PERCEPTIONS OF THE ROAD TRANSPORT MANAGEMENT SYSTEM (RTMS): PROMOTING VOLUNTARY CERTIFICATION

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ABSTRACT

This paper uses a structured survey to provide insight into how the Road Transport Management System (RTMS), SABS standard SANS 1395:2014, has developed and is viewed within the road transport industry in South Africa. The RTMS is an industry-led, government-supported, voluntary, self-regulation scheme that encourages consignees, consignors and road transport operators to implement a management system that demonstrates compliance with road traffic regulations and contributes to preserving road infrastructure, improving road safety and increasing productivity. The surveyed views of the road traffic authorities, banks, insurance companies, the RTMS steering committee, and road transport operators provide insights into the perceptions and experiences with respect to the RTMS from diverse stakeholders. Respondents indicate that improved safety, operational efficiency and reduced road crashes are seen as attractive benefits to implementing the RTMS. The main obstacles to certification are a lack of awareness of the RTMS and a poor understanding of the requirements for becoming RTMS certified. The clients of road transporters play a significant role in the transporter's decision to become RTMS certified.

1 INTRODUCTION

1.1 Background

Logistics costs typically comprises a significant percentage of a country's GDP. In 2015 logistics costs were 7.85% of GDP in the USA (Logistics Management, 2016) and an estimated 11.7% of GDP (50% higher) in South Africa (Havenga *et al*., 2016). High logistics costs negatively impact South Africa's manufacturing competitiveness and impedes economic growth as well as employment creation.

Furthermore, South Africa has 12.5 truck crash-related fatalities per 100 million kilometres travelled. This is 4 to 10 times higher than European countries such as Denmark, France, Germany and Switzerland (OECD, 2011).

The Brake and Tyre Watch is a South African industry initiative, where various technical experts provide training to traffic officials. These two-day events include practical training involving random roadside truck inspections. Heavy vehicles are pulled off the road and checked for vehicle defects with a specific focus on brakes and tyres. During 33 training events conducted between 2006 and 2016, 692 vehicles were inspected with 474 being discontinued, i.e. 68% of vehicles were found to have defects requiring the vehicle to be prevented from continuing its journey (Brake & Tyre Watch, 2016).

The prohibitive logistics costs, unacceptably high truck crash fatality rate and poor truck brake and tyre maintenance in South Africa, suggest that law enforcement alone is unable to ensure compliance with the road traffic legislation (Nordengen, 1998). Consequently, the Road Transport Management System (RTMS), SABS standard SANS 1395:2014, has been established to address this challenge by complementing law enforcement efforts.

The RTMS seeks to not only foster a corporate culture of observing the law, but also to promote good corporate governance and corporate citizenship. The RTMS provides a concise and clear pathway to developing management systems for a road transport company to ensure adherence to good practice. These systems are intended to help the road transport operator achieve legal compliance, improve driver wellness, reduce corporate risk, and improve profits. (RTMS, 2017). Road transport operators report significant improvements in all aspects of performance after becoming RTMS certified (Nordengen, *et al*., 2014).

As at November 2016, only 217 South African transport companies were RTMS certified (Naidoo, 2016). An important step in determining how voluntary certification can be promoted is to better understand the diverse stakeholder perceptions around the RTMS. This paper sets out to investigate the perceptions of road transport stakeholders with regard to RTMS certification.

1.2 Literature review

Yeo and Moore (1998) proposed that if implemented carefully, voluntary accreditation schemes for road transport comprising management based compliance could improve the productivity of scheme members, improve the effectiveness of conventional enforcement and improve compliance outcomes overall. They reported that in Australia, road transport operators elected to join the accreditation program seeking financial benefit, industry or company image, risk reduction, and employee morale. They suggest that the attractiveness of voluntary accreditation may increase with tangible benefits such as increased mass limits for certified road transport operators.

In South Africa, only limited literature on the application of voluntary accreditation schemes applied to road legislation exist, and mainly focuses on its growth from the initial Load

Accreditation Program (Nordengen, 1998), lessons learnt by the Australian road authorities through their experience with their National Heavy Vehicle Accreditation Scheme (Nordengen, *et al*., 2006), the first implementation of the RTMS in 2007 (Nordengen, *et al*., 2007), and finally the SANS 1395 standard.

Since inception in 2005, the RTMS has attained significant success as a road transport voluntary compliance program in South Africa with improved road safety, legal compliance, and operational efficiency as evidence. Companies implementing the RTMS have reported qualitative and quantitative benefits such as up to 66% reduction in crashes, reduction in overloading, reduction in speeding incidents, typically 20% improvement in fuel consumption (Nordengen, 2015). Further benefits include reduced turnover of drivers due to HIV and related issues, improvement in driver wellness, decrease in absenteeism, reduction in vehicle breakdowns, improved fleet utilization through reduced downtime, improved driver behaviour, better control and confidence in the company, reassurance that drivers are fit to drive a heavy vehicle, and improved employee motivation (Nordengen, *et al*., 2014). Given the operational success achieved by companies that have been certified, one would expect a high level of adoption of the RTMS in South Africa.

A survey of Swedish road transport companies found that 72% of companies surveyed reported that voluntary accreditation contributes to the company's profitability at high or the highest possible level of fulfilment, 84% report high or the highest possible level of fulfilment in road traffic safety, and 85% report high or the highest possible level of fulfilment in overloading compliance (Johansson, 2012).

The quality of policy transfer and local adaptation of voluntary self-regulation has been assessed through interviews of 12 stakeholders in diverse roles in the South African transport sector (Walker, 2015). This study found that the ineffective implementation and delivery of a stable enforcement regime was a key reason why some stakeholders favoured voluntary self-regulation. A respondent cited market forces where European and American clients favoured a programme that would demonstrate good governance, particularly around driver wellness. It was proposed that a voluntary self-regulation program may improve relationships between regulatory authorities and transport operators. The inability of enforcement to adequately address overloading was further described as posing a threat to the road network with a significant negative impact on productivity and safety.

Whilst the interviews provided excellent feedback on the quality of implementation and local adaptation of the self-regulation programme, it focussed on interviewees from within the RTMS fraternity (Walker, 2015). It is vital that the perceptions of companies that have not yet been certified, as well as those that have not yet embarked on RTMS certification be surveyed in order to understand the impediments to widespread RTMS adoption.

There is a need to investigate the perceptions and opinions of the RTMS as experienced by stakeholders that are RTMS-certified, those who have not yet chosen to embrace voluntary certification, as well as consignors and consignees. These views could shed light on possible hindrances to a more widespread voluntary adoption of the RTMS.

2 AIM AND SCOPE

The aim of this research was to determine the perceptions of the RTMS in South Africa through feedback from road traffic authorities, banks, insurance companies, the RTMS steering committee, and road transport operators. The perceptions of road transport operators included those that are RTMS certified, those that had begun working towards RTMS certification and those that had not yet decided to become RTMS-certified. The results will guide the RTMS Steering Committee as well as policymakers toward better alignment of the RTMS goals with industry needs. It is hoped that this will encourage an increase in voluntary certification.

3 METHOD

The research instrument was designed around the key principles of the RTMS and taking into consideration the work of Naidoo and Nordengen (2014), Walker (2012) and Yeo and Moore (1998). Ethics clearance was obtained for the survey through the School of Mechanical, Industrial and Aeronautical Engineering at the University of the Witwatersrand (application MIAEC 001/16). “Google forms” was used to create an online survey tool.

The National Bargaining Council for the Road Freight and Logistics Industry (NBCRFLI), the Road Freight Association (RFA), the Transport Forum and the Institute of Road Transport Engineers (IRTE) were contacted by email and requested to forward a participation information sheet with an internet link to an online survey to their members. Participation information sheets with the internet link to the online poll were distributed at transport presentations organised by the Transport Forum and RTMS workshops. More than 1 000 road transport operators, consignors and consignees were sent email survey requests. In addition a survey form was sent via email to banks, insurance companies, traffic authorities, the RTMS steering committee and the Department of Transport. The online survey was completed by 56 respondents which represents a response rate of approximately 6%. The number of respondents could be viewed as a limitation of the study; however, the researchers believe that the nature of the sampling pool could be regarded as adequately representative of the industry perspective.

4 DISCUSSION

The majority of respondents represent consignors, road transport operators and consignees from the FMCG, Courier, Bulk, Automotive, General Cargo, Containers, Hazardous Cargo, and Abnormal Loads segments. Most of the respondents were senior management or business owners/directors. A breakdown of the respondents in terms of industry type and respondent role is shown in Figure 1.

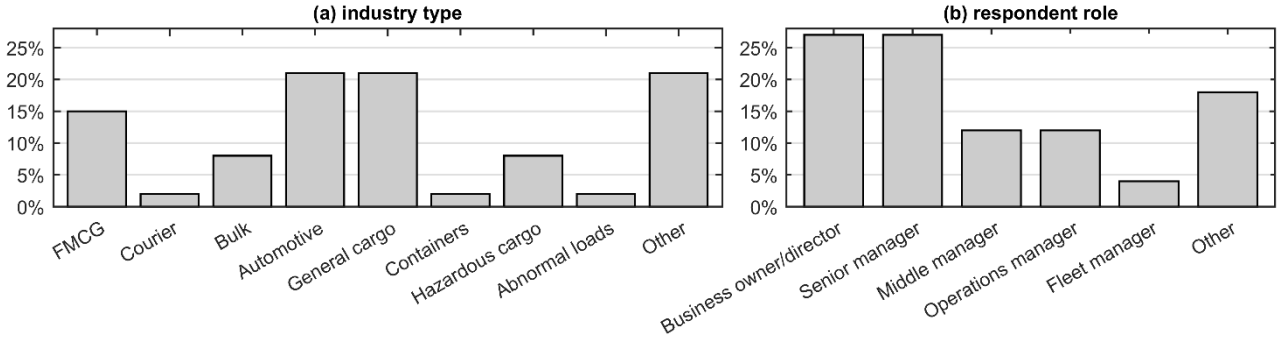

Figure 1 Response in terms of (a) industry type & (b) respondent role

Respondents were asked to indicate their function within the logistics chain and their RTMS status. Figure 2 shows that 72% of respondents were road transporters, 23% were consignors and 5% were consignees. Of the survey population, 44% were RTMS-certified, 12% had begun the RTMS implementation but were not yet certified, while 44% had not yet decided to become RTMS certified.

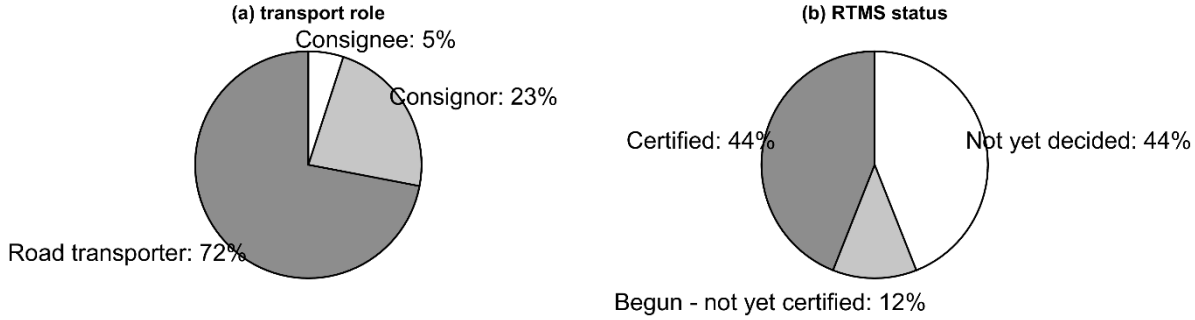

Figure 2 Response in terms of (a) transport role & (b) RTMS status

Figure 3 shows the survey response in terms of fleet size and introduction to RTMS: medium to large companies have been early adopters of the RTMS and the smaller companies have been slow to embrace the RTMS. When asked to indicate how they were made aware of RTMS, 35% of the RTMS-certified companies indicated that they heard of the RTMS from clients while 40% of the companies that were working toward certification became aware of RTMS through various workshops, meetings, courses and personal communication. A large number of companies (35%) that had not yet decided to implement the RTMS had no prior knowledge of the RTMS. This implies that clients are a strong influencer for RTMS uptake, as are the road transport meetings and workshops. There is also a need for more marketing of the RTMS.

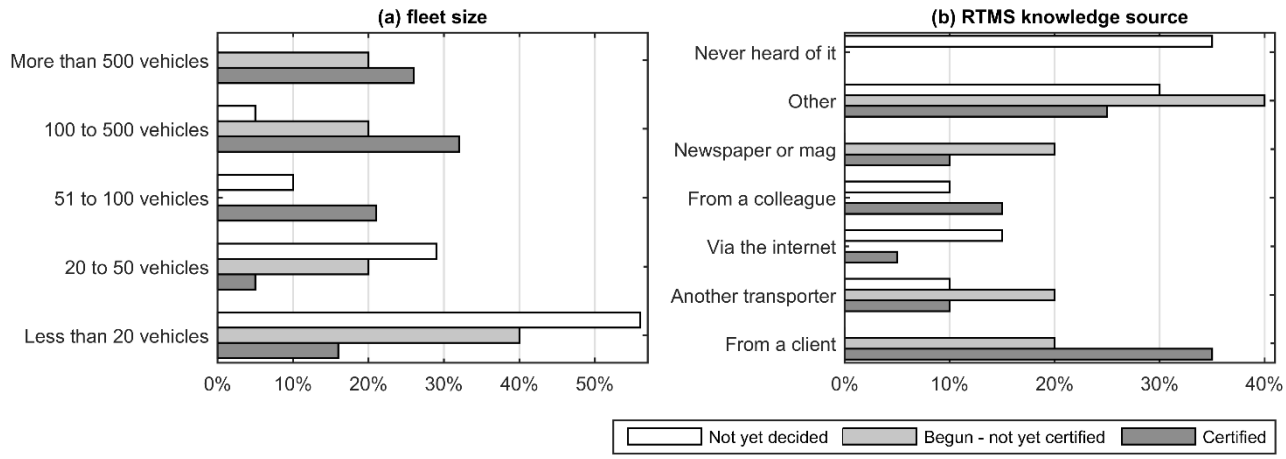

Figure 3 Respondents in terms of (a) fleet size & (b) RTMS knowledge

Respondents were asked to indicate the reasons why they became certified and also the duration of their certification process. 42% of the RTMS-certified companies attained certification within 6 months, while a further 42% took between 6 months and a year, and nearly 16% took more than a year. Of the respondents that were still working towards RTMS certification, 60% had been working at it for less than 6 months, and 40% were at it for over a year. The 40% of candidate RTMS companies taking longer than a year are cause for concern. They may be experiencing difficulty aligning their efforts to the RTMS. These results are depicted in Figure 4.

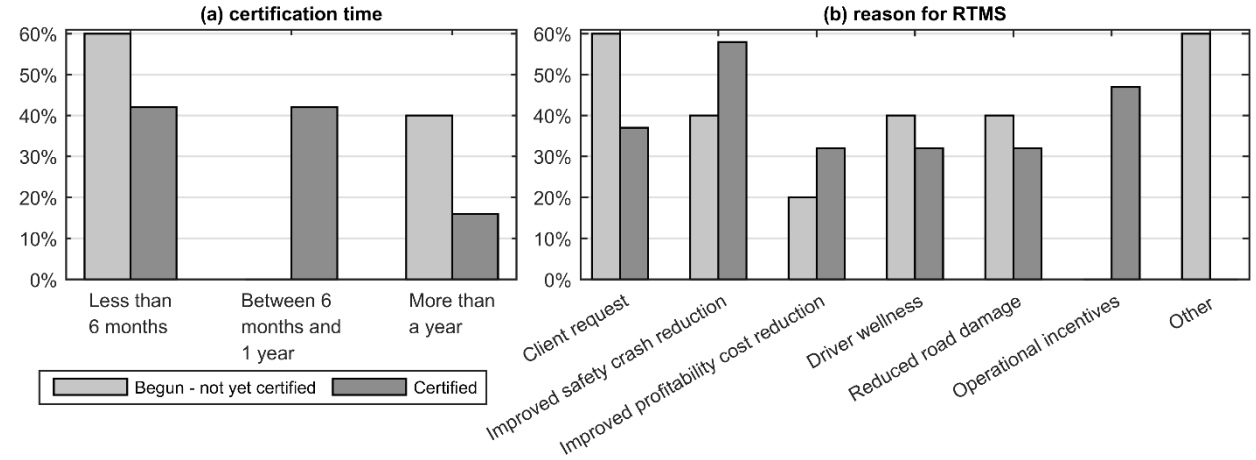

Figure 4 Respondents in terms of (a) certification time & (b) reason for RTMS

When asked to indicate the challenges to certification, the main obstacle was cited as a lack of understanding of the RTMS requirements. Respondents indicated that 25% of the clients of RTMS-certified companies were unaware of the RTMS, while 25% supported RTMS certification. 15% of respondents reported that clients insisted on certification; and 35% indicated that clients liked RTMS certification and the associated benefits. These results are depicted in Figure 5. For companies working toward RTMS, 40% indicated that their clients were unaware of the RTMS while 20% reported that clients insisted on certification; a further 20% said clients were supportive of RTMS certification and 20% reported that clients liked the RTMS and the associated benefits. 62% of companies that had not yet decided to implement the RTMS report that their clients had no prior

knowledge of it. Clients are once again a strong influencer in the decision to attain RTMS certification.

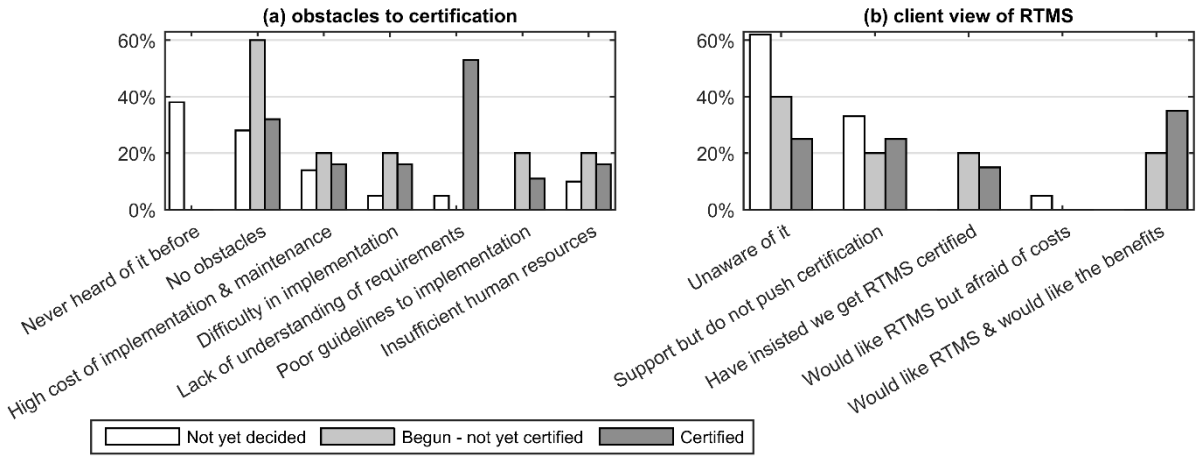

Figure 5 Respondents' (a) obstacles to certification & (b) client view of RTMS

Figure 6 shows the perceived benefits of RTMS in terms of safety, cost reduction, driver wellness, reduced road damage, operational efficiency and impact on business profits. 30% of RTMS certified companies identified some safety benefit in the RTMS, 15% identified significant benefits, and 50% indicated crucial benefits. Of the companies working towards RTMS, 20% reported some safety benefit, 40% reported significant benefits, and 20% reported crucial safety benefits. Safety is therefore a significant perceived outcome of the RTMS.

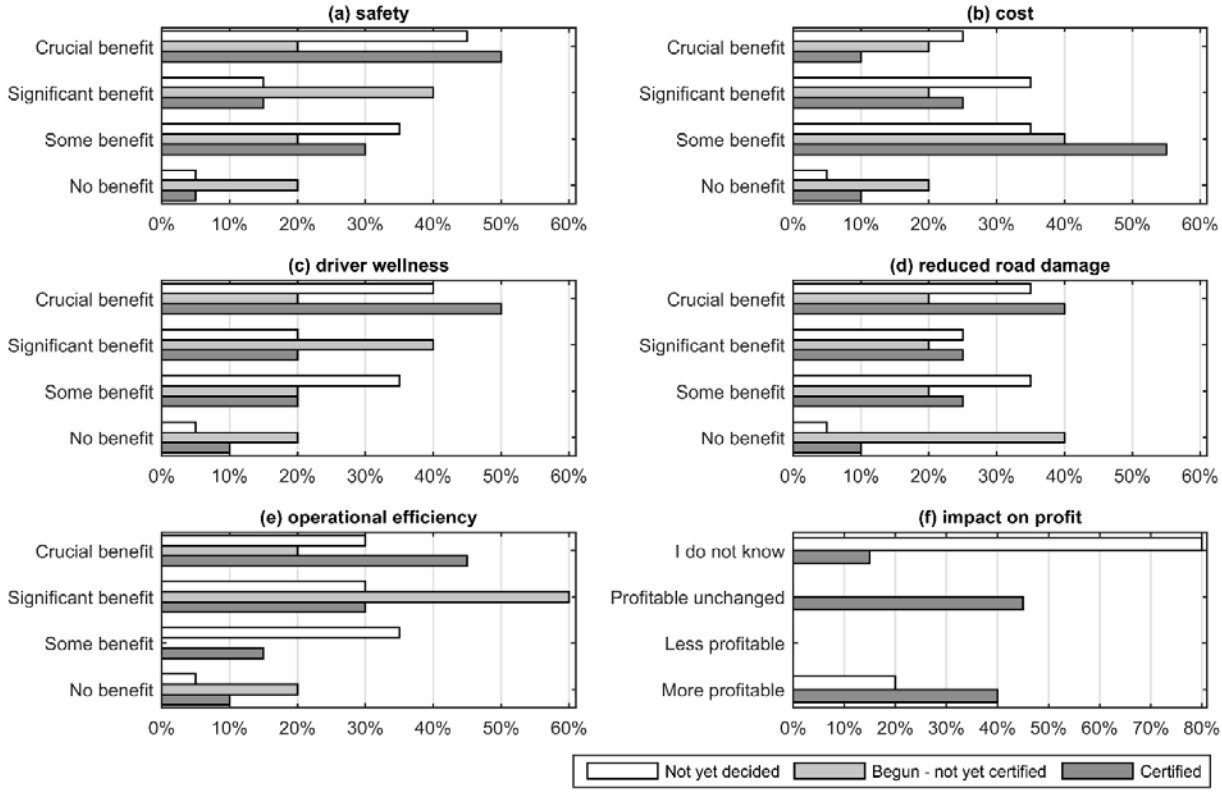

Figure 6 Respondents' perceived (a) safety, (b) cost, (c) driver wellness, (d) reduced road damage, (e) operational efficiency & (f) impact on profit

Figure 6 shows that 50% of RTMS certified companies found some cost reduction benefit, 25% found significant benefits and 10% indicated crucial benefits. Among the companies still working toward RTMS certification, 40% indicated some cost reduction benefit, 20% indicated significant cost reduction benefits, while 20% indicated crucial cost reduction benefits. This indicates that there are cost reduction benefits realised in 85% of RTMS-certified companies. Among RTMS certified companies, 20% found some benefit in driver wellness, 20% found significant benefits, and 50% found crucial benefits. Of the companies still working toward implementing RTMS, 20% find some benefit, 40% find significant benefit, and 20% find crucial benefit in driver wellness. Driver wellness is therefore a significant outcome of the RTMS.

Ten percent of RTMS certified operators believe there is no benefit in terms of reduced road damage, 25% reported some benefit, 25% reported significant benefit and 40% reported crucial benefit. Of the companies working towards RTMS certification, 40% reported no benefit, 20% reported some benefit, 20% reported significant benefit and 20% reported crucial benefit in terms of reduced road damage. It is suggested that the difference in perceived outcome is due to a change in awareness of the impact of overloading and improved vehicle design on the road network as respondents progress through their own RTMS awareness "evolution" and come to realise that there is a significant benefit in reduced road damage.

Fifteen percent of RTMS certified operators reported some benefit in improved operational efficiency, 30% reported significant benefit, and 40% reported crucial benefit in operational efficiency. In the companies working toward RTMS certification, 60% reported significant benefit in improved operational efficiency and 20% reported crucial benefit in improved operational efficiency. Significant improved operational efficiency has therefore been achieved as an outcome for an overwhelming majority of stakeholders in RTMS certification.

While only 40% of RTMS certified companies reported greater profitability as a result of the RTMS, 45% reported no change in profitability and in companies working towards RTMS, 20% reported increased profits as a result of the RTMS, while 80% did not know if there would be an increase in profit. Whereas there is some evidence of improved business profits, it does not appear to be consistent and widespread.

Figure 7 shows the respondents' opinions of the cost and worth of RTMS.

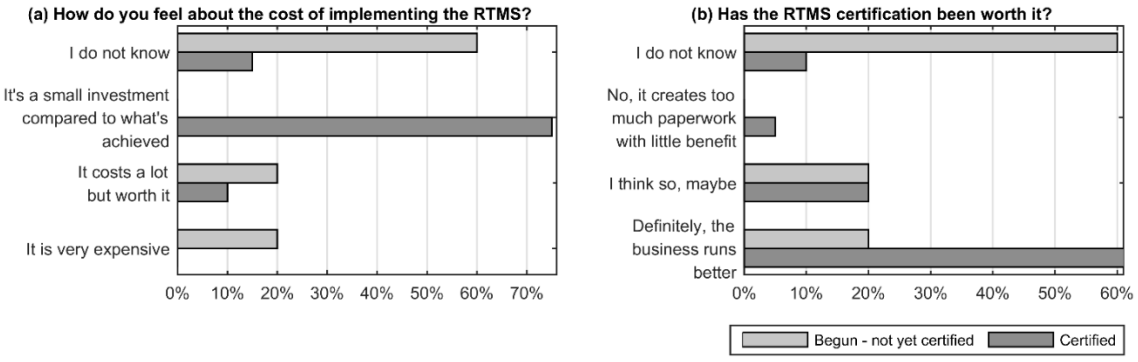

Figure 7 Respondents' opinions on (a) cost and (b) worth

Of companies that are RTMS certified, 70% believe that the RTMS is a small cost in relation to what it achieves. In companies that are working towards RTMS certification, 20% believe it to be an expensive exercise, 20% believe it costs a lot but is worth it, and 60% did not know. The RTMS is perceived to be worth the costs involved by the overwhelming majority of RTMS certified companies but it is less clear to companies still working toward RTMS certification. The majority of RTMS certified companies (60%) believe that it has been worthwhile and that the business runs better as a result of the RTMS, while 20% of the companies working towards RTMS certification definitely derive benefit from it, and 20% believe there may be a benefit, while 60% did not know. RTMS certification is regarded as worth the effort for the overwhelming majority of RTMS certified companies but this is not so apparent for companies working toward certification.

Figure 8 shows the respondents' views regarding informing other operators of their RTMS experience and how RTMS has changed how clients view their company. Most of RTMS certified companies (76%) are proud of the achievement and tell other road transport operators of this, while 50% of companies working toward certification are proud of it and tell others. Interestingly, 50% of companies working toward RTMS certification believe it is worthwhile but do not tell others. This is probably because they seek competitive advantage through the RTMS benefits.

Most of RTMS-certified companies (75%) believe that they are viewed by clients as more responsible as a result of RTMS certification. Only 20% of companies working towards RTMS certification indicated that they believe they are viewed as more responsible as a result of the RTMS, while 60% did not know. RTMS certification is a significant factor in shaping clients' views of the road transporter.

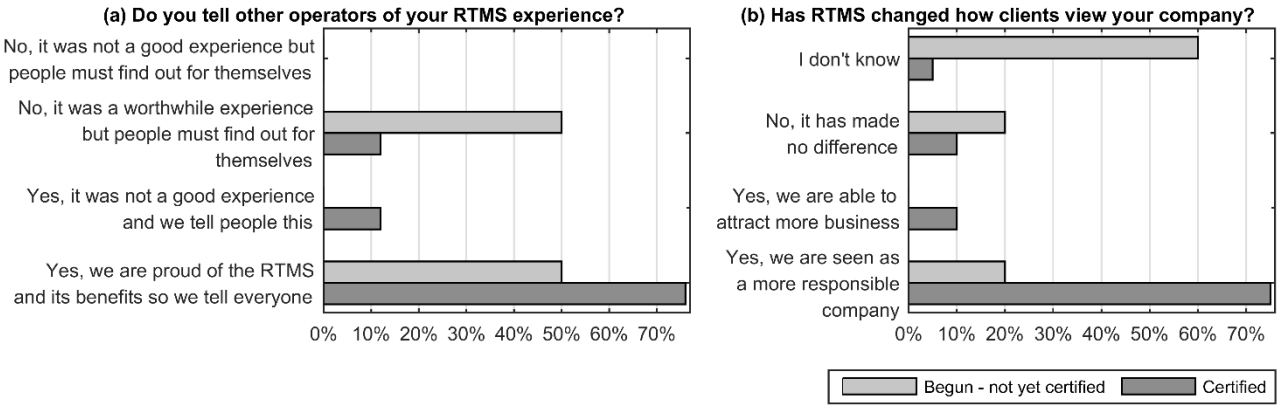

Figure 8 Respondents' (a) views informing other operators & (b) clients' views

The survey responses from the RTMS Steering Committee show that they believe that the RTMS has been effective in reducing crashes, minimising overloading, reducing road traffic offences, and achieving self-regulation amongst certified companies. The costs to implement the RTMS are regarded as minimal in comparison to the benefits for the operator, and it is viewed as having a good return on investment. The reduction in

crashes, reduction in fuel consumption, and improved operational efficiencies provide the payback to RTMS certified operators.

Lack of awareness of the value of RTMS certification, lack of exposure to management systems, and lack of buy-in from staff and management are seen as impediments to the widespread adoption of the RTMS. One respondent suggested that more work needs to be done in aligning the RTMS with the road traffic legislation to improve compliance. The respondents were unanimous in agreement that the RTMS has been successful thus far. In response to ways in which to improve the number of companies that are RTMS certified, one respondent suggested that a “toolkit” approach be implemented with templates and procedures to assist companies that have difficulty in developing a system. Another suggestion was that more of the achievements of RTMS certified companies should be marketed to demonstrate the benefits. When asked for advice to companies seeking RTMS accreditation, the respondents suggested making a start, taking the first step, doing a gap analysis and implementing a project plan, with internal audits guiding the process.

Significant responses from insurance and finance companies indicate that there is a general lack of awareness of the RTMS amongst road transport operators and that there are no systems in place to measure its effectiveness. They do not encourage their clients toward RTMS certification and they believe that more work needs to be done to promote an awareness of the RTMS, its objectives, and its achievements.

Survey responses from the road traffic authorities indicate that they see the role of the RTMS to support legislation and promote compliance. It is viewed as having achieved this objective, as well as improving safety and productivity, while reducing breakdowns and maintenance costs. More effective marketing of the RTMS, as well as improved operational incentives, and consignor awareness of the RTMS benefits are viewed as strong drivers for increasing RTMS certification. Suggestions for improved monitoring of the RTMS achievements are to collect data regarding crashes, maintenance costs, and costs of logistics operations. A caveat is in the observed gap in roadworthiness of vehicles and the manner in which they are operated, as compared to the standard to which they are certified. Some work needs to be done to ensure alignment of processes.

5 CONCLUSIONS AND RECOMMENDATIONS

RTMS certified road transport operators reported significant benefits in improved safety, reduced crashes, improved fuel consumption, operational efficiency, operating profits and regard the RTMS as worth the effort and investment. There is significant alignment between the objectives of the RTMS and the user experience of the RTMS in practice. There is also good alignment in the perceptions of the RTMS steering committee and the operator experience. It is recommended that the RTMS steering committee embark on initiatives that improve awareness of the improved road transport sustainability achieved through the RTMS. Clients of logistics service providers are key influencers in the decision to become RTMS certified, and their role should be leveraged through broader engagement regarding the RTMS and the mutual benefits of its objectives.

The process of RTMS certification needs to be made more clear and transparent. More effort needs to be expended in the marketing of the RTMS and its benefits. In addition, improved operational incentives may contribute significantly in the drive to increase the levels of RTMS certification. The RTMS has achieved its stated objectives of improved operational efficiency and profits, increased levels of compliance, reduced damage to road networks, improved road safety and driver wellness. The main challenge now is to create the right conditions for increasing the number of companies that attain certification. In light of the RTMS achieving goals that address various stakeholders' interests including that of the company shareholders and clients, drivers as well as those of society, the promotion of the RTMS should be a national strategic imperative in South Africa. Further research is required into specific obstacles encountered by companies in the transition to RTMS certification with a view to eliminating these obstacles where possible.

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