AN INVESTIGATION INTO THE FACTORS CONTRIBUTING TO RAIL FREIGHT LOSING MARKET SHARE: A SOUTH AFRICAN PERSPECTIVE

L PHALADI, Z TOLI* and C MARA**

University of Johannesburg; University of Johannesburg, P O Box 624, Auckland Park, 2006, Gauteng Tel: 083 254 4070
*Tel: 083 954 9858 or 011 583 0464; Email: Zolile.Toli@transnet.net
**Tel: 011 559 4432 or 072 270 2291; Email: cmara@uj.ac.za

ABSTRACT

Transnet Freight Rail (TFR) has positioned itself in the market as a low cost provider of transporting freight, with the intention of achieving a sustainable competitive edge and a bigger market share. However, despite this strategy, which involves Market Demand Strategic planning, TFR has been losing market share to road freight and that has influenced the organisation's revenue and sustainability. Transportation is a vital link in the value chain and contributes millions to an economy, yet produces many negative externalities, such as CO2 emissions. In South Africa, rail and road are the preferred modes of transport, and while railway transport produces less than one third of the emissions produced by road transport, the latter has become the preferred mode. Freight rail is losing market share to road freight and this study investigated the reasons. An interpretivist, qualitative content analysis was performed. Eight senior managers at Transnet Rail Freight were interviewed and it was found that the organisation lacks management skills, is unable to adapt to market demands; operates under unfavourable economic conditions; has to get by with aging infrastructure; under-utilises other assets; and is not customer centric. It is recommended that a skills audit be performed, and an audit of underutilised assets. Change should be managed more proactively to regain market share. This paper contributes theoretically to the body of knowledge on transportation in South Africa. Practically, senior managers at TFR will become aware of the challenges pointed out, which may aid decision making in the future.

1. INTRODUCTION AND BACKGROUND

Before 1987 government policy required that goods transported over a distance of 400 kilometres or more, had to be done by railways as the sole carrier. This situation gave railways a majority market share in the transportation industry. Railways' major competitor is road transport, which is trucks and heavy haulers. The entity representing railways or rail freight in South African is state-owned Transnet Freight Rail (TFR) that has 22,000 kilometres of train track connecting ports to the rest of the country (Datamonitor, 2009). Subsequent to 1987, transporting freight on rail was deregulated and the playing field was levelled for intermodal transport (Nell, 2003). This change gave the freight customer options, and they chose road transport even though rail is the better option (One, 2010). Today 83% of land freight is transported by road (Finweek, 2009). The effect of competition is seen in TFR reducing their private sidings (facility to move freight from customers to destinations or door-to-door) from 13000 sidings in 1992 to currently 3500 private sidings.

This situation may affect society negatively in various ways, such as in a form of emissions of carbon dioxide, air pollution, global warming, noise, congestion and energy security (Mail and Guardian, 2011; Dedík, Gašparík, Záhumenská, Ľupták and Hřebíček, 2018). To compound this problem further, an increase in railway tariffs pushed more freight transportation onto roads and off the railways (CILT World, 2008). The South African government recognised the decline in railway as an intermodal transport preferred by freight operators (Department of Transport, 2006; RRA, 2018). Hence, a need for a transport strategy and policy surfaced that will consider complementarity between road and rail (Nell, 2003). Before new strategies are developed however, TFR needs to revisit current strategies. Rail competes on costs by being 75% cheaper than road, yet, this does not appear to be a winning strategy. Counterintuitively, customers are willing to pay more for better service (Maqutu, 2015). Therefore, TFR needs to consider a differentiation or focused strategy instead of a low cost leader competitive strategy (Porter, 1996). Options should be pursued, such as strategic alliances with road transport providers, to achieve a smooth 'door-to-door' delivery (Schilling, 2013). This is the academic puzzle that inspired this research.

2. LITERATURE REVIEW

Rail freight is an autonomous service sector for providers who transport freight by rail (MarketLine, 2014). Rail freight is however not the only mode of transporting freight, others being road and intermodal transport (two or more modes of transport, for example road, rail, and water) within a single transport chain (Bierwirth, Kirschstein and Meisel, 2012). The freight service sector consists of rail, road competition and intermodal transport (Dedík et al., 2018). It has been proven that economic growth is closely correlated with growth in freight transport activity (Eurostat, 2014b; 2018). Sustainable freight transport activity is therefore important for economic growth in times of turbulence and uncertain future outlook (Dedík et al., 2018). Shippers or consignees are expected to be more cautious about spending during recessionary times and choose the cheaper mode of transport (Islam, 2018). However, the contrary is taking place in South Africa, where road transport is preferred and volumes are increasing steadily (MarketLine, 2014).

Ahjum Merven Stone and Caetano (2014) refer to fuel efficiency in road vehicles that may influence users' decisions to use road transportation. These authors found that migration away from rail, in favour of road transportation is increasing, and this is due to fuel and combustion efficiency improvements in freight transportation vehicles. However, road transport introduces many negative externalities such as traffic congestion, serious and fatal road accidents, and CO2 emissions three times higher than what is generated by rail transport (Havenga and Pienaar, 2012). Other external costs include property damage and noise (Islam, 2018). To examine the subject further and uncover reasons for this occurrence, literature was reviewed to obtain and present both a domestic and international freight industry perspective; the internal and external factors challenging the organisation under study; and the relationship between strategy and market share performance.

2.1 International freight industry

Research found that rail freight losing market share is a global occurrence. A study found in Japan and China (where rail freight is controlled by the government) road freight has the bigger market share (55.2%) when compared to rail freight on 44.8% (Marketline, 2014). Irish rail network experienced a significant reduction of railway lines from 4115 lines in

1957 to 1,834 lines in 2007, resulting in some lines being dismantled due to reduced utility (Gimenez, 2010). On the other hand, road freight continues to increase in market share as more customers prefer this alternative means of transporting their commodities. Irish exporters pointed to the efficiency of rail freight. In Ireland manufacturing plants are not conveniently located for connecting with a rail network making it difficult to achieve competitiveness in rail freight transportation since they cannot provide the door-to-door service road hauliers do (Gimenez, 2010). This ineffectiveness and incapacity contribute to rail losing market share. According to Woodburn (2003), the UK logistical perspective is that it is imperative to improve rail network capabilities and capacity, and a greater customer focus from rail operators, before a shift from road to rail may be established. Furthermore, such shifts will be beneficial to the environment (Islam, 2018).

In a pro-active drive to discourage road transportation the UK government has set targets for CO2 reduction that contribute to climate change in recognition of the potential threats to the ecosystem (Mckinnon, 2007). In European countries, additional fee externalities are imposed when transporting goods by road (Dedík et al., 2018). In Ireland from 2006 to 2007, there were 703 victims in road transport when compared to four victims in rail transport (Gimenez, 2010). Considering the negative externalities related to road transportation, the balance should shift away from road transportation in favour of rail. Yet in practice, road transportation has the bigger market share, and it continues to be the preferred transport mode (Dedík et al., 2018). Critics of rail transportation lament this transport mode, the inflexible volumes, slow trains and limited national and international routes of this mode (Dedík et al., 2018). According to Bontekoning and Priemus (2004), breakthrough innovation is necessary if the market share of the rail freight is to expand. The main growth opportunities lie with the short-distance markets, perishable and high value commodities, and small consignments. There is also demand for speed, reliability and flexibility.

2.2 South African freight industry

Compared to other countries South Africa has high transport demands considering its output and population size (Havenga and Pienaar, 2012). In the past, rail transportation carried high fixed costs and a combination of cross-border and domestic freight alleviated this burden. TFR attempted to dabble in intermodal transport, yet more shippers started preferring road to rail (DOT, 2018). This imbalance between road and freight transportation is not sustainable and is further exacerbated by the deterioration of aging rail infrastructure, combined with the absence of intermodal solutions (Havenga, and Pienaar, 2012).

In South Africa the competitive landscape is no different for the freight industry. The competitive rivalry between rail and road has seen TFR experience a sharp decline in profits from 25% to 8% during the period of 2007 to 2011 (Marketline, 2013). This might explain why road dominates 88% of all freight transported (Maqutu, 2015). However, other freight clients such as Toyota argue that in the long-term rail transportation will result in savings on overheads and general logistics costs (Venter, 2012). Infrastructure maintenance is another major disadvantage of freight. Comparatively, road freight has very small fleet maintenance costs (Stander and Pienaar, 2002).

Ahjum et al. (2014) are projecting further changes and erosion of rail transportation between 2015 and 2050. Accordingly, the relatively affordable cost of capital, anticipated GDP growth, development if fuel technology is expected to shift preferences further away

from freight rail to road rail transportation. Table 1 below illustrates the factors that are anticipated to influence this preference.

Table 1: Assumptions about the factors that will influence decisions

Factor	Description
Interest rates	The cost of capital is expected to remain below 8%
GDP growth in SA	Annual GDP growth of 3.1% is expected
Improved fuel and vehicle technology	Cleaner fuels from 2020 will result in crude oils being further refined and the continued introduction of biofuels
Electrification of road transport	Fuel demand would reduce even further and electricity demand will increase

Source: Ahjum et al. (2014)

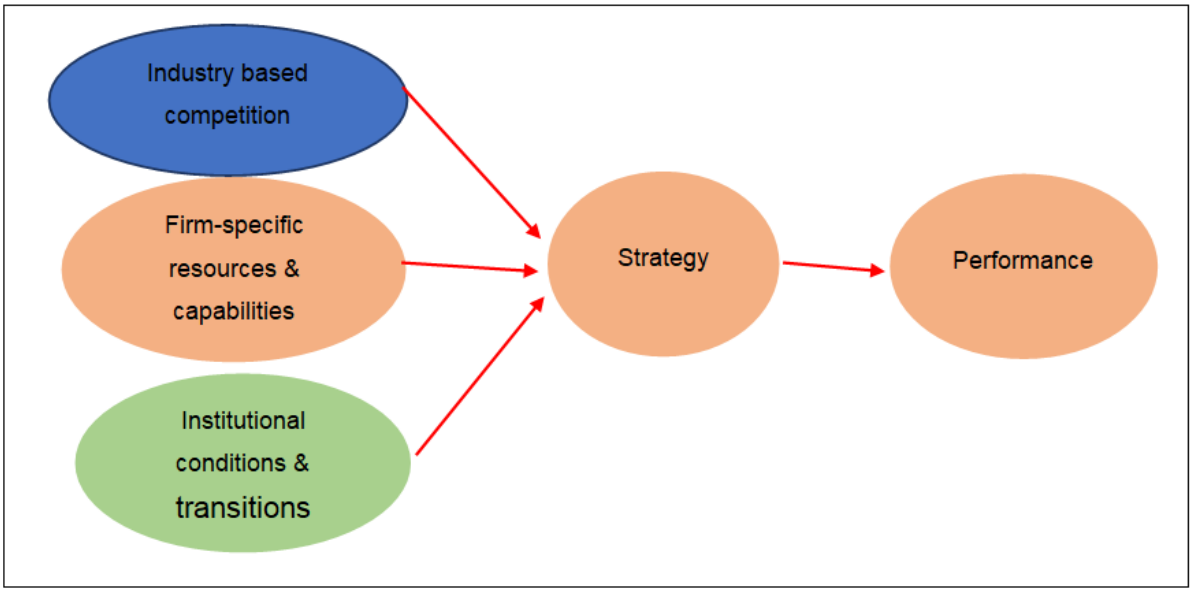
One of the major rail freight carriers is TFR, an operating division of Transnet. In the face of deteriorating infrastructure, little guidance from policy makers and failed implementation of initiatives and strategies, Transnet Freight Rail was facing many trials and looked to international models for solutions (Havenga and Pienaar, 2012). It appears however that few of these international models were useful to TFR, and to understand the organisation's strategy implementation a closer look at the underlying strategic management theories and studies is warranted.

2.3 The relationship between strategy and organisational market share

Good business strategy is linked to good organisational performance, which warrants an investigation into bases of strategic choices and strategic decisions. Young, Wang, Lui and Austrom (2014) distinguish between the institution-based view strategy (figure 1) and a resource-based view strategy (RBV). The institution – based view strategy pays attention to aspects such as "firm – specific resources and capability" and it also relates to the size of the company. Sarac et al. (2014) found that the size of the organisation had no effect on their business performance or market share. This finding shows that when top management make strategic decisions, they should have a holistic view in singling out specific aspects in the strategy tripod depicted in figure 1. In contrast, other scholars argue that an increase in customer satisfaction (industry-based competition) improves market share (Rego, Morgan and Fornell, 2013) which is one leg of the tripod.

In the figure below, strategy is depicted as dependent on industry-based competition; the organisation's internal resources and competencies; and internal changes in the organisation. These three dependencies form the strategy tripod that informs company strategy to results in the overall good or bad performance. Babatunde and Adebisi (2012) argue that understanding strategy requires a firm grip of the internal challenges and opportunities an organisation faces. Balas, Gokus and Colakoglu (2014) tested the theory of environment-strategy-performance focusing on the service sector, in particular finance, insurance, accommodation and transportation. They found that:

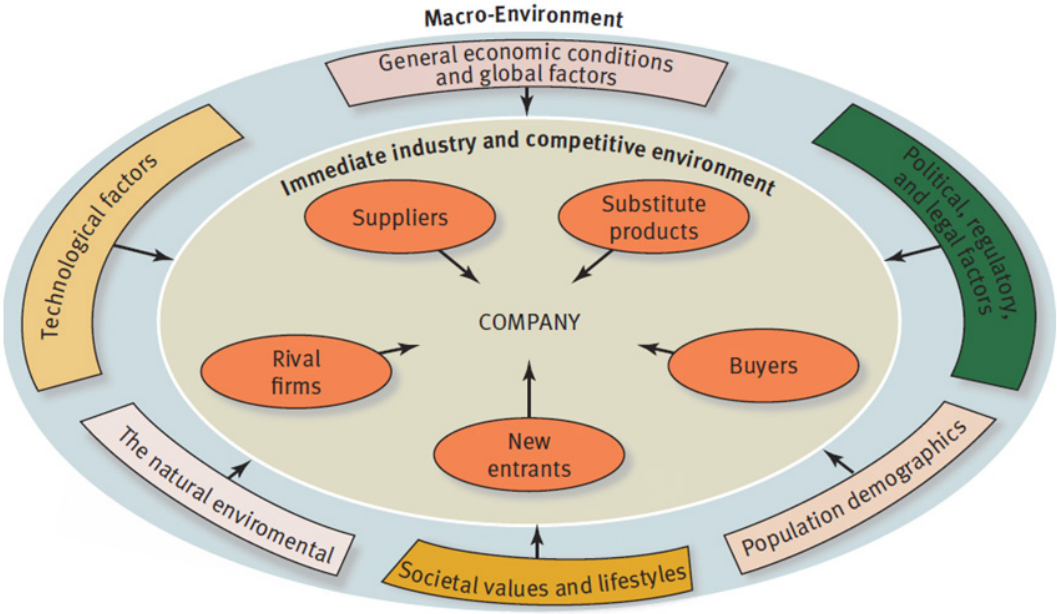
1. The external environment does influence the organisation's strategic focus,
2. When organisations are faced with sudden or regular change in customer preferences they tend to increase their prospector focus (new customers),
3. When there is an influx of change in customer preferences, they tend to increase their defender focus (defensive strategies).



Source: Young et al., 2014.

Figure 1: The strategy tripod

Gamble, Thompson and Peteraf (2018) refer to the components of an organisation's external environment that impacts its internal environment. These include technology, population growth, customer preferences and competitive pressure from rivals. These components may by illustrated in Figure 2 below.



Source: Thompson et al. (2018).

Figure 2: The Components of an organisation's Macro-Environment

These findings re-affirm that organisations need to constantly scan their internal and external business environment in an effort to examine their performance. The external environment is beyond the control of the organisation, however the internal environment is where strategic decisions are formulated depending on resources, structure, culture and policies (Maier and Zenovia, 2012). Organisations can however use strategy as a mechanism of adjustment, by aligning internal and external environmental factors for their business success, optimizing internal strengths and reducing internal weaknesses to

overcome external threats to take advantage of external opportunities (Dragnic, 2014). Both environments are crucial to business strategy. However, it is not clear which environment takes priority in strategy formulation (Balas et al. 2014; Maier and Zenovia, 2012; Dragnic, 2014). Summarizing literature has found that business performance is dependent not only on organisational strategies, but on their formulation and implementation. In the case of TFR, the researchers are investigating strategy formulation and implementation in an effort to understand what has led to the organisation's loss in market share. This quest is also what gave rise to the formulation of a problem statement and objectives to address the research problem.

3. PROBLEM STATEMENT

Optimising organisational performance and capturing the biggest market share through creativity and innovative business practices are avenues for sustainable competitive advantage for the benefit of all stakeholders (Babatunde and Adebisi, 2012). Transnet Freight Rail (TFR) as sole rail freight operator is bleeding market share, which may have a negative impact on an organisation's revenue, future performance and sustainability outlook. It is not clear if TFR management is implementing strategies or if they are considering the factors that are contributing to the loss of market share and how to prevent further erosion. What is clear however, is that the market share performance of TFR has declined over the years, which raises the question of: What factors contribute to TFR losing market share? To address this research question, a primary and a number of secondary objectives are formulated.

3.1 Primary objective

To understand the factors contributing to market share erosion in TFR.

3.2 Secondary objectives

- To investigate TFR's strategic objectives.
- To analyse how resources are allocated to meet strategic objectives.
- To analyse what challenges has shaped TFR strategies over time.
- To examine how the organisation's performance is evaluated.
- To advice on the implications for management.

4. CONTRIBUTION OF THE STUDY

This study investigates the aforementioned problems to suggest solutions that may benefit society, in the form of spin-offs such as reduced road congestion and accidents, reduced road maintenance, cheaper bulk commodities and a reduction in pollution caused by transportation (Maqutu, 2015; Dedík *et al*., 2018). This study may also enable the development of new strategies to attract customers and the identification of distinctive strategies that will evoke organisational restructuring and a change in strategic position, for the transportation industry or other industries (Porter, 1996).

5. LIMITATIONS OF THE STUDY

This study resulted from a research project of Honours students in a South African university. The students had limited time and financial resources to conduct the study. Interviews were conducted during office hours and eight respondents were conveniently selected, in the interest of time and study deadlines.. Only one organisation was

approached, as it is the sole provider of freight transportation. Findings are based on subjective perceptions and responses, and may not be the views of the organisation.

6. RESEARCH METHODOLOGY

In this section, the research design and paradigm, research approach, population and sample, research procedure, data collection and analysis are discussed.

The nature of this study calls for the Interpretivism approach. Interpretivist researchers believe that knowledge is co-created by them and the respondents (Babbie and Mouton, 2011). To understand TRF's strategy and the reasons for its loss of market share, multiple views from TRF senior management are required. The Interpretive approach is suited to this kind of investigation because it focuses on the holistic point of view of the respondents and their environment (Babbie and Mouton, 2011). This study commenced with the views and literature of other authors and continues by investigating the research problem empirically. A qualitative approach is employed, which is compatible with the interpretivism paradigm. Qualitative researchers study human actions and viewpoints and seek to understand and describe the world through these holistic viewpoints, rather than performing statistical calculations from which to draw conclusions (Creswell, 2013; Babbie and Mouton, 2011).

Non-probability, stratified random sampling was considered the most suitable method for this study. This sampling technique fits in well with social research, especially as this study was a low-budget student project (Creswell, 2013). This sampling takes place when the researcher selects a sample from which the most can be learned. Non-probability sampling is most successful when data review and analysis are done in conjunction with data collection (Welman, Kruger and Mitchell, 2010). In this study, the context is senior managers working at Transnet. Fifteen managers were approached, however only eight accepted the opportunity to be interviewed. These eight managers, located in Gauteng, were considered to be a reasonable sample although the population consists of 382 senior and executive managers countrywide. As this study was an Honours research project, which is conducted on a small scale, with limited time and financial resources, the sample size of eight managers was considered adequate. Furthermore, samples in qualitative research are typically smaller than in quantitative research, and participants ae selected based on their expert knowledge and ability to contribute meaningfully to the study as stated by Dworkin (2012) and Bryman (2015).

The researchers conducted eight interviews at the premises of Transnet in Gauteng, using self-developed semi-structured interview schedules. The interviews generated in-depth, rich data, information and ideas, with which manual thematic analysis could be performed (Babbie and Mouton, 2011; Creswell, 2013). Data was collected during interviews by means of handwritten notes and audio recordings, for which permission was sought from the participants beforehand (Babbie and Mouton, 2001). Following the interviews, handwritten notes were written out in full and verified for accuracy (Welman et al., 2010). Next, thematic data analysis was commenced, to build categories and find common themes from the responses (Emmel, 2015). The researchers identified four significant themes that emerged from the utterances of participants. The themes are: strategic objectives; resources; evaluation methods and challenges. The themes are illustrated graphically as in Figure 2, and further elaborated upon under Section 7.

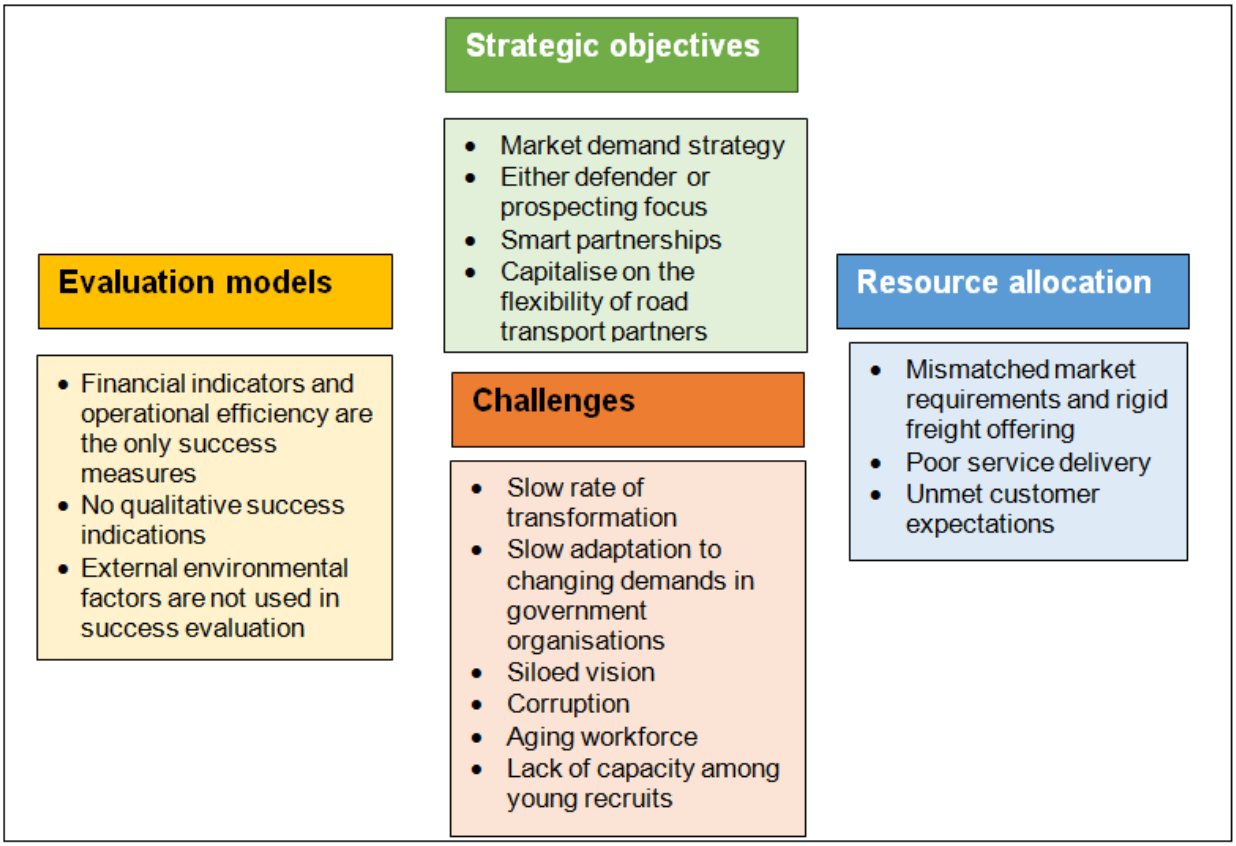


Figure 2: Four common themes identified from categories

Table 2: Objectives, themes and findings summarised

Secondary Objectives	Theme	Findings	Theoretical concept
To investigate TFR's strategic objectives	Strategic objectives	Managers interviewed stated that a new strategy was formulated, referred to as the Market Demand Strategy (MDS), which is built on 5 pillars: operational improvement, market development, timely investments in infrastructure, improved leadership and accountability. TFR is classified as market oriented organisation, which has to choose to be either prospectus focus or defender focus when economic conditions change. The strategy is to partner with road freight service providers, instead of competing with them. Road transportation is more flexible and can complement the positive attributes of rail, being low costs, the ability to move bulk freight and its environmentally friendly operations.	Balas *et al*., 2014
To analyse how resources are allocated to meet strategic objectives	Resource allocation	Managers reported a mismatch between market requirements and rigid processes resulting in slow adjustment to change, better service delivery and meeting customer expectations.	Maier and Zenovia, (2012); Dragnic (2014)
To analyse what challenges have shaped TFR strategies over time	Challenges faced	Managers lamented their own readiness for the transformation of the organisation and change management processes, still in its infancy. Managing change in a government organisation can be difficult as it involves people, objectives and responsibilities and therefore does hamper adapting to changing markets. Business units have siloed vision, and even compete internally to achieve monthly and annual targets; The MDS made provision for new trains, but due to corrupt practices, new trains were unsuitable, prices were inflated and the organisation was left to use the old trains. Aging workforce, with many employees retiring and not enough capacitated replacements	Hrebiniak (2008); Gamble *et al.* (2018)
To examine how the performance of the business is evaluated	Evaluation methods	Success is evaluated when targets are achieved. Targets are set at 250 million tonnes to be moved per week. Efficiency is also measured in terms of financial indicators and operational efficiency Operational efficiency is not measured in qualitative terms such as customer satisfaction or value chain efficiency	(Young, *et al*., 2014)

Source: Authors

As illustrated in Figure 2 above, the four themes that were most frequently reported by managers who participated in the study were: strategic objectives, resource allocation, management challenges experienced and evaluation practices employed. These themes were developed from a number of categories, grouped according to commonality and given a theme that was most suitable to describe the categories. Categories and themes are further explained in Table 2 above.

7. DISCUSSION OF FINDINGS

Managers reported that the MDS was an ambitious and workable strategy. However, they perceive their execution of it as being defective, on account of external elements that were influenced by external forces. This finding is in line with previous findings of Gamble et al. (2018) who stated that the external environment impacts management decisions made internal to the organisation. The MDS strategy entailed investing in new infrastructure, but the locomotives bought were not usable and corruption allegations surfaced, stating that the prices were inflated (Fin24.com, 2018). The strategy could therefore not be executed as envisaged. Business units are compelled to use aging infrastructure, which uses old technology and requires frequent maintenance. Business units are also functioning as silos, and instead of cooperating, are competing for infrastructure. One manager reported that there is rivalry among train controllers, who would prioritise the movement of their division's freight to achieve their targets, at the expense of other divisions. Aging infrastructure hampers strategy implementation and execution and as affirmed by Maier and Zenovia (2012), while management has no control over the external environment, it is within their means to use strategy to control the organisation's structure, culture and resources to overcome weaknesses and compete successfully.

Managers interviewed reported that they lack management training and skills. Tenured employees will leave soon and will create a knowledge gap. To overcome the challenges of loss of market share, TFR is partnering with road haulers. This partnership sees the two types of transport (road and rail) being complemented. Road haulers are restricted in terms of the weight they may carry per load, whereas freight rail is not. On the other hand, road transportation can move freight in places where rail transport cannot reach. These findings are affirmed by Ahjum et al. (2014), who found that customer preferences are biased toward road transportation. Business performance is measured and evaluated in financial terms, such as achieving a certain minimum tonnage of freight. Other measures are operational efficiency and earnings before interest, tax, dividends and amortisation (EBITDA). However, participants of this study realised that quantitative measures are insufficient means of evaluating successful strategy implementation and qualitative measures such as value chain analysis or customer satisfaction.

8. CONCLUSION

This research study aimed to understand the factors that contributed to the loss of market share at TFR. The findings were categorised in four themes, being strategic objectives, resource allocation, challenges faced and evaluation techniques. The address of these themes satisfied the requirements of the research objectives.

It may be concluded from the findings of this research that a combination of factors, such as poor implementation of a good strategy, and organisational structure and culture that are non-supportive this strategy may be responsible for the failure of the MDS. Other shortcomings such as misread market demands, resources erroneously allocated and finally, an inability to exercise control and evaluation of project success or failure has led to

TFR becoming less competitive and losing market share. Findings were illustrated in Table 1. Based on these findings further recommendations will follow.

9. RECOMMENDATIONS AND MANAGEMENT IMPLICATIONS

- The organisation should do an audit of all management skills; identify which skills are needed to align with the execution of the MDS strategy. The individuals identified should be trained and deployed in areas where strategic focus is weak.
- Change management programmes should be implemented at all levels of management and junior staff. The role of change agents should be more visible in the organisation.
- There should forums formulated to find creative ways to increase utility TFR assets like locomotives in an attempt to increase the return on investment (ROI). These assets have shown to be underutilized.
- Internal decision making processes need to be revised to an able TFR to be more agile in responding to the changing market conditions.
- Further research could provide for deeper and richer data from more managers, for example 30 compared to the current eight.

10. REFERENCES

Ahjum, F, Merven, B, Stone, A and Caetano, T, 2014. Road transport vehicles in South Africa towards 2050: Factors influencing technology choice and implications for fuel supply. Journal of Energy in South Africa. 29(3), pp. 33-49.

Babbie, E and Mouton, J, 2011. “The practice of social research. 1 ed”. Cape Town: Oxford University Press. P192 (2011).

Balas, A, Gokus, O and Colakoglu, S, 2014. Exploring the role of External Enviroment on determining strategic focus, market orientation, and firm performance of service firms. Academy of Marketing Studies Journal, 18(1), pp. 19-38.

Bierwirth, C, Kirschstein, T and Meisel, F, 2012. On Transport Service Selection in Intermodal Rail/Road Distribution Networks. German Academic Association for Businss Research, 5(1), pp. 198-219

Bontekoning, Y. and Priemus, H, 2004. Breakthrough Innovations in Intermodal Freight Transport. Transportation Planning and Technology, 27(5), pp. 335 -345.

Bryman, A, 2015. Social Research Methods. Fifth edition. London, UK: Oxford University Press. P79 (2015).

CILT World, 2008. South Africa rail freight tariff increases 'will move more freight onto road'. CILT World, 1 April.

Creswell, JW, 2013. “Research Design – Qualitative, Quantitative and Mixed Methods Approaches. 2nd Ed.” Sage Publications. Los Angeles, USA. P212 (2013).

DOT (National Department of Transport, South Africa), 2018, (Online). Available at www.transport.gov.za. Accessed on 14 December 2018.

Datamonitor, 2009. Road and Rail in South Africa. 4, pp. 2-27.

David, F, 2009. “Strategic Management Concepts and cases. 12 ed.” New Jersey: Pearson Prentice Hall (2009).

Dedík, M, Gašparík, J, Záhumenská, Z, Ľupták V and Hřebíček, Z, 2018. Proposal of the measures to Increase the Competitiveness of Rail Freight Transport in the EU. Naše more, 65(4), pp. 202-207.

Dragnic, D, 2014. Impact of internal and externa; factors on the performance of fast-growing small and meduim business. Management, 19(1), pp. 119-159.

Dworkin, S.L, 2012. Sample Size Policy for Qualitative Studies Using In-Depth Interviews. Architecture of Sexual Behaviour, 41, pp. 1319-1320.

Emmel, N, 2015. Themes, variables, and the limits to calculating sample size in qualitative research: a response to Fugard and Potts. International Journal of Social Research Methodology. 18(6): 685-686.

Fabrigar, L and Wegener, D, 2012. “Exploratory Factor Analysis understanding statistics.” 1 ed. New York: Oxford University Press. P221 (2012).

Eurostat, 2014b. “Real GDP growth rate – volume”. (Online).
Available at: http://epp.eurostat.ec.europa.eu. (Accessed 11 December 2018).

Eurostat, 2018. “Services statistics – short-term indicators”.
Available at: http://epp.eurostat.ec.europa.eu. (Accessed 11 December 2018).

Finweek, 2008. End of line? Finweek, 2 February, pp. 57-57.

Fin24.com, 2018. Transnet overpaid by R509mil for locomotives - report. (Online). Available at www.fin24.com. Accessed on 12 December 2018.

Finweek, 2009. No gloating please at derailment. Trucking, 26 February, pp. 41-44.

Gamble, J, Thompson, A and Peteraf, M, 2018. Essentails of Strategic Management: the quest for competitive advantage. New York: McGraw-Hill, pp. 93-187 (2018).

Gimenez, JC, 2010. Towards a greener Irish chain supply: A rail freight perspective. Supply Chain, 2(4) p 26-33.

Havenga, JH and Pienaar, WJ, 2012, the creation and application of a national freight flow model for South Africa. Journal of the South African Institute of Civil Engineering. (Online.) Available at www.scielo.org.za. Accessed on 14 December 2018).

Hrebiniak, L, 2008. Making strategy work: overcoming the obstacles to effective execution. Ivey Business Journal, 150, Pp 263-270.

Islam, DZ, 2018. "Prospects for European sustainable rail freight transport during economic austerity", Benchmarking: An International Journal, 25(8), pp.2783-2805.

Klein, HK and Myers, MD, 1999. A set of Principles for Conducting and Evaluating Interpretive Field Studies in Information System. MIS Quartely, 23(1), pp. 67-99.

Kreurtzburger, E, Marcharis, C, Vereecken, L and Woxenius, J, 2003. Is intermodal freight transport more enviromentally friendly than all road freight transport? Paper presented at the NECTAR Conference No 7, Umeå, Sweden June 13-15, 2003.

Krzakiewicz, K and Cyfert, S. 2014. The Strategic Dimension of the Dynamic Capabilities of Enterprises. Management, 18(2), pp. 7-18.

Maier, V and Zenovia, C. 2012. The impact of internal and external environment on the competitiveness of firms. Managerial Challenges of the Contemporary Society. 4(1-6).

Mail and Guardian, 2011. Back-to-rail plan stuck at the station. Mail and Gaurdian, 4 March.

Maqutu, A, 2015. Road is still king of freight. Business Day, 27 January.

Marketline, 2013. Road and Rail in South Africa. MarketLine, 1 March, pp. 2-24.

MarketLine, 2014. Road and Rail in Japan. MarketLine Industry Profile, 1(2), pp. 4-37.

Marketline, 2014. Road and Rail in Asia - Pacific. Marketline Industry Profile, pp. 1-39.

Mckinnon, A, 2007. CO2 Emissions from Freight Transport: A data analysis of UK. United Kingdom, Logistic Research Network.

Nell, J, 2003. Rail Freight versus Road Freight. Truck and Bus, September, pp. 50-54.

One, 2010. Rail vs road debate. Revising the Road, November, pp. 14-15.

Porter, M, 1996. What is strategy?. Harvard Business Review, 74(6) 61–78.

Rego, L, Morgan, N and Fornell, C. 2013. Reexamining the Market Share - Customer Satisfaction Relationship. American Marketing association, 77(1), pp. 1-20.

Sarac, M, Ertan, Y and Yucel, E, 2014. How Do Business Strategies Predict Firm Performance? An Investigation On Borsa Instanbul 100 Index. Journal of Accounting and Finance, 1(1), pp. 121-134.

Schilling, M, 2013. “Types of collaborative arrangements. Strategic Management of Technological innovation”. New York: McGraw-Hill, pp. 157-159 (2013).

Smith, T, 2014. Testing theory and related factors for influencing proficiency in quantitative research. Academy of Educational Leadership Journal, 18(4), pp. 117-128.

Stander, H and Pienaar, W, 2002. Perspective on freight movement by road and rail in South Africa. Stellenbosch, Paper presented at the 21st Annual SATC conference (2002).

Venter, I. 2012, Auto firm makes decisive shift from road to rail. Engineering News, (online). Available at http://www.engineeringnews.co.za/topic/rail/page:114. Accessed on 9 December 2018.

Welman, C, Kruger, F and Mitchell, B, 2010. “Research Methodology, 3rd Edition”. Oxford University Press, Cape Town, South Africa.

Woodburn, AG, 2003. A Logistical Perspective on the Potential for Modal Shift of Freight from Road to Rail. International Journal of Transport Management in Great Britain, 1(4), pp. 237-245.

Young, M, Tsai, T, Wang, X, Lui, S and Ahstrom, D, 2014. Strategy in emerging economies and the theory of the firm. Asia Pacific Journal of Management, 31(2), pp. 331-354.

Zondi, S, 2015. Internal communication challenges and issues: a case study of Transnet Freight Rail business unit coal,vryheid (Kwazulu Natal province, South Africa). Kuwait Chapter of Arabian Journal of Business and Management Review, 4(6), pp.105-145.