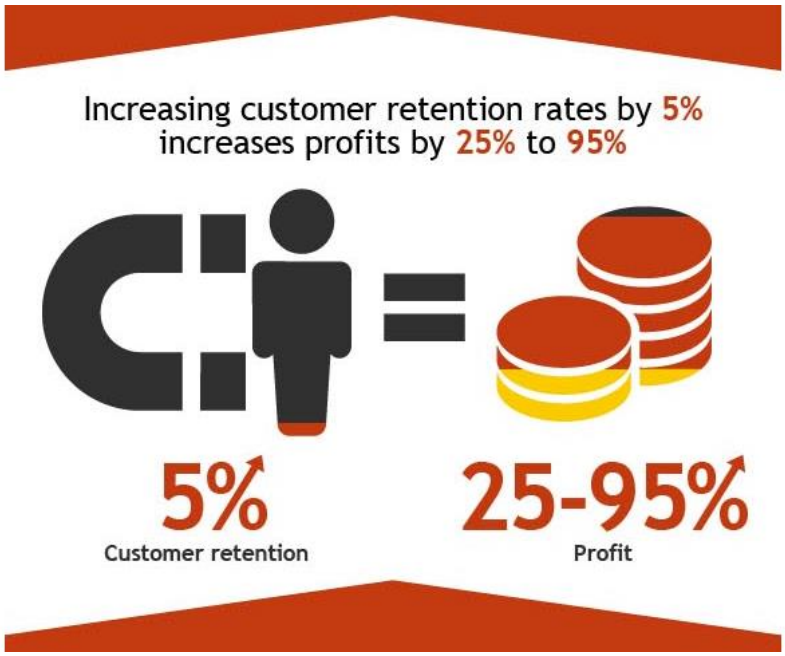


Figure 13: percentage profit increase as a result of customer retention

Source: www. invespcro.com

She continues to state that increasing clientele retention by 5% increases profits by 25% ~ 95% depending on the industry as shown above in fig 13.

Customer replacement cost calculations:

K. Customer acquisition costs ($z\% \times A$) =Ksh._____

Where z% is the percentage costs of sales of the revenue

L. Average costs per customer ($L \div B$) =Ksh._____
M. Replacement costs for lost customers ($M \times 5$) =Ksh._____
N. **Total yearly costs due to poor customer service: (H+K+N)** =Ksh._____

6 Research methodology

6.1 Introduction

Research is a systematic and logical study of an issue or a phenomenon through a scientific approach with an intended end results of finding a fact or solutions/answers to problems (O.R. Krishnaswami and B.G. Satyaprasad 2010, 2).

6.2 Population and sampling size

Due to time restriction, budget and other factors (discussed below), the sample size chosen was small, made of 35 truck drivers. The study aimed for both long and short distance driving. Since the survey was done through one on one interviews, the response rate was 100%. Random sampling on status such as age was used. However, it is to be noted that even though gender, was one of the criteria used, no female drivers were available during the time and place of this study.

6.3 Data collection methods

According to C.R. Kothari (2004 95), there are two types of data collection, primary and secondary. Primary data are those data that are collected on the ground by the researcher. The various ways of collecting these data could include, use of questionnaires, interviews and observations. Data collected this way are normally afresh and for the first time. On the other hand, secondary data collection involves use of already existing data that have already been analysed by another party.

Due to the nature and complications of this study, a mixed method of primary data collection was used. Research was done through personal interviews but recorded in form of a questionnaire through the use of google forms. This way, the interviewees were able to provide more information and insights that were at first overlooked, or not thought of at the first place. The research survey was carried on the 14th March 2019 in Nairobi Kenya at a truck's terminal point. The research questions were

formulated and aimed to find out the general atmosphere of the truck driving culture in the country after reading reports of the challenges the industry was facing. All the research questions were formulated by the author of this document and facilitated to the intended audience by his colleague.

By using primary data collection and analysis, the study aimed to see if there was a correlation between different factors and their effect on driver honesty and turnover which are currently plaguing the transport sector in Kenya.

Secondary data was obtained via sources such as e-books, articles and other professional materials. The aim of using secondary data was for the writer to compare other countries that had similar issues, and to reimburse on this study what he couldn't achieve by use of primary method for various reasons such as time and capital.

6.3.1 Challenges faced when collecting data

- Time constraints: not enough time to split between her personal life and helping in this study.
- Language barrier: all the questions were in English, most of her interviewees needed direct translation to Swahili whereby some meaning got lost.
- Lack of enough manpower to collect as much data as possible.
- Open ended questions were never answered. All drivers dreaded to be recorded for reasons such as fear, fear that the recordings would be used against them if they openly discussed the negatives they face in the industry.

7 Data analysis

The study used descriptive analysis to describe different phenomena as seen under results and findings. Statistical measures such as central tendency (mean median and mode) and measures of association such as correlation was used by use of SPSS computer programme. The responses were summarised by use of simple charts obtained directly from google form. Below is the summary of the visualized data.

7.1 Results and findings

7.1.1 Truck drivers profile in kenya

7.1.1.1 gender

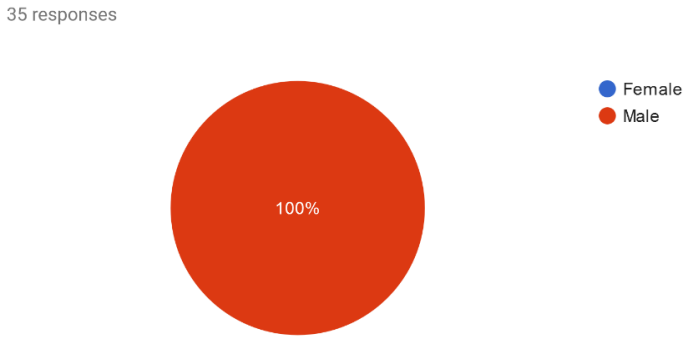


Figure 14 Gender

At the time of taking the survey, only men were interviewed as there were no females' drivers available. Not surprisingly, Kenyan women tend to be discriminated against formal or informal blue-collar jobs and their dominant role seen as that of raising children and looking after household. (Amanda Ellis, Jozefina Cutura, Nouma Dione, Ian Gillson, Clare Manuel, Judy Thongori 2007, 77)

7.1.1.2 Age

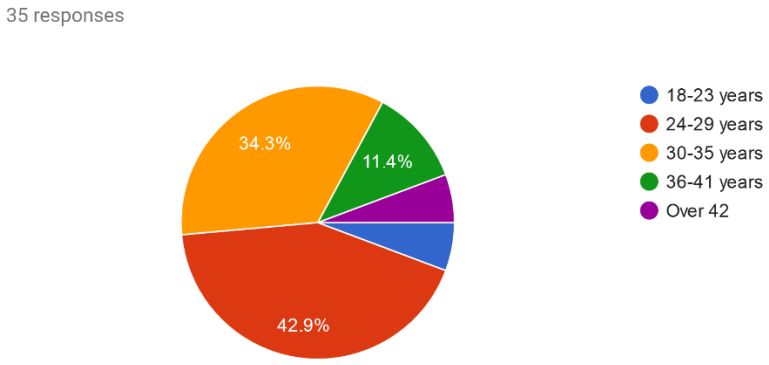


Figure 15: Age

Kenya has a very young population, according to world population review, as of 2019, the median age of the country's population is 19.7 years. The figure above supports this claim as the 24-29 age group interviewed consisted of 42.9% of the total

sample size surveyed. Both 18-23 years and over 42-year participants accounted for 5.7% each.

7.1.1.3 Driving experience

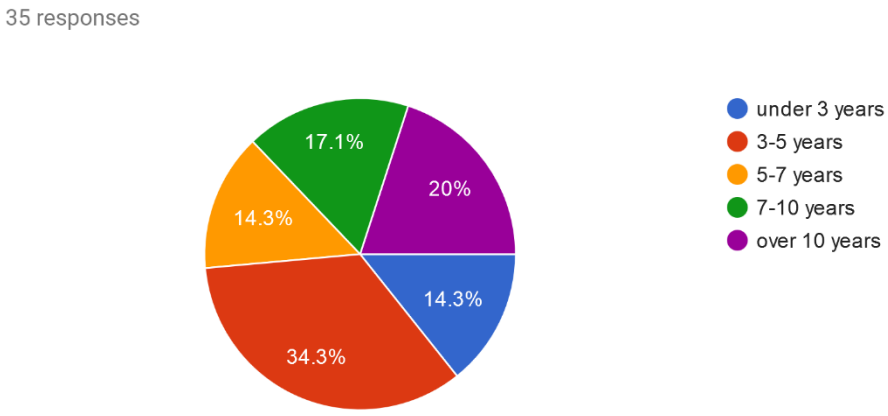


Figure 16: Driving experience

Majority of the drivers interviewed were between the age of 24-29 years old, this goes hand by hand with the majority of the drivers having a driving experience of between 3-5 years which has a share of 34.3% of the total population sample surveyed.

Young drivers with less years of driving experience are generally preferred by truck owners, since majority of them have not yet started a family of their own. Young drivers in the Kenya are also likely to be more adventurous and high-risk takers and thereby can be sent to deliver goods to new and unfamiliar places compared to elderly drivers. They also tend to be paid less since most probably don't have family responsibilities of their own yet.

7.1.1.4 Opinion: care for fuel efficiency when driving

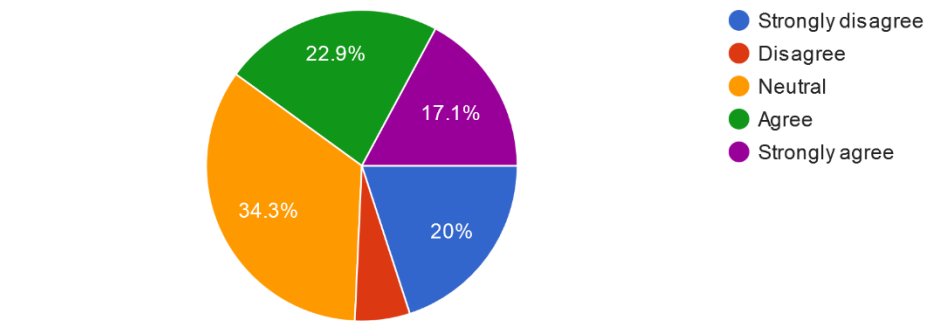


Figure 17: driving efficiency

It's goes without saying that majority of the drivers interviewed (34.3%) never pay attention to their driving habits and how that affects fuel consumption. Most of the truck drivers interviewed started their career as an assistant to the driver (turnboys) and later 'graduated' as co-drivers before becoming fully fledged drivers on their own.

7.1.1.5 Opinion: salary satisfaction

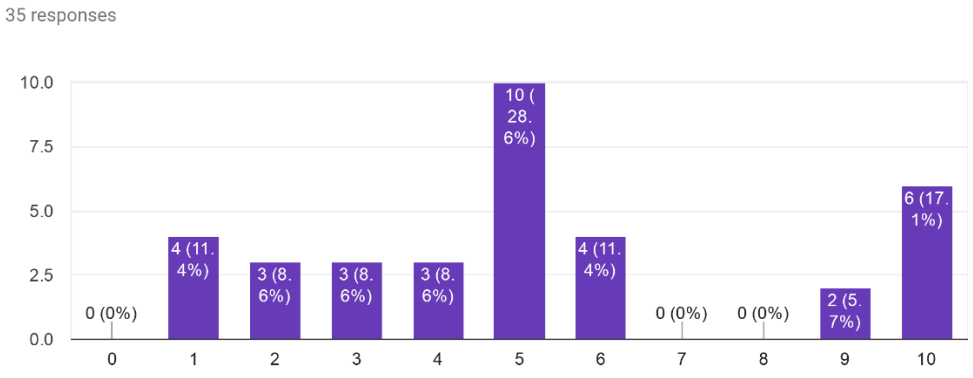


Figure 18: salary satisfaction

Over 50% (mean 5.2286) of the interviewees were not satisfied with their current pay. These could mostly be drivers with families already. As of 2018, the minimum wages of medium sized vehicle drivers and heavy commercial vehicle drivers is Ksh 195/hr (€1.69/hr) and Ksh 268,80/hr (€2.33/hr) respectively (wageindicator, 2019).

7.1.1.6 Opinion: Use of company's truck for personal errands

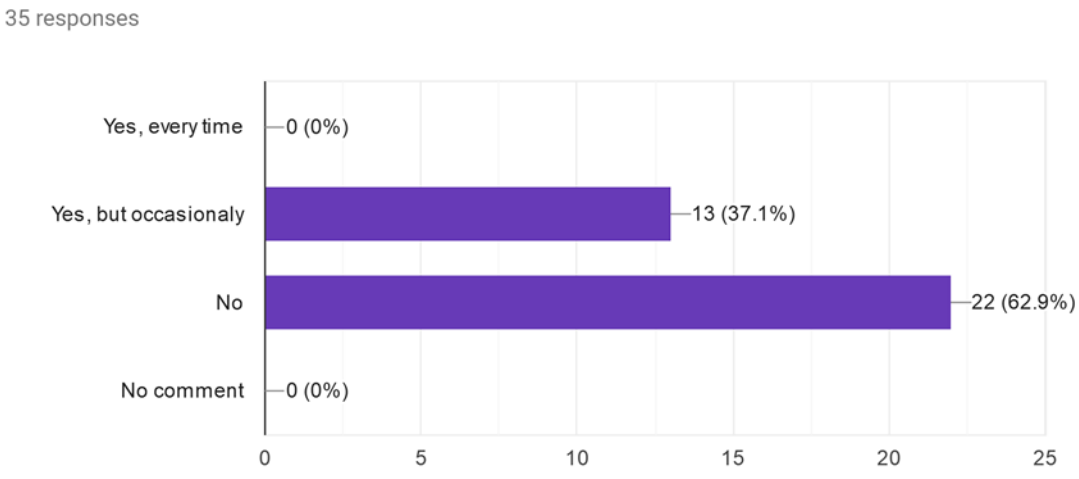


Figure 19 use of truck for personal errands

37.1% of the truck drivers interviewed admitted in using the company's vehicle to earn extra money. The rest, 62.9% did not use the company's vehicle unauthorized. This was done presumably to supplement their low wages.

7.1.1.7 Driving hours before taking a break

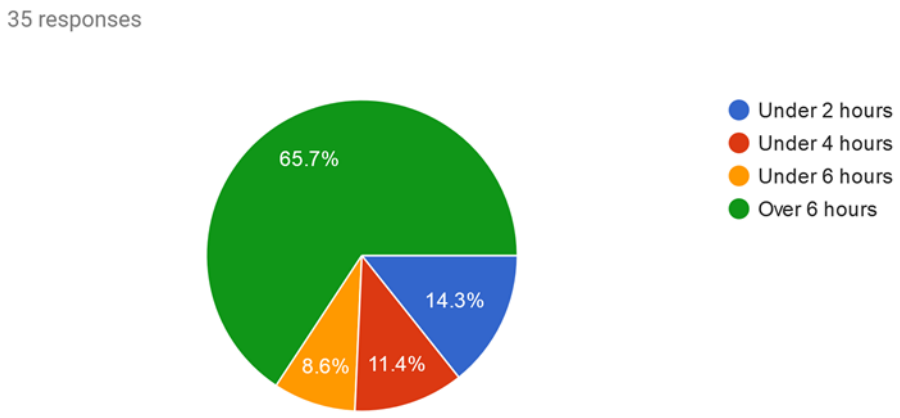


Figure 20: Driving hours before break

65.7% of the drivers surveyed drove over 6 hours before taking a break. Compared to Europe, the maximum driving hours before taking a break by law is 4.5 hours. These observations have been caused by factors such as truck owners refusing their vehicles to be driven at night due to either or a combination of poor road lighting resulting to poor visibility, car-jacking and/or road accidents as a result of poor visibility at night. This has resulted into drivers being forced to drive many hours during the day to cover as much distance as possible before taking a night-break (https://www.youtube.com/watch?v=wCUHIVvjzXM on behalf of UKAid) accessed on 25/05/2019. Truck drivers experience a lot of vibrations from sources such as truck powertrain and road surface conditions (Azizan, Fard, Azari, Benediktsdottir, Arnardottir, Jazar & Maeda, 2016). These vibrations have been linked to causing driver fatigue or drowsiness. And with majority of Kenyan roads being uneven or unpaved, combined with long driving sessions without a break, this can result into truck drivers being subjected to enormous amount of stress and fatigue. Similar cases have been observed in India whereby drivers are subjected to working for 15 hours a day (Dr.P.Senthilkumar, Mr.N.Rajkumar 2015, 6) with aftermath being road accidents rates increasing or fuel theft by the drivers as a way of 'getting back due this and

other injustices' as noted by Ramesh Kumar (2016). It should also be noted that Kenyan drivers in the trucking industry are paid by km driven contrary to the mandated hourly charges as stipulated by the government. Therefore, this forces drivers to drive at high speeds endangering their lives and lives of others on the road. This has also meant that Kenyan drivers are in a lot of duress to deliver the goods on time since they can only drive during daytime.

7.1.1.8 Opinion: Rest more often when on transport assignment

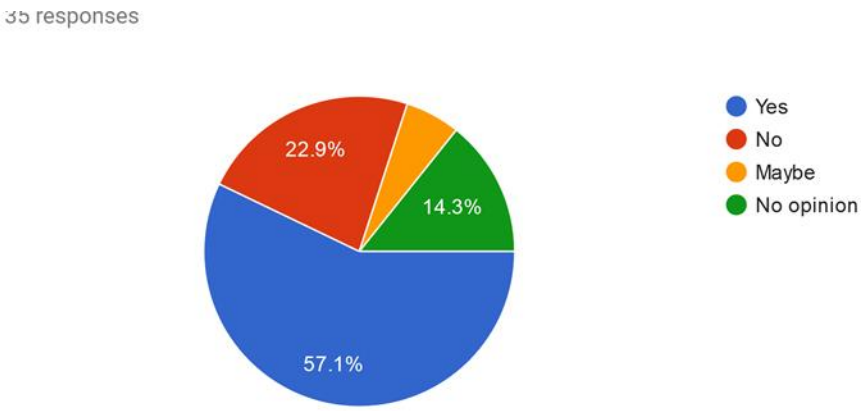


Figure 21 rest schedule

Majority of the drivers (51%) would like to have more rest when on an assignment. The rest either didn't have an opinion on the matter or were against taking breaks. This could be explained mainly by the fact that drivers are paid by km traveled and not time. Having a break would result in less km travelled in a single day and thus less wages/salary.

7.1.1.9 Opinion: Receive driving plan/ schedule from supervisor/dispatcher

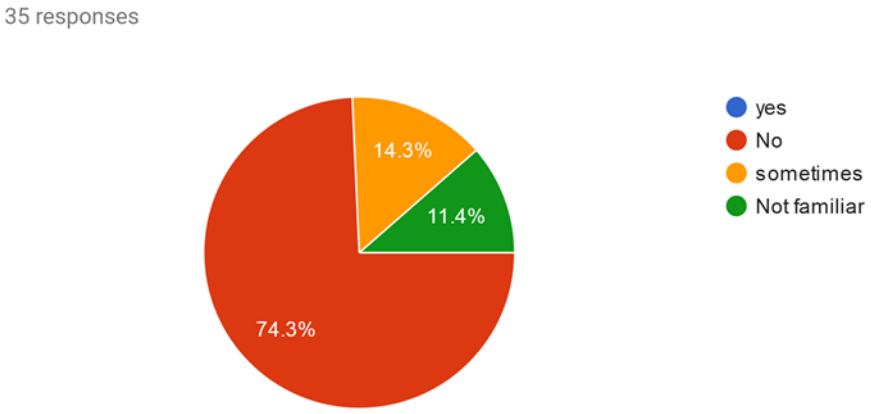


Figure 22 driving plan

74.3% of the interviewees never had a driving plan/schedule from their supervisors/ dispatchers. 11.4% were not familiar with the term driving plan, whilst 14.3% did receive driving plans occasionally. Without the plan, drivers are not able to know when and where they should take a break, which are the best routes to use or generally calculate the transportation cost. This could lead to time wastage especially in traffic, more fuel consumption, and loss of productivity (Jurica Magoci, 2016)

7.1.1.10 Opinion: Majority of truck drivers are dishonest

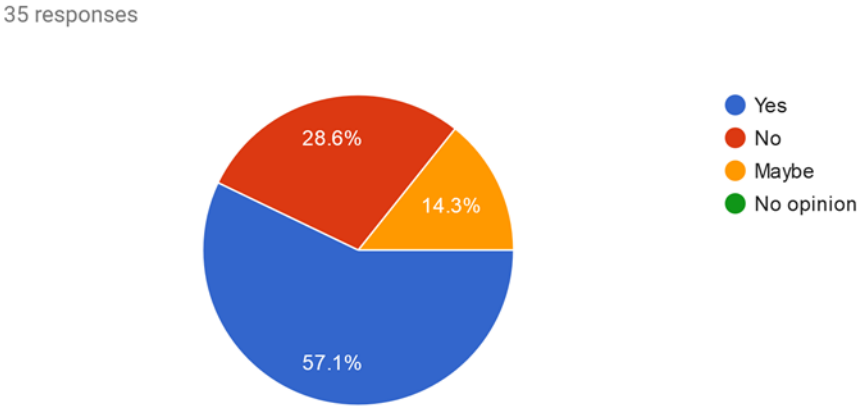


Figure 23 opinion on honesty

Over half (57.1%) of the interviewees believed that dishonesty was prevalent in the trucking industry. This can lead to losses for the company involved. Dishonest drivers also lead to high driver turnover rate and risking vehicle damage when overloading

the vehicle in both cases this will only increase the company's overall operating costs.

7.1.1.11 Opinion: Achievements are rewarded/complemented

35 responses

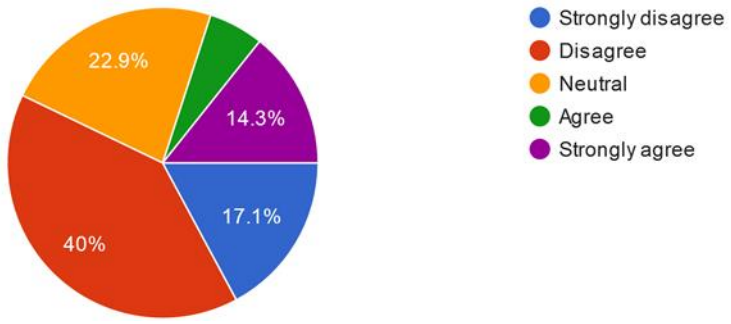


Figure 24 achievement recognition

Over 50% of the interviewees rarely receive any complements or rewards from their employers. According to Forbes 36% of employee do switch their jobs if there is lack of recognition from the management (Victor Lipman, 2019). By recognizing their drivers, firms could reduce driver turnover rate, foster better relationship between the drivers and management and minimize dishonesty among the drivers.

7.1.1.12 Opinion: Would like to learn how to reduce fuel consumption when driving

35 responses

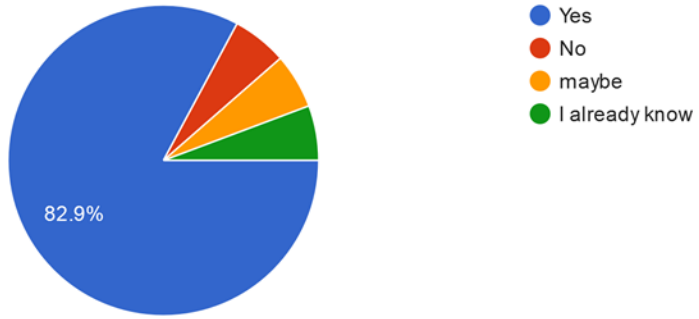


Figure 25 learn fuel efficiency driving skills

83 % of the interviewee would like to learn driving skills on how to reduce fuel wastage. 5.7% already had the know-how of reducing fuel wastage when driving. 5.7% didn't want to learn whilst the rest, 5.7% were unsure.

7.1.1.13 Correlation between age and salary satisfaction

		age_group	salary_satisfaction
age_group	Pearson Correlation	1	-.528**
	Sig. (2-tailed)		.001
	N	35	35
salary_satisfaction	Pearson Correlation	-.528**	1
	Sig. (2-tailed)	.001	
	N	35	35

Figure 26: Correlation between age and salary satisfaction

65.8% of those who took the survey were between the 0-5 score numbers as shown . There was a strong correlation between the higher the drivers age the lower the salary satisfaction as shown in fig 18 r=-.528. The significance number p of .001 is lower than 0.05 shows that the correlation is statistically significant. This could be attributed to factors such as, older drivers having got a family needs more money to take care of them as single family or extended family

7.1.1.14 Correlation between salary satisfaction and honesty

Descriptive Statistics

	Mean	Std. Deviation	N
salary_satisfaction	5.2286	2.92138	35
tds6	1.5714	.73907	35

Correlations

		salary_satisfaction	tds6
salary_satisfaction	Pearson Correlation	1	.115
	Sig. (2-tailed)		.511
	N	35	35
tds6	Pearson Correlation	.115	1
	Sig. (2-tailed)	.511	
	N	35	35

Figure 27 correlation between salary satisfaction and honesty

57.1% of the sampled population think majority of truck drivers in the industry are dishonest as shown in figure 23. There is a no statistically substantial relationship between higher salary satisfaction and thinking that majority of the truck drivers are dishonest. However, the effect size r=0.115 is rather small. The p-value for this correlation is .511 thus, the correlation between the two variables is not significant to the general population size, this support the study *can wages buy honesty* which found out that increasing the salary above the industry standard reduced inventory loss by 39% but won't pay off employees' dishonesty/theft. The study analysis also suggested that benefits were likely to be higher where workers shared shifts (Clara Xialing Chen & Tatiana Sandino 2012, 23)

7.1.1.15 Relationship between salary satisfaction and personal use of company's truck.

Descriptive Statistics

	Mean	Std. Deviation	N
salary_satisfaction	5.2286	2.92138	35
tds2	2.6286	.49024	35

Correlations

		salary_satisfaction	tds2
salary_satisfaction	Pearson Correlation	1	.102
	Sig. (2-tailed)		.559
	N	35	35
tds2	Pearson Correlation	.102	1
	Sig. (2-tailed)	.559	
	N	35	35

Figure 28 relationship between salary satisfaction and misuse of trucks

The correlation between salary satisfaction and misuse of company's truck is weak since the effect size *r* of 0.102 is lower than 0.5. However, the correlation is positive and thus generally, drivers who are more satisfied with their salary will tend not to use company's lorry for personal benefit. The p-value for this correlation is .559 bigger than 0.05 thus, the correlation between the two variables is not significant to the general population size. According to Kim Girard (2012), studies found that overpaying workers relative to the industry standards caused a drop in employee theft, for 1-dollar wage increase companies were able to save 60 cents due to theft.

7.1.1.16 Relationship between driving experience and personal use of company's truck

		age_group	driving_experience	salary_satisfaction	tds1	tds2
age_group	Pearson Correlation	1	,754**	-,528**	-,085	-,379*
	Sig. (2-tailed)		,000	,001	,628	,025
	N	35	35	35	35	35
driving_experience	Pearson Correlation	,754**	1	-,358*	,161	-,291
	Sig. (2-tailed)	,000		,035	,357	,090
	N	35	35	35	35	35

Figure 29 relationship between driving experience and misuse of trucks

There is a weak but negative relationship between the two variables of *r* -0.291. Thus, as the driver experience increases there is more likelihood of them misusing company's truck for their own personal gain. However, there is no statistically significance correlation between the two variables as the significance value p of 0.09 is greater than 0.05. according to Dana Wilkie (2019), "research psychology shows that high percentage of people are likely to engage in theft and small-scale cheating when there is a little chance of being caught." Also, as shown below (fig 30), there is a strong and positive correlation *r*=0.754 between age and driving experience and thus, since the older drivers tend to have much to cater for, such as families, they are more prone to misuse company's trucks to reimburse their income. Generally, employees (drivers) with more experience tend to be trusted more and with little to no supervision, it can be tempting (easier) for them to commit employee fraud. According to an article, inexperienced employees (drivers) have low expectations for compensation (Randstad, 2019) compared to highly experienced workers who generally compare themselves to others, where less pay can make them feel financially inferior to their colleagues and thus prone to commit fraud (Chad Brooks, 2013).

		age_group	driving_experience
age_group	Pearson Correlation	1	,754**
	Sig. (2-tailed)		,000
	N	35	35
driving_experience	Pearson Correlation	,754**	1
	Sig. (2-tailed)	,000	
	N	35	35

Figure 30 relationship between age and driving experience

7.1.1.17 Relationship between employee recognition and personal use of company's truck

Figure 31 relationship between employee recognition and employee fraud

According to Kim Harrison (2019), lack of employee recognition can lead to disengaged employees who are more likely to commit fraud, create a negative working environment for the coworkers and drive customers away. The writer continues to state that according to data, actively disengaged employees (drivers) are twice more likely to seek for a new job than their counterparts. Joseph T. Wells (2001) also supports the study by writing that "the more disappointed the workers, the more likely they were to participate in illicit behaviour. One criminologist depicted the phenomenon as 'wages in kind.' We all have sense of how much we are worth; if we feel that we are not justly treated or amply compensated, statistically we are more prone to risk and try to balance the scales ourselves." However, according to this study findings as shown in figure 31, there was very small correlation between employee recognition and employee fraud $r = 0.057$. the trendline was slightly positive meaning that those drivers who felt appreciated by their companies were a bit more likely to engage in company fraud thus further disagreeing with already established studies.

8 Discussion

8.1 Summary of the key findings

8.1.1 Drivers' analysis conclusion and recommendations

Majority of the truck drivers do not feel appreciated by their companies in various ways. Many of the drivers with families would like their wages to be increased and be able to rest more often. Due to lack of security on the roads, most drivers are forced to drive long hours at a go before coming to a safe area where its ensured that their client goods or fuel won´t be stolen. This is also the reason (road insecurity) why most truck owners' advice their drivers not to drive at dark. However, driving during daytimes brings its sets of challenges. The bigger one being that truck drivers will have to encounter long traffic jams that can delay cargo delivery by up to 2-3 hours in the city of Nairobi alone. Apart from time wastage, traffic jams can increase fuel consumption by 10-40% thereby increasing costs that often transcend to customers. Noise and air pollution are other indirect costs that are associated with traffic jams. The psychological effects of traffic jams on drivers such as aggressive driving and impatience can affect driver's productivity and, in some cases, lead to road accidents.

It is therefore recommended that truck owners, start providing route planning and scheduling to their drivers which can effectively increase efficiency and cut costs. With route scheduling and planning, the trucking company can be in a position to calculate goods arrival time to their customers and thus increase customers' satisfaction level. Other benefits described previously would be, minimize time wastage by avoiding routes/times prone to traffic congestion thereby reducing fuel costs and improving on overall driver's psychological state of mind.

Route planning and scheduling bundled with telematics will also give truck owners a platform to be able to implement key performance indicators (KPI's) and thus be able to discuss issues affecting their drivers and ways of improving their driving performance. As shown in fig 24, more than a half of the drivers interviewed never felt that their contributions were appreciated. It is difficult to appreciate/recognize drivers' contributions if there are no planned goals to be achieved apart from delivering

goods as shown in fig 22. As studies have shown, employees (drivers) who felt appreciated by their company will always try to give back in return and in this case, the company will experience less driver turnover and improve on driver's morale and overall save money.

KPI Category	Sample KPI Type	Description
Safety	• Speed violations • Driving speed • Alerts • Incidents	Monitor driver behavior and provide data that you can use to promote and improve driver safety.
Efficiency	• Consumed fuel cost • Idling violations • Idling duration • Fuel consumed	Monitor operational performance and provide data that you can use to reduce wear and tear on vehicles and maintenance costs.
Compliance	• Distance driven	Monitor driver behavior and provide data that you can use to ensure compliance with local, municipal, and federal regulations.

Figure 32 example of driver's KPI

Source: www.oracle.com

Through KPI's, truck owners can monitor and implement ways in which their drivers can improve their driving skills. This can be achieved through workshops and training programmes. Use of telematics can also improve driver performance while at the same time help in monitoring company's rules and regulations such as speed limit, resting time and routes used.

Furthermore, companies should take proactive measures to ensure that they background check drivers that are best fit to companies' goals and visions before employing them. This can be achieved through assessments such as NEO-FFI, and general driving history such as recent traffic violations or accidents.

NEO-FFI is a testing procedure that investigates a person's traits, the biggest 5 being;

- Openness: measures drivers' ability to accept wide range of internal and external experiences: drivers with high score in this scale would be open to new

experiences whilst those with low score would generally prefer to be practical and traditional.

- Extraversion- measures peoples sociability traits; this can be helpful if the company involved is looking for a driver who is either a team player or generally reserved and serious.
- Agreeableness-measures peoples adopted roles in relationship. Generally, people with medium to high scores tend to be trusting, agreeable and good natured.
- Neuroticism- measures relationship between emotional stability and emotional reactivity especially during negative emotions. Valuable to companies if they are looking for drivers who will be relaxed even under stressful conditions.
- Conscientiousness- measures people's strength and drive to accomplish goal or purpose. Low scorers' drivers would generally be somewhat careless and not so organised contrasted to high scorers who would generally be more diligent and organised

8.1.2 Fuel economy conclusion and recommendation

Since not so much can be done on the fuel price at the company's level, majority of fuel cost expense can only be controlled through driving habit, vehicle condition and price negotiations through contracts.

8.1.2.1 Driving habits

As discussed earlier, poor driving habits do increase fuel consumption and thus fuel cost. Drivers should be trained on ways that can save fuel such as avoiding harsh breaking and acceleration, avoid carrying unnecessary items that increases truck's weight, coast to decelerate, avoiding engine idling, reducing and maintaining speed via cruise control if available and finally planning journey ahead.

8.1.2.2 Vehicle condition

Companies should ensure that their vehicles are well maintained and that the engines are well tuned as per manufacturers recommendation. This will not only improve fuel economy, but also ensure that unnecessary breakdowns are minimized.

Vehicle's tires should also be properly inflated as recommended and regularly checked at least once per week before journey commences. Tires should be inflated to the operating pressure as recommended on the vehicle owner manual. Over inflation or underinflation may jeopardize tire's integrity leading to failure or reduced fuel

economy due to increased rolling resistance. Its therefore advisable that companies equip their drivers with proper tire pressure gauges for correct measurement. The figure (33) below shows a Kenyan truck driver checking tire pressure before starting her journey. She is using a spanner to hit the tires to gauge if tires are properly inflated or not.

Figure 33 Kenyan female truck driver checking her vehicle's tire pressure

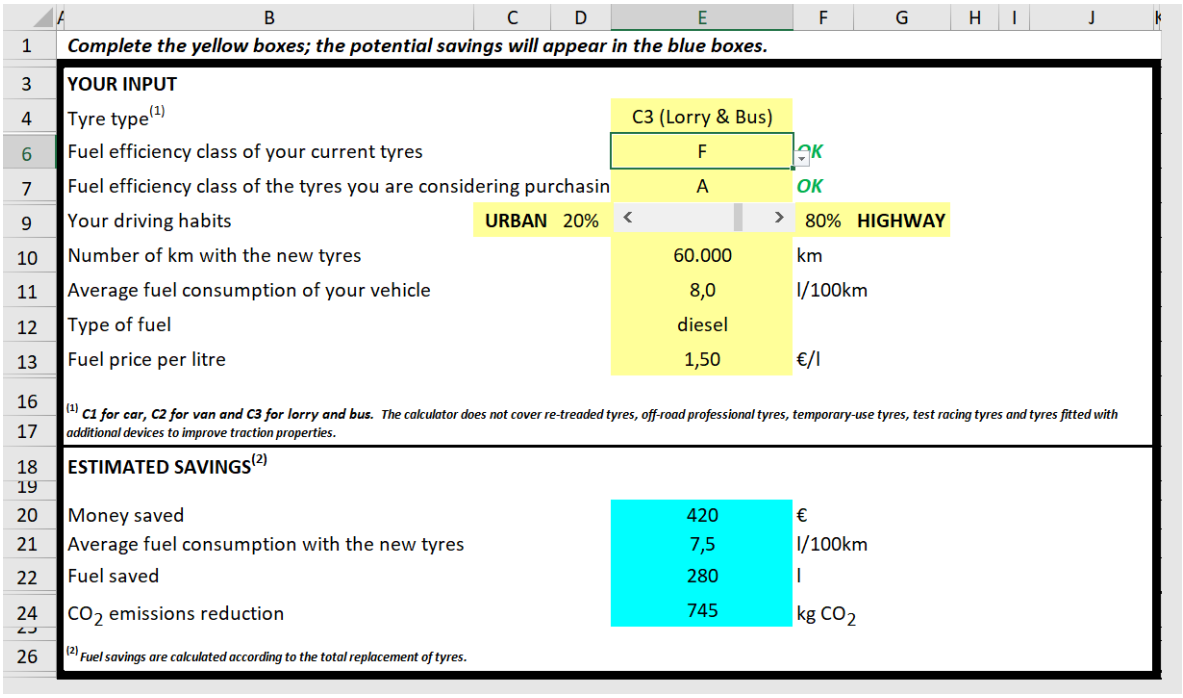
Source: Kenyan CitizenTV

Below is a cheap, all weather tire pressure gauge that can be used to check pressure even on the inner tires of a truck with ease.

Figure 34 tire pressure gauge

Source: www.amazon.de

Apart from checking tire pressure, companies should also pay attention to fuel efficiency class of the tires. According to European commission fuel saving calculator, there are 6 ratings for fuel efficiency tires namely ABCDEF with different ratings. The calculator is free to use with excel and can determine company's potential fuel savings. The link to the item can be found in https://ec.europa.eu/energy/en/content/fuel-savings-calculator.



1	***Complete the yellow boxes; the potential savings will appear in the blue boxes.***									
3	**YOUR INPUT**									
4	Tyre type[1]			C3 (Lorry & Bus)						
6	Fuel efficiency class of your current tyres			F	OK					
7	Fuel efficiency class of the tyres you are considering purchasin			A	OK					
9	Your driving habits	**URBAN**	20%	< >	80%	**HIGHWAY**				
10	Number of km with the new tyres			60.000	km					
11	Average fuel consumption of your vehicle			8,0	l/100km					
12	Type of fuel			diesel						
13	Fuel price per litre			1,50	€/l					
16	[1] ***C1 for car, C2 for van and C3 for lorry and bus.*** *The calculator does not cover re-treaded tyres, off-road professional tyres, temporary-use tyres, test racing tyres and tyres fitted with*									
17	*additional devices to improve traction properties.*									
18	**ESTIMATED SAVINGS**[2]									
20	Money saved			420	€					
21	Average fuel consumption with the new tyres			7,5	l/100km					
22	Fuel saved			280	l					
24	CO_2 emissions reduction			745	kg CO_2					
26	[2] *Fuel savings are calculated according to the total replacement of tyres.*									

Figure 35 example of potential savings through fuel efficiency tires

Source: ec.europa.eu

Use of telematics can also greatly reduce fuel theft from third parties or dishonest drivers. Modern fuel level sensors have GPS and can reliably:

- Relay data on current fuel volume
- Define refueling volume- especially important whereby fuel is purchased through cash. Majority of dishonest drivers are likely to buy less fuel and pocket rest of the money.
- Detect fuel theft from tank and determine fuel consumption.

The information can then be relayed in form of graphs and tables to the management.

Figure 36 in-tank fuel level sensor

Source: www.wagecontrol.eu

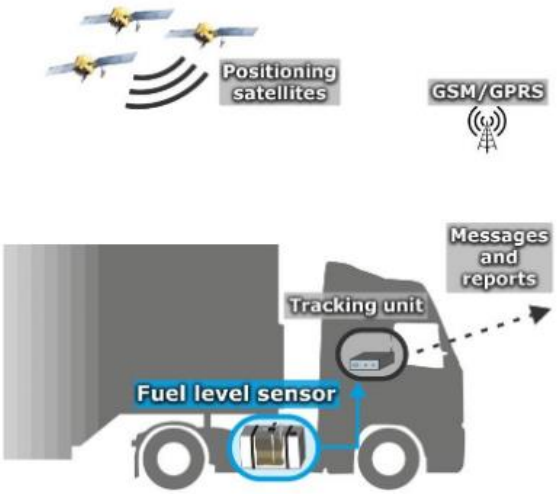


Figure 37 how in-tank fuel level sensor works

Source: www.wagecontrol.eu

Other cheaper methods to deter fuel theft is via installing cheap anti-siphoning gadgets such as the one shown below and use of defensive parking to block access of fuel tanks especially when parked with other trucks at resting yards.

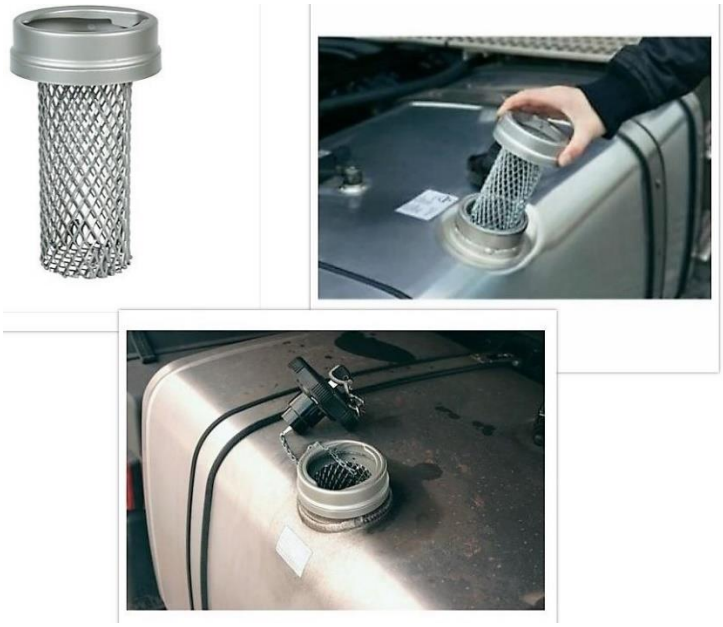


Figure 38 Anti-siphoning device

Source: www.lampa.it

8.1.3 Customer satisfaction conclusion and recommendation

Apart from making profit and expanding, businesses exist to meet certain demands that are not readily available in the said market. Where products do similar job and difficult to distinguish, companies can rely on customer service to separate themselves from the rest of the competition.

8.1.3.1 Logistics elements that affect customer service

8.1.3.1.1 Time and place utility of a product

If the product purchased by the customer is not where and when needed, the lower its perceived utility becomes and thus the lower the customer satisfaction level created by the company. Therefore, companies have an inducement to enlarge the perceived utility of their product in order to retain and attract more customers (Raphael Zeder, 2018). To improve on time delivery, the company should address issues that affect time and place utilities currently. This can be achieved through the kaizen model of continuous improvement.

Identify

Companies should make an effort to find the root cause why deliveries are late. Since there are many factors that can affect delivery time, the management should explore each aspect of the supply chain to unearth the issue.

Plan

Create a process to track the reasons why deliveries are late and categorize them to make it easier for drivers and other employees to record

Analyze

Afterwards, when there is enough data, prioritize the issues and work with key stakeholders such as drivers to develop before implementing the changes

Act

Establish standards to be met by the stakeholders through implementing new procedures and processes and focus on issues that are within company's control.

Review

Monitor the results and adjust when necessary. Document success and communicate the improvements with necessary stake holders such as drivers. Generate more interest so that there is continuous improvement on delivering goods on time (C.H Robinson 2013)

8.1.3.1.2 Customer interaction

Drivers and other stakeholders that do interact with customers should be trained on customer etiquette and show gratitude. Simple etiquettes such as being calm and professional when customer is angry, saying thank you, and letting the customer know beforehand if his/her goods are going to delay can really improve company's customer satisfaction perception and thus retaining customers and potentially acquiring new one.

Another major cause of customer dissatisfaction is delivering on commitments. If a company promises to deliver goods at a certain time and fail to do so, customers are expected to complain. To avoid this, management should consider the real root

cause of why the consignment was late and avoid giving customers unrealistic expectations.

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