RAILWAY CORPORATE GOVERNANCE IN A FREE-FUNCTIONING FREIGHT TRANSPORT MARKET: A SOUTH AFRICAN POSITION

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Abstract

Defining the economic role of rail freight transport in the national transport system of South Africa should be one of the basic ingredients of both an economically rational transport policy and the effective functioning of Transnet Freight Rail. In the interest of the national economy and in its own commercial interest, Transnet Freight Rail must only specialise in those fields where it can provide services tailored to the needs of customers at prices which are competitive and defensible in terms of economic principles. The institutional framework governing Transnet Freight Rail's operations should create an environment conducive to the management of its operations as a fully competitive and profit-oriented business by:

- fostering a competitive freight transport market;
- providing any required socio-economic rail services under special agreements;
- Transnet's board of directors defining management objectives and granting real management autonomy to Transnet Freight Rail; and
- Transnet Freight Rail defining clear and adequate performance indicators for itself.

On the basis of these conditions, this paper outlines a governance structure under which Transnet Freight Rail as a public corporation can operate within a climate of free and effective competition.

Keywords: economic regulation; freight rail transport; transport policy; vertical separation

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1. Introduction

The economic regulation of land freight transport in South Africa was terminated on 31 March 1990. Until that date the South African Transport Services (the then national railway operator) had a social obligation to operate as a common carrier. Under the terms of the Legal Succession to the South African Transport Services Act of 1989 ('the Act'), Transnet Limited, the holding company of Transnet Freight Rail, came into being on 1 April 1990. From its inception in 1990, Transnet Freight Rail was relieved of any social common carrier obligations. Under the terms of the Act, Transnet Freight Rail is empowered to operate as a profit-oriented division of Transnet Limited and as the only national rail freight carrier.

Today, 20 years after the economic deregulation of land freight transport, the increase in the number of freight vehicles conducting long-distance haulage on South Africa's intercity road network is receiving substantial attention. This attention usually focuses on (1) the great number of commercial vehicles; (2) their large size; (3) their huge mass (and that of their loads); and (4) the external costs they cause. These points – either individually or collectively – often lead to allegations that road freight carriers, firstly, do not pay in full for the road pavement damage and external costs that they cause, and secondly, unduly deprive Transnet Freight Rail of much of its business (Pienaar, 2003:18).

Investigations conducted in South Africa, however, have demonstrated that these allegations are often not true – or not as severe as asserted. In addition, the organised road transport industry has on several occasions expressed its willingness to pay a due price (and not excessive and misdirected indirect taxes) for road usage. Nevertheless, insinuations persist that long-distance road freight haulage is of a somewhat unsavoury economic nature, and that strict economic re-regulation of land freight transport in favour of rail transport is necessary (Stander and Pienaar, 2002:27; Stander and Pienaar, 2005:16).

Defining the economic role of rail freight transport in the national transport system of South Africa should be one of the basic ingredients of an economically rational transport policy and the effective functioning of Transnet Freight Rail. In the interest of the national economy and in its own commercial interest, Transnet Freight Rail should only specialise in those fields where it can provide services tailored to the needs of customers at competitive prices. The question addressed by this

research, therefore, is: what changes in the institutional and regulatory structures are necessary for Transnet Freight Rail to remain viable?

2. Transnet Freight Rail and national transport policy

To pursue the maximisation of welfare in South Africa, the principal objective of national transport policy should be to achieve effective competition among the various carriers and modes of freight transport. Competition is the medium for attaining the principal objectives that a transport system is meant to achieve. First, competition will best promote economic growth in both the domestic and foreign trade sectors of the country's economy. Second, it will provide the discipline needed to develop and enforce the kinds of rational investment policies that will provide effective transport services in the most efficient manner.

To achieve these objectives, it is essential to pursue two critical policies: economic deregulation and intermodal equity. The economically rational distribution of traffic among the different modes of transport within a free freight transport market implies that the various carriers of all modes of transport should provide full cost coverage for all the economic resources that they require, such as, for example, the provision and maintenance of the infrastructure they use.

The reform of transport policy in developed and developing countries suggests that free operation of the freight transport market guarantees a more efficient and economically rational traffic allocation among modes of transport and provides rail transport with the best opportunities for traffic development. Therefore, in this free operation of the freight transport market, Transnet Freight Rail, under the custodianship of its board of directors, which act as delegates of the Minister of Public Enterprises, should be the sole entity to define the kind of transport services it offers to customers or to freely negotiate special agreements with its major customers.

The best prospects for a sound development of freight rail transport activity will be offered within the framework of a free-functioning transport market, in which, among other things:

- Transnet Freight Rail is in active competition with the carriers of the other transport modes, the customers being totally free to choose the mode of transport and carrier they prefer.
- The various carriers within all modes of transport provide total coverage of the cost of provision and upkeep of infrastructure they use, and the external cost or negative externalities that they impose on the community.
- Transnet Freight Rail freely determines the form of services it offers to its customers, and freely fixes, according to the market situation and its actual cost and cost structure, defensible tariffs for services, or freely negotiates specific agreements with major customers.
- The provision of possible social services by Transnet Freight Rail demanded by Government is carried out within the framework of specific agreements between Government and Transnet Freight Rail, with effective payment by Government that assures the profitability of traffic.

Therefore, the institutional framework governing Transnet Freight Rail's operations should create an environment conducive to the management of its operations as a fully competitive business by:

- fostering a competitive freight transport market;
- providing socio-economic rail services under concessionary agreements; and
- Transnet's board of directors defining management objectives and granting real management autonomy to Transnet Freight Rail, and Transnet Freight Rail defining clear and adequate performance indicators for itself.

Fostering a competitive transport market

Freight rail transport is a commercial activity, which means that Transnet Freight Rail should be managed along business lines, and in active competition with other transport modes. In a competitive transport market customers have total freedom to choose among the various transport modes and operators. This means that there can be no mandatory allocation of traffic. Transnet Freight Rail freely determines the configuration of its commercial services in reference to its own commercial interest. It also freely sets tariffs, or, as is appropriate, freely negotiates special contracts with major customers. Under these terms, (1) all transport operators must bear the resource costs of all inputs that they use and consume, and pay for all external costs that they impose on the community; and (2) the 'public service' concept should be strictly confined to those activities undertaken at Government's request and performed under special concessionary agreements (Huff, Barber and Thompson, 1990:3).

The aim of Transnet Freight Rail (as a commercial enterprise) to recover its full costs requires that users collectively pay the total cost of service. The upper tariff limit is determined by the value of the service – i.e. what the traffic is willing to bear. The lower limit of the tariffs is equivalent to the short-run marginal cost – in practice the direct cost or the cost that will be avoided if the service is not rendered.

The 'user-pays' principle, which is associated with economic rationalism, and the aim of Transnet Freight Rail to recover its full costs, demand that the user pays the total cost of the service. This principle ignores the pursuit of economic efficiency, which cannot be divorced from marginal-cost pricing. The Ramsey pricing principle addresses this problem. This principle takes into account the marginal cost of providing a service as well as the extent to which demand for the service will respond to changes in its

price – or the price elasticity of demand (Ramsey, 1927:61).

Each rate thus covers the direct costs incurred in rendering the service, and contributes to a greater or lesser extent to the indirect costs. The outcome is to maximise the traffic and the consumer surplus. Obviously, differential or Ramsey pricing will yield enough revenue to cover full costs if the demand is sufficiently price-inelastic for some services to enable their contribution to the indirect costs to compensate for the amounts below average costs yielded by the services for which the demand is price-elastic (Baumol and Bradford, 1970:283).

Strict application of short-run marginal-cost pricing will lead to financial losses in certain corridors even though there may be improved efficiencies. This is clearly unacceptable if Transnet Freight Rail is to be commercially viable. Therefore, one needs to find ways of recouping total costs without distorting too much the allocative efficiency of marginal-cost pricing. Ramsey pricing suggests that where short-run marginal-cost pricing is unable to generate sufficient revenues to cover a certain required revenue target, then it is economically most efficient to raise the extra revenue required from different users in inverse relation to their price elasticity of demand for rail services – in effect, by charging on the basis of willingness to pay. Such a policy will have the least impact on the pattern of demand and output that would have prevailed under pure marginal-cost pricing. This way the allocative efficiency is least distorted.

In so far as Transnet Freight Rail is the sole freight rail operator in South Africa, it has the rail monopoly. However, there are alternative modal substitutes for Transnet Freight Rail's product. Therefore, from a competitive intermodal viewpoint, Transnet Freight Rail is not a monopoly. The market dominance that Transnet Freight Rail has on its coal and iron-ore export lines is the result of economies of scale, enhanced by long-haul economies and economies of density.

Monopolies may be harmful or beneficial to the public interest –

a) A beneficial monopoly is one that succeeds in achieving economies of scale in an industry where the minimum efficiency scale is at a level of production that would mean having to achieve a large share of the total market supply.
b) A monopoly that is not in the public interest is one in which cost efficiencies are not achieved, or are negligible.

In so far as Transnet Freight Rail has monopolistic power(s), it falls under category (a) above – its monopolistic powers are natural. Operating in an economically deregulated environment, Transnet Freight Rail has to be both cost-efficient and service-effective to achieve any natural monopolistic advantages.

The existence of the highly remunerative natural monopolies on the coal and iron-ore export lines should not distort the pricing policies applicable to other lines. The maximum annual amount that can be charged on the export lines depends on the coal and iron-ore exporters' willingness to pay. This is, in turn, dependent on the profitability of iron-ore and coal sellers' exports and on the demand levels within importing countries. Transnet Freight Rail must not only recoup all its costs of outlay within the various mines' lifetimes, but also maximise its profits during these periods. The onus is on the exporters – and not on Transnet Freight Rail – to determine the price elasticity and sensitivity of their overseas coal and iron-ore demand. The influence of this will, of course, be subject to negotiation between Transnet Freight Rail and the abovementioned exporters. A possibility for tariff fixing would be to determine Transnet Freight Rail's total cost to supply the entire service and link the return to the profit margin that the iron-ore and coal exporters themselves manage to realise within a year, thereby creating mutually beneficial situations on the coal and iron-ore export lines. Realising above-normal surpluses on the coal and iron-ore export lines gives Transnet Freight Rail justified economic power and commercial freedom (without acting against the public interest) to lower tariffs for less remunerative traffic on other lines, on the condition that it at least recovers the short-run marginal cost of all traffic on these less remunerative lines. By doing so Transnet Freight Rail may be in a position to regain economies of scale and price competitiveness on these lines in the short run.

Provision of social rail services under concessionary agreements

Rail services which are likely to be commercially unprofitable in the long run should be abandoned unless Transnet Freight Rail is explicitly requested by Government to provide such services under a social service agreement. Moreover, a special agreement ought to be signed between Government and Transnet Freight Rail for each social service. Such concessions should define the configuration of the service to be provided, and the compensation to cover Transnet Freight Rail's opportunity cost for each individual and ring-fenced service.

Management objectives and autonomy

In order for Transnet Freight Rail to be competitive it is a prerequisite that the company defines its own appropriate performance indicators and, indeed, monitors its operations in accordance with the pursuit of profit. Physical efficiency indicators – for example, the volume of freight carried and distance covered; locomotive and rolling stock availability and utilisation; wagon turnaround times; and staff productivity – constitute valuable measures of management effectiveness in attaining technical efficiency. Benchmarking, for example, has the

potential to point out where the greatest cost efficiencies may be achieved.

Increased efficiency will lower not only unit cost levels, but also marginal cost. In turn, this would enable Transnet Freight Rail to lower its floor (i.e. lower limit) rate levels, thereby most likely increasing its turnover, as well as maximising surpluses earned on any price-capped traffic. In combination, the increased turnover and greater profit margins per unit should increase Transnet Freight Rail's net revenue. Benchmarking should not be construed to mean only measuring efficiency against best rail practice worldwide, but also measuring total service effectiveness (i.e. meeting clients' expectations) against that of Transnet Freight Rail's road transport competitors. However, efficiency and effectiveness are not always indicators of overall performance of a rail transport entity. Therefore, physical indicators of technical efficiency and of service effectiveness should be supplemented by financial profitability measures. Profit is the most powerful performance indicator of an enterprise placed in a competitive environment.

Providing clear management objectives, strengthening incentives (such as profit-sharing schemes) – and holding management accountable to the board of directors for these objectives – and by granting real management autonomy to Transnet Freight Rail should prevent Government interference in day-to-day management. Real management autonomy was in effect institutionalised with the formation of Transnet Limited as a company in 1989, with Transnet Freight Rail as the company's freight rail transport division. The objective was to secure management autonomy, nurture accountability and stimulate business-oriented conduct, as prescribed by the Competition Act (Act 89 of 1998), subject to scrutiny and verification in an external auditing process, as prescribed by the Companies Act (Act 71 of 2008).

3. Management and control of infrastructure

The reform process of railways around the world follows two mainstream trends. One can be called the vertical separation trend and the other the integrated commercialisation trend.

The first trend is characterised by infrastructure services and train operations being separated (Behafy, 1995:20). In this case, infrastructure is then assigned to a new enterprise or authority. This entity, in turn, makes the infrastructure available to operators on commercial conditions. A characteristic of the second trend is that rail transport operation is deregulated and commercialised in its entirety when it comes to prices and supply, but the entity is allowed to continue without being split (*Railway Gazette International*, 1994:85). The latter condition is the status quo in South Africa.

A major objective of vertical separation in the rail transport industry appears to be to encourage market contestability through open access on the railway network. It can be argued that the primary source of strong economies of scale in rail transport lies in its infrastructure; the natural monopoly argument is mitigated because of the split of infrastructure and operation. Where the ownership of rail infrastructure is vested with an independent authority, the operation of rail freight services may, therefore, be seen as a contestable activity (Pienaar and Vogt, 2009: 345).

Considering that Transnet Freight Rail's quest is for countrywide service delivery, integration between rail transport operation and track is imperative for its purposes. In the light of this, branch and main lines must be seen as an integrated system and not in isolation. For this reason, uneconomic branch lines (seen as single business subdivisions) cannot simply be abandoned, given their important role of feeding the main lines. Furthermore, there may be a conflict of interest between the infrastructure authority and the operators in terms of the quality and quantity of service provided. This may be the result of potential differences in priorities.

Changing the status quo could jeopardise Transnet Freight Rail's development and successful implementation of a centrally coordinated national train-operating schedule, a reliable and punctual service programme and the delivery of a high-quality all-round service. Under vertical separation, the adaptation of rail terminals to make them more user-friendly and compatible with intermodal transfer requirements will be out of Transnet Freight Rail's control.

Many reasons for failures or implementation difficulties of vertical separation in freight rail transport are cited by researchers and rail experts. These include complexity, high costs of execution, additional bureaucracy, loss of economies of scale, safety risks and information asymmetries (Amos, 2007:6; Pittman, 2005:181).

Paradoxically, the problems associated with information asymmetries in cases of vertical separation, and the successful processes to address them, lead to close relationships between interested parties. The mooted advantages of vertical separation are then negated by the fact that an industry with a few highly specialised role players and highly integrated operations will require these relationships to be successful (Sanchez, 2001:7). This inevitably leads to cooperation and quasi-reintegration, which limit the role of market forces – in contrast to what was apparently planned in the first years of railway reform (Bouf *et al*., 2005:11; Cowie, 2010:121).

The preceding discussion on the structural split of infrastructure and operations highlights the need for Transnet Freight Rail to retain the integrated commercialisation model for the foreseeable future. Under this model, in the presence of active intermodal competition, infrastructure and operations are merely

treated as separate accounting units, enabling Transnet to identify infrastructure costs and still gain the purported efficiencies achievable with infrastructure divorce.

4. A governance structure for Transnet Freight Rail

From the discussion above it is evident that – comprehensively viewed – the regulation of land transport cannot be the responsibility of a single regulating body.

Whereas Transnet Freight Rail's commercial conduct and business operations are guided by the board of directors of Transnet Limited (subject to scrutiny and verification in an external auditing process prescribed by the Companies Act), its fulfilment of contractual obligations with respect to social services will naturally be monitored and controlled by the Government body which commissions the company to conduct such concessionary services.

Technical and safety regulatory aspects with a view to protecting the public interest are believed to be most effectively regulated by the Department of Transport through traffic legislation, with enforcement duties delegated to a National Rail Safety regulator.

Custodianship of effective competition, for example guarding against harmful and restrictive business practices and pricing malpractice, as prescribed by the Competition Act, should ideally fall within the ambit of the duties of the Competitions Board within the Department of Trade and Industry, in consultation with the Department of Transport, should such malpractices jeopardise the performance of the freight transport system.

In cases where market forces do not provide for the automatic recovery of road-user costs within intermodal rail-road transport competition, external costs and the costs of damage to road infrastructure, the appropriate road-user cost responsibility should be determined by the National Department of Transport in consultation with the National Department of Finance and the different provincial administrations. Full recovery of user-cost responsibility should take place with no cross-subsidisation between private (mostly light) road vehicle users and commercial (mostly heavy) road vehicle users, which may intermodally be competitors of Transnet Freight Rail.

All other matters not covered here should be left to market forces as such. Within a climate of free and workable competition, it is believed that market forces will be conducive to self-regulation to support an efficient, effective and balanced freight rail transport system.

5. Conclusions

The best prospects for a sound development of freight railway activity in South Africa will be offered within the framework of a free-functioning freight transport market in which:

- customers are free to choose the mode of transport and carrier they prefer;
- all transport operators provide complete cost coverage for their social cost obligations;
- Transnet Freight Rail freely determines the form of services it offers and freely fixes tariffs which are competitive and defensible in terms of economic principles;
- Transnet Freight Rail abandons all services which are likely to be commercially unprofitable in the long run, unless it is requested to provide such services under social service agreements according to which Transnet Freight Rail is remunerated in full.

An environment conducive to the management of Transnet Freight Rail's operations as a fully competitive and profit-oriented business requires (1) the definition of clear and adequate performance indicators and the monitoring of operations aimed at measuring financial profitability; and (2) the provision of clear management objectives and incentives for which management can be held accountable to its board of directors.

Upgrading existing roads and the provision of new roads should go ahead whenever it is economically justified and financially viable to do so. In order to support industrial growth, development and competitiveness in South Africa, an equitable road-user charge system should be introduced in the country. Restrictions and enforcement on land freight transport modes should be limited to technical, safety and environmental considerations only. These refer to traffic aspects, such as speeding, overloading, proper loading of freight, the carriage of dangerous and oversized loads, vehicle visibility and roadworthiness, driver alertness and driver training.

As long as Transnet Freight Rail is to remain a public corporation and the sole countrywide freight rail operator, it should retain ownership of the infrastructure it uses. Changing this ownership status quo could jeopardise Transnet Freight Rail's development and successful implementation of a centrally coordinated national freight train operating schedule and a reliable service programme. And under such change of ownership, the adaptation of rail terminals to make them more user-friendly and compatible with intermodal transfer requirements would then be out of Transnet Freight Rail's control.

Within a climate of free and effective competition, market forces will (within the parameters spelt out in this paper) be conducive to self-regulation to support an efficient, effective and balanced land transport system. Harmful business practices that jeopardise the performance of the transport system should fall within the ambit of the Competition Commission, an institution of the Department of Trade and Industry that investigates anti-competitive business practices.

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