



Fleet Driver Management and Operational Performance: Evidence from Road Transporters Based in Mombasa Kenya

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Abstract

The road transport sector plays an important role in supporting trade and economic activities in Kenya, particularly in Mombasa County. This study examined the influence of driver management on the operational performance of road transporters based in Mombasa County, Kenya. The study focused on driver management practices such as driver training, supervision, performance evaluation, and incentive systems. A descriptive research design was adopted, and data were collected from 122 respondents using structured questionnaires. Data analysis involved descriptive and inferential statistics. The findings revealed that respondents generally agreed that organizations provide driver training, maintain structured mission assignment systems, and require drivers to submit journey reports and maintain vehicle logbooks. Regression analysis indicated that driver management had a positive but statistically insignificant effect on operational performance ($\beta = 0.048$, $p = 0.448$). The study concluded that although driver management practices improve accountability and operational processes, their direct effect on operational performance was not statistically significant. The study recommends strengthening driver training, supervision, and incentive systems alongside technological integration to improve fleet efficiency and service delivery.

1. INTRODUCTION

Driver management encompasses the processes of hiring, training, supervising, motivating, and rewarding drivers to enhance operational efficiency, safety, and organizational performance (Begashaw, 2021). Driver management has become a critical component in the road transport sector due to its direct influence on operational performance, customer satisfaction, safety, and cost efficiency. In the transport industry, drivers are central to daily operations because they are responsible for vehicle handling, timely delivery of goods, fuel utilization, and adherence to traffic and organizational regulations. Effective driver management involves activities such as recruitment, training, supervision, motivation, performance evaluation, and rewarding drivers to enhance productivity and operational efficiency (Begashaw, 2021). Poor driver management practices often lead to increased accidents, vehicle misuse, fuel wastage, delays, and high employee turnover, all of which negatively affect organizational performance.

In Kenya, the road transport sector plays a significant role in facilitating trade and economic growth, particularly in Mombasa, which hosts the country's largest seaport. Transporters based in Mombasa serve both local and regional markets across East and Central Africa. However, many transport firms face challenges related to driver indiscipline, fatigue, inadequate training, and low motivation, which may hinder operational performance. As competition within the logistics and transport industry intensifies, firms are increasingly recognizing the need for effective driver management practices to improve efficiency, reliability, and profitability.

Operational performance in road transport companies is commonly measured through indicators such as timely delivery, fuel efficiency, vehicle utilization, customer satisfaction, reduced accidents, and profitability. Proper driver management can significantly enhance these performance indicators by promoting responsible driving behavior, reducing operational costs, and improving service quality. Despite the importance of driver management, limited empirical studies have specifically examined its effect on operational performance among road transporters based in Mombasa, Kenya. This study therefore seeks to examine the relationship between driver management and operational performance among road transporters in Mombasa County, Kenya.

2. LITERATURE REVIEW

2.1 Driver Recruitment and Operational Performance

Driver recruitment is a fundamental aspect of effective fleet driver management and significantly influences the operational performance of road transport organizations. The recruitment process should focus on selecting drivers who possess technical competence, reliability, vehicle care skills, and compliance with road safety regulations. According to Begashaw and Temesgen (2019), the recruitment of qualified and competent drivers forms the foundation of effective driver management. Similarly, Begashaw's (2021) fleet operation report identifies shortages of skilled drivers and vehicles as major contributors to service delivery imbalances, thereby affecting the competitiveness of transport firms.

As industrial expansion continues to increase demand for transport services in Kenya, transport organizations are increasingly required to strengthen recruitment and selection procedures to meet customer expectations and sustain market competitiveness (Pedraza-Martinez & Van Wassenhove, 2020). Regulatory frameworks also play a significant role in strengthening hiring standards and improving overall fleet management performance (Nguyen, 2021). Effective recruitment practices therefore enable transport firms to acquire drivers who can contribute positively to safety, efficiency, and service delivery.

2.2 Driver Training and Operational Performance

Driver training is another critical component of fleet driver management, ensuring that drivers acquire the necessary knowledge and skills to operate vehicles safely and efficiently. Training programs commonly focus on vehicle maintenance, compliance with road safety regulations, fuel-efficient driving, and problem-solving during mechanical breakdowns (Ochieng, 2019; Sun et al., 2021). Casner and Hutchins (2019) argue that driver training initiatives targeting individuals with a history of traffic violations can effectively reduce traffic offenses, although their direct impact on reducing crash rates remains inconclusive.

Continuous education and exposure to emerging technologies are also important in enabling drivers to adapt to changing operational demands while maintaining high performance standards (Ibua et al., 2023). However, many organizations face challenges in implementing large-scale driver development programs. Consequently, decentralized training approaches such as instructional materials, posters, and short presentations are often used to improve drivers' technical competencies and service quality (Nguyen, 2021).

Training also contributes significantly to fuel efficiency and safe driving behavior. Gelarch and Pisinger (2021) note that driver training programs designed to promote fuel-efficient driving and safe driving practices directly affect operational performance. Supporting this argument, Gitahi and Ogollah (2021) observe that many drivers incorrectly believe that speeding and aggressive driving significantly reduce travel time. Findings from the UK SAFED program (DfT, 2004) revealed up to a 35% variation in fuel consumption between skilled and inexperienced drivers due to differences in road speed, gear selection, acceleration patterns, braking behavior, and engine idling practices.

2.3 Driver Supervision and Operational Performance

Supervision plays a vital role in ensuring that drivers adhere to established operational and safety standards. According to Sun et al. (2021), regular vehicle inspections conducted by drivers contribute significantly to effective fleet management and regulatory compliance. Supervisory systems facilitate the early detection of mechanical problems, promote accountability, and help maintain vehicles in optimal operating condition.

Organizations therefore rely heavily on continuous supervision and feedback systems to improve driver responsibility, productivity, and operational efficiency (Ibua et al., 2023). Effective supervision further enhances compliance with organizational policies, reduces operational risks, and supports timely service delivery. Through continuous monitoring and evaluation, transport firms are able to maintain discipline, improve safety standards, and minimize operational inefficiencies.

2.4 Driver Management, Fuel Efficiency, and Fleet Maintenance

Fuel management has increasingly become an important area within driver management because driver behavior directly affects fuel consumption and operational costs. Milenkovic, Milos, and Nebojsa (2020) argue that driver management and training are essential for effective fuel allocation, as meaningful fuel savings cannot be achieved without driver motivation and awareness. Engaging drivers actively in fuel management initiatives promotes accountability and enhances long-term fuel efficiency in both public and private sector operations.

Similarly, Phillips, Thai, and Halim (2020) emphasize that monitoring driver behavior and fuel consumption helps minimize financial losses and improve operational efficiency, thereby enhancing profitability and shareholder value. Effective driver management therefore contributes not only to operational efficiency but also to cost reduction and financial sustainability within transport organizations.

Fleet maintenance practices are also closely linked to driver management and operational performance. Chikwere and Kanyepe (2020) identify the absence of structured maintenance schemes as a major challenge affecting vehicle efficiency, driver productivity, and operational safety among road transporters. Payne, Cruz-Suarez, and Prado-Román (2020) advocate for stronger regulations governing vehicle utilization, driver training, and vehicle acquisition to improve fleet performance.

Wang et al. (2019) further observe that fleet owners and drivers often neglect routine maintenance activities due to demanding daily responsibilities, despite the need for regular servicing, inspections, and component replacement. Kawai (2019) warns that failure to address vehicle problems promptly can result in severe operational and safety consequences. Effective driver management therefore requires integrating maintenance awareness and responsibility into fleet operations to ensure vehicle reliability and operational continuity.

2.5 Global Perspective on Fleet Driver Management

Globally, the fleet management industry continues to grow rapidly due to technological advancements and increasing demand for transport services. The European fleet management industry, for instance, generates billions of euros in revenue annually. According to Alp et al. (2022), critical success factors in the industry include strong financial capacity, a customer-oriented service approach, a transition from vehicle-centered to driver-centered services, and maintaining fleet sizes aligned with market demand.

Offering a variety of vehicle brands is also important in meeting customer needs effectively (Cramer & Bryman, 2019). Furthermore, empirical evidence demonstrates that technological integration has significantly enhanced fleet management efficiency and operational effectiveness across transport organizations. These developments highlight the growing importance of effective fleet driver management practices in improving operational performance within the transport sector.

3. METHODOLOGY

The questionnaire was implemented through a self-administered method. Out of a total of 154 participants, 122 provided responses, representing a response rate of 79.2%. On the other hand, 32 participants did not respond, resulting in a non-response rate of 20.8%. These figures show that the majority of participants engaged with the survey process, while a smaller portion remained unresponsive. Acceptable response rates in research have been reported to range between 40% and 75% (Sataloff & Vontela, 2021). Therefore, attaining a 79.2% response rate demonstrates a high level of participant engagement and indicates that the data collected are both representative and robust, thereby strengthening the validity, reliability, and generalizability of the study's findings.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

The study sought to evaluate the influence of driver management on operational performance. Specifically, the study examined the relationship between driver management practices and the operational performance of road transporters. The findings relating to this objective are presented in Table 1.

Table 1: Driver Management Descriptive Statistics

	Driver Management
N	122
Minimum	2.3333
Maximum	5.0000
Mean	4.109290
Std. Deviation	.5811345

Table 1 presents the findings obtained from 122 respondents regarding various aspects of vehicle tracking. Responses were measured using a five-point Likert scale, where a score of 1 represented strong disagreement and a score of 5 represented strong agreement.

The findings indicate that driver management recorded a mean score of 4.11 and a standard deviation of 0.58 based on responses from 122 participants. The high mean score suggests that respondents generally agreed that effective driver management practices were being implemented among road transporters. This implies that aspects such as driver recruitment, training, supervision, and motivation were perceived to positively contribute to operational performance.

The standard deviation of 0.58 indicates relatively low variation in responses, meaning that respondents had fairly consistent views regarding driver management practices. Additionally, the minimum score of 2.33 and maximum score of 5.00 show that while a few respondents expressed moderate disagreement, the majority reported favorable perceptions toward driver management. Overall, the results suggest that driver management is an important factor influencing operational performance among road transporters.

4.2 Regression Analysis

Regression analysis was conducted to determine the effect of driver management on operational performance among road transporters in Mombasa County, Kenya. The analysis aimed at establishing whether driver management practices significantly predict operational performance. The results of the regression analysis are presented in Table 2.

Table 2: Regression Coefficients

Model	Unstandardized Coefficients			Standardized Coefficients	t	Sig.
	B	Std. Error	Beta			
1	(Constant)	.858	.300		2.860	.005
	Driver Management	.045	.059	.048	.761	.448

a. Dependent Variable: Operation Performance

Table 2 presents the regression coefficients examining the influence of driver management on operational performance. The findings indicate that driver management had a positive but statistically insignificant effect on operational performance among road transporters. The unstandardized coefficient ($B = 0.045$) suggests that a one-unit improvement in driver management would result in only a 0.045 increase in operational performance when other factors are held constant. Similarly, the standardized coefficient ($Beta = 0.048$) indicates that driver management had a very weak influence on operational performance.

The results further reveal a t-value of 0.761 and a p-value of 0.448, which is greater than the conventional significance threshold of 0.05. This implies that the effect of driver management on operational performance was not statistically significant. Therefore, the study failed to establish sufficient evidence that driver management independently predicts operational performance among road transporters based in Mombasa County, Kenya.

These findings are consistent with Casner and Hutchins (2019), who observed that driver training programs are generally intended to improve operational performance by reducing accidents and enhancing driver behavior. However, the authors noted that there was insufficient evidence to confirm that such programs directly contribute to a reduction in crash rates. This suggests that although driver management practices such as training and supervision may improve driver awareness and operational procedures, their direct effect on measurable operational performance outcomes may remain limited unless supported by other organizational and technological factors.

4.3 Hypothesis Testing

H₀: driver management has no significant effect on operational performance of road transporters.

The null hypothesis here asserts that driver management has no significant effect on operational performance. The p-value is 0.448, which is greater than 0.05, meaning the effect is not statistically significant. As a result, H₀ is not rejected, implying that driver management does not have a meaningful impact on operational performance in this context. The findings align with Casner and Hutchins (2019) findings that driver training aims to enhance operational performance through accident reduction. Nevertheless, Casner and Hutchins (2019) claimed that there is no proof to indicate that these programs result in a reduction in the number of crashes.

4.4 Discussion

Based on the objective of the study, which sought to examine the influence of driver management on operational performance, the findings revealed that the majority of respondents agreed that drivers receive the necessary training before being hired. This was reflected by a mean score of 4.07 and a standard deviation of 0.86, indicating that

respondents generally acknowledged the importance of pre-employment driver training, although slight variations in opinions existed. The findings further showed that organizations provide on-the-job training opportunities for drivers, as evidenced by a mean score of 3.74. However, the standard deviation of 0.99 suggests relatively diverse opinions among respondents regarding the availability and effectiveness of such training opportunities.

The study also established strong agreement among respondents concerning supervisory practices, particularly the requirement for drivers to submit reports after every journey to their supervisors. This statement recorded a mean score of 4.16, suggesting that monitoring and accountability mechanisms are widely practiced among road transporters. These findings imply that transport organizations recognize the importance of driver training, supervision, and reporting systems in enhancing operational processes and maintaining service standards.

Despite the positive perceptions regarding driver management practices, the regression analysis revealed that driver management did not have a statistically significant effect on operational performance. The null hypothesis (H02), which stated that driver management has no significant influence on operational performance, was therefore accepted since the p-value of 0.448 exceeded the significance threshold of 0.05. This indicates that although driver management practices are implemented within transport firms, their direct contribution to operational performance was not statistically supported by the study findings.

The results are consistent with the findings of Casner and Hutchins (2019), who observed that driver education programs are primarily designed to improve operational performance through the reduction of accidents and enhancement of driver behavior. However, the authors argued that there is insufficient evidence to conclusively demonstrate that such initiatives directly reduce the number of accidents. This suggests that while driver management practices may contribute to improved driver awareness and compliance, their independent effect on operational performance may remain limited unless combined with other operational, technological, and organizational factors.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusions

Driver management was the second objective of this study. The findings revealed that effective driver management practices contribute significantly to improved fleet management and operational processes among road transporters. The study established that organizations have structured driver mission assignment systems supported through driver training, which enhances coordination and operational efficiency. The findings further indicated that respondents agreed that drivers should properly fill and maintain vehicle logbooks for all distances travelled and that organizations should designate responsible officers to oversee driver mission assignments through incentives and reward systems.

Respondents strongly agreed that the organizations' driver performance evaluation systems were effective in enhancing fleet management and operational performance. The study therefore underscores the importance of structured driver management practices such as driver training, supervision, performance evaluation, and incentive programs in improving accountability, service delivery, and operational efficiency.

The findings suggest that transport organizations that implement effective driver management systems are better positioned to minimize operational inefficiencies, improve cost management, and maintain high service standards. Proper driver management also enhances compliance with operational procedures and reduces operational risks, thereby contributing to sustainable fleet performance among road transporters.

5.2 Recommendations

The study recommends that future research should further examine the role of advanced telematics systems and data analytics in enhancing operational efficiency, safety, and decision-making within transport firms. Future scholars should also investigate how behavioral and motivational factors among drivers influence operational performance outcomes, with particular emphasis on continuous driver training, supervision, and performance-based incentive programs. Such studies would provide deeper insights into how driver management practices can be integrated with technological innovations to improve fleet performance and organizational effectiveness.

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