EFFECTIVENESS OF THE MANAGEMENT SYSTEMS ON THE PERFORMANCE OF ROAD TRANSPORT COMPANIES IN RWANDA

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Abstract

The purpose of this paper is to assess the management systems and establish the extent to which they are effective in enhancing the performance of the road passenger transport companies in Rwanda. Three hundred thirty four (334) respondents were randomly and purposively selected from three transport companies. The data was analyzed using SPSS and MS Excel for windows statistical software and frequencies, pie charts, frequency tables and chi-square ($X^2$) tests of relationships were conducted to determine the pattern among the study variables. The results showed a statistically significant relationship in the vehicle management systems among the three road transport companies ($p=0.000<0.05$). Findings of both private and public companies indicated that all were moderately effective using scientific accepted formats. Finally, the research recommends that the government owned ONATRACOM Company should put more effort in cost management because the findings revealed that cost management is given less attention by the management. Private transport companies should consider implementing briefing, pre-journey and en-route information as some of the important passenger management systems.

Keywords: Effectiveness, Management system, Performance

Introduction

Management systems are an important aspect in the performance of any company; be it public or private. Management systems are considered the framework of processes and procedures used to ensure that an organization can fulfil all tasks required to achieve its objectives (Publicly Available Specification, 2006). They are considered a means to achieve the business objectives and increase understanding of the current business operations. The transportation system is also one of the basic components of an urban areas social, economic and physical structure. Transport is a major sector of any nation’s economy (Hillman, 1992). The significant place it holds reflects the fact that cars are generally seen as the most attractive means of travelling comfortably, quickly,
privately and safely (Nzuve & Mbugua, n.d). Despite the significance of management systems on the performance of the road transport systems, they have continued to receive little attention especially in most developing countries including Rwanda. This study therefore sought to understand the ways in which the management systems impact the performance of the road transport companies in Rwanda.

Studies that have been done indicate a close link between the management systems and the performance of the road transport companies (Aworemi and Ilori, 2008). Despite these findings, few or no studies have been done in Rwanda on how the management systems affect the performance of the road transport companies. This study was therefore, intended to fill this gap by finding out the ways in which management systems affect the performance of the passenger road transport companies in Rwanda.

Objective of the study was to establish the extent to which the management systems in the road passenger transport companies are effective in enhancing the performance of the road passenger transport companies in Rwanda.

Review of related studies

Effectiveness

Effectiveness is a term often used in most reports to mean different things by different organizations. It is context dependent implying that its use is based on the circumstances and prevailing situations within which it is used. When it is used in the context of accomplishing organizational objectives, it implies a ratio of outcomes to outputs (Arvidsson et al 2011). On the other hand Mouzas describes effectiveness to encompass the company’s ability to design a unique model of embracing business opportunities through exchange relationships. Effectiveness concerns the company’s own recipe to generate a sustainable growth in its surrounding business network and is a continuous process linking the organization to its constituencies rather than a characteristic of an organization’s outputs (Mouzas n.d). They contend that rather than produced, effectiveness is negotiated and considers an effective organization as one that has the ability to create accounts of its own activities that relevant constituencies find acceptable and the accounts are in this case created for various purposes, activities and audiences.

Effectiveness concerns the level of goal completion i.e. the extent to which the organization is achieving its long term
goals or doing the right things (Arvidsson et al., 2011). Ammons (2007) asserts that effectiveness or otherwise called measures of outcome is normally aimed at measuring the quality of services and the extent to which a program’s objectives are being achieved. Effectiveness like other performance measures should report not only how much service is provided but also how well and efficient the service has been provided (Ammons, 2007). The effectiveness of the programs should be evaluated in regard to their impact on HRM goals. It is not enough simply to have the programs, they must be high quality programs that satisfy employees’ needs. For example, a day care center that is too expensive for employees to use will probably not have a positive impact on job decisions or family life (Ammons, 2007).

Management systems and performance
Management systems

Management systems are considered the foundation for the operations of most companies and organisations be it government or Non-Governmental Organisations. They are guiding frameworks and road maps within which companies operate and which guide employees in their daily activities and operations. Management system is defined as the framework of processes and procedures used to ensure that an organization can fulfil all tasks required to achieve its objectives (Publicly Available Specification, 2006). On the other hand, Chartered Quality Institute (2015) considers a management system as a set of components, interconnected for the guidance and control of action. According to the Chartered Quality Institute (2015) this suggests that the interconnection has been planned for a reason, and that the purpose would not be achieved without the interconnection. Among the key objectives of (defining) a management system might be to achieve compliance, to encourage standardisation and reduce variation and to help staff to understand what they have to do and how they fit into the organisation. It should also provide a sound basis for managing change and making improvements (Publicly Available Specification, 2006).

Contrary to the traditional approach which addresses individual aspects separately, there is now a move towards integrating management systems, especially when seeking combined certification against more than one external standard, based on an external assessment of a single system description. But the word integrated, which suggests that you take discrete systems and somehow combine them, can
obscure the fundamental principles involved in running a business.

The Chartered Quality Institute (2015) also asserts that a management system should be a means to achieve some of the following: achieve business objectives; increase understanding of current operations and the likely impact of change; communicate knowledge; demonstrate compliance (with the requirements of the Turnbull report, Sarbanes-Oxley, sector-specific and international standards etc); establish 'best practice'; ensure consistency; set priorities; and change behaviour.

Public Available Specification (2006) notes that an oversimplification of a management system is "Plan, Do, Check, Act", although, a more complete system would include accountability (an assignment of personal responsibility) and a schedule for activities to be completed, as well as auditing tools to implement corrective actions in addition to scheduled activities, creating an upward spiral of continuous improvement. Also as in the aforementioned management system, an occupational health and safety management system (OHSMS) enables an organization to control its occupational health and safety risks and to improve its performance by means of continuous improvement (Publicly Available Specification, 2006).

Performance
Although performance is an important aspect in both government and private run companies and organizations, the concept of performance has been found to be more relevant and largely pursued in the private sector. It is a measure of the output, deliverables and outcomes in most organisations. Miner et al. (1985) contend that performance is what one does within the limits of a position created by an organization to achieve goals. This definition seems to be narrow and ignores the fact that performance varies from person to person. Some people may do things within the limits of a position and fail to achieve goals. The idea of performance as what one does within the limits of a position creates some doubt. Whatever one does whether outside the limits of a position but aimed at achieving organizational goals should also be considered performance (Miner et al., 1985).

Steers (1991) also argue that performance concerns the extent to which an individual can successfully accomplish a task or achieve a goal. Performance as a concept,
includes not only the production of certain tangible units of output but also of less tangible outputs, such as effectively supervising others, thinking in a creative way, inventing a new product, resolving a conflict between others, or selling a good or service. The definition of Steers provides a clear understanding of what performance is, but the idea of ‘ability’ should be well emphasized in his definition. Thus, a comprehensive definition should consider ‘Performance as the extent to which an individual in his or her ability and within or outside the limits of a position can successfully accomplish a task or achieve a goal.’” According to Harrison (1995) performance involves having in place systems and methods which translate the goals of strategic management into individual performance terms through Human Resource Management (HRM).

**Dimensions of Performance**

Miner et al (1985) identified four general dimensions of performance which appear to encompass most of what is considered to be performance. Quality-mistakes, errors, waste, accuracy; Quantity-amount, productivity, profit and loss; time at work-absenteeism, lateness, lost-time accidents, premature turnover, long service, overtime. Finally is the cooperation toward goal attainment, including positive and negative effects on the performance of others and goal attainment: theft, sabotage, incurring of costs, squandering resources, contribution. For an organization to increase its performance there should be a clear understanding of entity-relationships within the organizational system.

In a similar argument, Kendall et al. (1992) argue that for the entity-relationship to be effective, the following requirements must be fulfilled: list what entities in the organization are in order to gain a better understanding of the organization; choose key entities in order to narrow the scope of the problem to a manageable and meaningful one; identify what the primary entity should be; confirm the above through other data gathering methods (investigations, interviewing, administering questionnaires, observation and prototyping). Organization’s performance heavily relies on its dynamism to changes and how subsystems interrelate with the internal and external environment.

Koontz et al. (1984) believe that for a system to fully achieve its objectives, it must be characterized by the the following points: it must have boundaries that separate it from its environments; if an
open system is to survive, it must at least achieve a state in which it ingests enough inputs from the environment to offset its output plus energy and material used in the operation of a system; if a system is to achieve any kind of dynamic equilibrium, it must have feedback, an information input that tells whether the system is indeed at least achieving a steady state and is in danger of destruction; systems have subsystems and are also a part of supra system, they are hierarchical.

Determinants of work performance

Douglas and Jack (1991) argue that the ability to perform on the job is based on such variables as rewards, coworkers, management competence, the intrinsic quality of the work itself and promotional opportunities.

Rewards: Monetary and non-monetary rewards, such as recognition and job security are usually at the top of the list of variables affecting job performance. The overall tie between pay and performance has always been present but the relationship between an employee’s behavioral performance and pay have too frequently been ignored.

Co-workers: The place of the work group in contributing to effective job performance has been well established by the Hawthorne and other studies. The importance of being continuously associated with fellow workers is stronger for some employees than the more direct monetary rewards.

Management and supervisory competence: The expectations of employees about the competence of their supervisors and managers have increased with higher levels of education and which generation. If managers do not have the technical and interpersonal competence expected by the employees they will not be as diligent in performing their jobs.

Intrinsic factors of the work itself: The internal aspects of how the job is designed are important determinants in how effectively the job is performed. Job design and the autonomy and the responsibility of employees are critical areas for most individuals. When jobs are too structured, employees lose interest in performing to maximum levels. Recognition is another factor contributing to how “good” the job is and consequently how well the employee performs the job. The amount of recognition provided for individuals is a significant force having a direct bearing on how intensely they work. Promotional opportunities: When the job has chance for
promotion, employees will perform to their best in a bid to win that position (Douglas and Jack, 1991).

**Measuring performance**

According to Raymond et al (1994) the most common approach to measuring performance are the comparative approach and the attribute approach. The comparative approach to performance measurement consists of techniques that require the raptour to compare an individual’s performance, or worth, and seeks to develop some ranking of the individuals within a given work group. The attribute approach focuses on the extent to which individuals have certain attributes (characteristics or traits) believed to be desirable for the company’s success. The techniques that use this approach tend to define a set of traits and evaluate individuals on them. Most organizations have developed certain attributes believed to be desirable for the success of their organizations. They are the same attributes that they use for performance appraisal. Unfortunately, no such attributes have been developed in public transport business. This study will use attribute approach basing on the set of traits suggested by the researcher; these are initiative, sense of responsibility, ability and motivation, professional knowledge, intellectual knowledge, social responsibility, patriotism, punctuality, innovativeness, level of effort, pace of work and relations with others. Donnelly (1987) says: it is the accomplishment of goals successful performance; note that efforts alone do not yield successful performance. The individual must possess abilities, needs and personal traits to do the job well.

On the contrary to the performance of public transport companies, most situations, enterprise’s performance has been monopolized by the politicians, statesmen, managers, therefore, to identify the effects of HRM and performance. The other problem that the investigator was able to analyze which could be the cause of poor performance of public transport companies was political influence. Although several factors may account for performance inefficiency, the researcher feels that the major factor lies in human resource simply because, in any organization to achieve objectives effectively control must be done as it is asserted by one.

Wayne (1992) said that, performance refers to an employee’s accomplishment of assigned tasks which is a result of control. More still, human resource management is
crucial in performance of public transport companies, than any other factor because fundamentally, feedback process and performance appraised is applied which is fairly an expensive way to improve productivity. "The degree of accuracy of their prediction depends on how closely the tests score are correlated with job performance evaluation and this correlation is never perfect. Thus, some people who do poorly on tests will do well on the job and some people who score highly will fail on the job (Strauss and Sayles, 1962).

Road transport companies
The road transport companies can either be transportation of goods (cargo) or passengers or both and such companies can also be public or private. For the most part, ‘public transport’ is a common term dating back, at least, to the provision by states, private owners, and corporations of modes of motorized transport that could be enjoyed by the broader populace as these became available during the middle and latter part of the Industrial Revolution. As a result, public transport was broadly taken to mean transport services made available to the general public (Glover, 2011). Clearly, a confounding feature to understanding public and private transport systems is the sorts of public and private roles in the ownership, financing, funding, planning, managing, and operating arrangements that exist in modern transport systems. With many states adopting neo-liberal policy reforms, a new array of financial and other relationships between states and corporations have developed, overturning many of the established demarcations between the public and the private. Another common approach, often used implicitly, is to consider public transport as occurring when a service is owned by a government entity, and private transport being that which is privately owned.

Institutional features can be used to distinguish between public and private transport systems at the city scale (Glover, 2007). Three broad criteria can be identified: governance through public policy mechanisms; financial structures based in public agencies; and a primary objective of the system operators being the provision of a transport service. For the first of these criteria, the role of public policy and the associated use of public institutions are central to guide the activities of a public transport system; in this way, public transport is one of the direct functions of government (Glover, 2011). Private transport services are also subject to all manner of public policy and
regulation, but crucially, while the chain of accountability for public transport ends with the government, for private transport accountability ends with those owning the corporation – which could be private or through shareholders and boards. Essentially, the distinguishing feature here is that governance is either a public (i.e., government) affair or a private one (i.e., corporate).

In turn, the third criterion continues the theme of examining the extent to which public institutions are engaged in the provision of transport services, by considering the strategic orientation of the enterprise (Glover, 2011). Provision of a transport service is the goal that distinguishes public transport from private transport. Because private transport has as its goal individual/ household or corporate goals, the provision of a transport function is, in a sense, a means to an end. In the case of individuals and households, what is sought is not the transport experience, but access to desired services (Glover, 2011). Corporations providing transport services obviously need to provide these services, but this also is a means to an end, namely that of pursuing corporate objectives of profits, returns on investment, and such things as market share. For such corporations, if there are greater gains by rationalizing or reducing transport services, if circumstances allowed, then this would be what owners and investors would expect to occur. Public transport operators might also have corporate goals, such as cost reduction, but ultimately their strategic goal is to provide transport services, not to furnish profits; the public service obligation trumps their corporate aspirations (Glover, 2011).

State of the road transport in Rwanda
The transport system in Rwanda is centered primarily on the road network, with paved roads between the capital - Kigali and most other major cities and towns in the country. Rwanda is also linked by road with other countries in East Africa, via which the majority of the country's imports and exports are made. A large amount of investment in the transport infrastructure has been made by the government since the 1994 genocide, with aid from the European Union, China, Japan and others. Rwanda has a total of 14,000 km of roads, of which 1,000 km are paved. The remainder is dirt roads with quality varying from smooth hard surfaces with drainage to rutted, extremely uneven tracks passable only with a four-wheel drive vehicle.
Most of the main towns in the country are now connected by paved road. The condition of these roads was until recently very poor, with numerous pot-holes and vehicles often driving on the dirt verges since these were deemed smoother than the road itself. A recent government program of upgrading and resurfacing means that most major routes are now in good condition. The major urban arteries of Kigali, as well as the high streets in Ruhengeri (Musanze), Kibuye (Karongi) and Gisenyi (Rubavu) are dual carriageways, but all national long distance roads are single carriageway (ADB, 1999).

According to the Ministry of Infrastructure (MININFRA, 2008), the international transportation in Rwanda is generally dominated by foreign transporters, while the Rwandan transport companies offer little competition to their more organized and more professional counterparts from the regional transit countries like Kenya, Tanzania and Uganda. This situation in the absence of a more efficient and effective national transportation fleet constitute a potential risk in terms of independence, security, and supplies for the country. This factor, combined with the general poor state of the road network, and numerous other factors, increases the cost of transportation of goods and passengers within the country.

The weak institutional capacity with a lack of adequate qualitative and quantitative human resources and the long absence of effective sectoral planning are the constraints facing the transport sector in Rwanda. The legal and regulatory framework of the sector is not adapted to the present and future context. There is a lack of diversification of the means and modes of transportation; road transportation being practically the only mode used at present. However, the development of a railway system has been initiated with the proposed extension of the railway networks in the neighbouring countries into Rwanda. The lack of local infrastructure design consultants and construction contractors limits competition and increases the costs of infrastructure projects, lack of practical applications of accessibility analysis in transport appraisal methodologies is mainly due to concerns about double counting of effects (Geurs & Ritsema van Eck, 2001), the perceived complexity of their formulations and their resulting difficulty of interpretation (Geurs & Ritsema van Eck, 2003). Each of the formulations of accessibility is particularly suited to address a certain transport...
planning problem and the selection of the appropriate indicator for a particular case is a complex task (Elena Lopez Suarez, 2007). This study therefore was undertaken on the management systems in Rwanda to understand how they impact performance of road transport companies focusing three transport companies.

Method
This study adopted a cross-sectional research design where a great deal of quantitative research design and to a less extent qualitative design was used. Questionnaires and in-depth interviews were to collect data to examine the ways in which management systems impact the performance of the passenger road transport companies. The data was analysed using SPSS statistical software and frequencies, pie charts, frequency tables and chi-square ($X^2$) tests of relationships were conducted to determine the pattern among the study variables.

Three hundred thirty four (334) respondents were randomly and purposively selected from three transport companies (ONATRACOM, KBS and Horizon) operating in different parts of Rwanda. The companies were selected based on their representativeness of the characteristics prevailing in the transport companies in Rwanda. ONATRACOM is the only Rwandan government owned company while KBS has its operations confined in Kigali whereas Horizon operates in all parts of Rwanda. One hundred forty eight (148) respondents were selected from ONATRACOM government owned company. Whereas simple random sampling was used to select one hundred forty (140) respondents, eight (8) respondents were selected using purposive sampling. All the one hundred eighty six (186) respondents were selected using simple random sampling.

Findings
Of the 334 respondents studied, 148 were from government owned company ONATRACOM while 186 were from privately owned passenger road transport companies. Of these, 8% represented management of both government and private transport companies, 69% were drivers, 65% were conductors, 37% were mechanics while 20% belonged to the category ‘others’.

Management systems in the road passenger transport companies in Rwanda
The management systems employed in the different road transport companies in
Rwanda that were considered for this study are: human resource management systems and vehicle fleet management systems and these varied from one company to the other. Human resource management encompasses staff management and passenger management practices. Each of these employs a range of management systems that are presented and discussed in the proceeding section.

### Table 1: Vehicle management systems in road transport companies

<table>
<thead>
<tr>
<th>Vehicle Management system</th>
<th>Frequency</th>
<th>Percentage</th>
<th>p – value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
<td>Public</td>
</tr>
<tr>
<td>Speed governors</td>
<td>39</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Capacity management</td>
<td>31</td>
<td>41</td>
<td>21</td>
</tr>
<tr>
<td>Repairs and maintenance</td>
<td>52</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>Automobile purchasing and disposal</td>
<td>17</td>
<td>27</td>
<td>10</td>
</tr>
<tr>
<td>Cost Management</td>
<td>9</td>
<td>39</td>
<td>6</td>
</tr>
<tr>
<td>In-Vehicle Management System</td>
<td>0</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>148</strong></td>
<td><strong>186</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

*Source: Primary data*

The key vehicle management systems employed by the passenger road transport companies in Rwanda were; speed governors (38%), repairs and maintenance (47%) and capacity management (43%). After obtaining the responses from the different staff of the road transport companies in Rwanda, the responses were tested to determine if there is a relationship in the vehicle management systems among the different road transport companies.

### Table 2: Passenger management systems

<table>
<thead>
<tr>
<th>Passenger Management systems</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Seatbelts</td>
<td>35</td>
<td>20</td>
</tr>
<tr>
<td>Briefing</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Pre-journey and en-route information</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>

*Source: Primary data*
Fining violent passengers 4 0 3 0
Time management 21 49 14 26
Formal stages for picking passengers 32 38 22 20
Passenger comfort 0 7 0 4
Reliability 13 38 9 20
Frequency 23 34 16 18
Suggestion box for feedback 0 8 0 5
Total 148 186 100 100

Source: Primary data

The key passenger management systems existing among the passenger road transport companies in Rwanda were; seatbelts (35%), time management (40%), formal stages for picking passengers (42%) and frequency (34%). A comparison of the passenger management systems among the different companies revealed that seatbelts, briefing, en-route information, fining violent passengers and time management were very popular in the government owned transport company – ONATRACOM compared to private companies; although formal stages for picking passengers, passenger comfort, reliability, frequency and suggestion boxes were more popular among private companies.

Management system for drivers and conductors

The road transport companies also have systems for managing drivers and conductors and these systems are presented in Table 3.

Table 3: Management system for drivers and conductors

<table>
<thead>
<tr>
<th>Management system for drivers and conductors</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Fatigue management</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Rotational systems</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Incentives</td>
<td>25</td>
<td>41</td>
</tr>
<tr>
<td>Paid leave</td>
<td>56</td>
<td>22</td>
</tr>
<tr>
<td>Drink and drive monitoring systems</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Refresher courses – training</td>
<td>17</td>
<td>3</td>
</tr>
</tbody>
</table>
The following management systems for drivers and conductors were most popular in the government owned ONATRACOM; paid leave, communication skills and refresher training courses. On the other hand, incentives and fatigue management were also most popular in the private transport companies.

**Extent to which the management systems in the road passenger transport companies are effective in enhancing the performance of the road passenger transport companies in Rwanda**

The effectiveness of management systems on the performance of road transport companies in Rwanda was surveyed and this was measured on three levels: very effective, less effective and not effective. The respondents were asked to indicate whether the company management systems were effective or not and the results are based on the number of responses rather than the proportion.

Table 4: Effectiveness of the management systems on the performance of road transport companies in Rwanda

<table>
<thead>
<tr>
<th>Management systems</th>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effective</td>
<td>Not effective</td>
</tr>
<tr>
<td>Vehicle management systems</td>
<td>123</td>
<td>25</td>
</tr>
<tr>
<td>Accountability systems</td>
<td>117</td>
<td>31</td>
</tr>
<tr>
<td>Quality management systems</td>
<td>51</td>
<td>97</td>
</tr>
<tr>
<td>Information management systems</td>
<td>126</td>
<td>22</td>
</tr>
<tr>
<td>Employee health and safety management systems</td>
<td>135</td>
<td>13</td>
</tr>
<tr>
<td>Process and job control systems</td>
<td>93</td>
<td>55</td>
</tr>
<tr>
<td>Inventory and material management systems</td>
<td>54</td>
<td>94</td>
</tr>
<tr>
<td>Passenger management systems</td>
<td>132</td>
<td>16</td>
</tr>
<tr>
<td>Fuel management systems</td>
<td>67</td>
<td>81</td>
</tr>
</tbody>
</table>

Source: Primary data

The effectiveness of the management systems on the performance of the road transport companies revealed differences and similarities in effectiveness across the public and private transport companies. For instance, the vehicle management, accountability systems and process and job control systems were more effective in the public companies compared to the private companies.
information management and process and job control systems were effective among both public and private transport companies. On the other hand, quality management, fuel management, and accountability management systems were more popular among private transport companies than in the public transport companies, while employee health and safety management and passenger management systems were more effective among the government owned – ONATRACOM than in the private transport companies.

Discussion, conclusion and recommendations

The results generated on the vehicle management systems in Rwanda indicated although there are variations in the emphasis on the different management systems used by the passenger road transport companies in Rwanda, the results showed a statistically significant relationship in the vehicle management systems among the three road transport companies (p=0.000<0.05). Nevertheless, speed governors and repairs and maintenance were more popular in the government owned ONATRACOM company compared to its private company counterparts. On the other hand, cost management and automobile purchasing and disposal seemed most common in the private transport companies than in the government owned company. Similarly, the use of seatbelts, briefing, pre-journey and en-route information were mostly pursued in the government owned company compared to private companies; although other aspects such as time management, passenger comfort, reliability and frequency were mostly associated with private transport companies. Statistical analysis was conducted to determine if there is a relationship in the passenger management systems employed by the three road transport companies. The passenger management systems implemented by the different road transport companies were not statistically different revealed by the p-value of 0.000 which is less than 0.05 (p=0.000<0.05).

Regarding the effectiveness of management systems on the performance of road transport companies in Rwanda the results revealed that vehicle management, information management and process and job control systems were effective among both public and private transport companies. Quality management, fuel management, and accountability
management systems were more popular among private transport companies than in the public transport companies while employee health and safety management and passenger management systems were more effective among the government owned – ONATRACOM than in the private transport companies. The pursuit for profits and the need to ensure quality and efficient service delivery was reported to be the reasons for effective quality management, fuel management and accountability systems in the private transport companies. Nevertheless, despite the reported existence of accountability systems, cases of fraud and financial mismanagement among the employees of the different transport companies were common indicating that the companies still have a long way to go in enhancing accountability among their employees.

**Conclusion**

The management systems in the road passenger transport companies in Rwanda were found to be categorized into vehicle and passenger management systems. The vehicle management systems were mainly speed governors, automobile purchasing and disposal, capacity management and repairs and maintenance. These systems were equally present in both government and private owned companies and there seemed to be no statistically significant difference in the management systems across both government and privately owned transport companies. Similarly, the key passenger management systems among these companies were; seatbelts, formal stages for picking passengers, time management, reliability and frequency. However, frequency, reliability, and formal stages for picking passengers were more popular in private transport companies than in the government owned ONATRACOM, though the statistical test showed that there was no difference in the passenger management systems among private and government owned companies.

Regarding the extent to which the management systems in the road passenger transport companies are effective in enhancing the performance of the road passenger transport companies in Rwanda, the results showed vehicle management, accountability and quality management systems were most effective in private transport companies than in the government owned ONATRACOM transport company, although employee health and safety management and passenger management systems were most
effective in ONATRACOM than in private companies.

The study recommends that the government owned ONATRACOM company should put more effort in cost management because the findings revealed that cost management is given less attention by the management of ONATRACOM. This was even found to be one of the causes of inefficiency in ONATRACOM.

Private transport companies should consider implementing briefing, pre-journey and en-route information as some of the important passenger management systems. On a similar note, the public transport company should endeavour to implement passenger comfort, reliability, time management and frequency as important passenger management systems in the transport industry. Similarly, the private transport companies should ensure that they conduct periodic training courses for their employees in aspects of customer care, safe driving, mechanics and reporting systems.

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