Administered Prices

TRANSPORT

A report for National Treasury

ETHÈL TELJEUR

Preface

This report was prepared for National Treasury to support its assessment of administered prices in South Africa. The objective of the study was to assess the processes involved in setting prices in regulated industries. By evaluating the efficiency, effectiveness and analytical rigour of the regulatory processes involved in setting prices for the services involved, an assessment can be made of the likelihood that the resultant tariffs approach efficient levels. Volume I of the report sets out the main findings and recommendations with supporting information relating to the individual sectors included within the scope of the study provided in a summarised form. Volume II contains more detailed sectoral reports, covering individual review of the water, electricity, telecommunications, transport, health and education sectors.

The report does not offer a detailed quantitative assessment of the performance of the regulatory regime, and is largely based on in-depth interviews and documentary analysis. The authors would like to thank the interviewees for their cooperation and valuable insights. Although much care was taken to provide a correct reflection of the opinions expressed, the authors remain entirely responsible for any inaccuracies.

CONTENTS

1. EXECUTIVE SUMMARY

This study assesses the processes involved in setting prices or tariffs in selected transport modes in South Africa. By evaluating the efficiency, effectiveness and analytical rigour of the regulatory processes involved in setting prices for transport services, an assessment can be made of the likelihood that the resultant tariffs approach efficient levels.

As not all the transport modes are regulated in a similar fashion and some frameworks do not fit the 'administered pricing' profile, prices in three particular sectors were focussed on – aviation, ports and rail. Excluded from the review are road transport and maritime transport. In aviation, the process to determine infrastructure tariffs (i.e. use of airspace and airports) involves a part-time regulator, whose tariff setting procedures and methodology are discussed in the second section of this report. As no regulator exists for ports and rail charges, leaving the price determination to a large extent up to the state-owned enterprise Transnet, which is both service provides and owner of the infrastructure, these charges are prime case studies for an enquiry into administered prices. They are discussed in the third and fourth sections of this paper.

The report emphasises the processes involved in determining prices, not the actual price levels themselves. An analysis of the institutional and procedural framework was complemented by an assessment of the practical forces impacting on price levels in an industry, which may or may not be captured in the official decision making framework.

It is important to note that the need for and effectiveness of price regulation depends to a large extent on factors exogenous to the price setting process, such as: (i) sector structure and market design, including the degree of vertical or horizontal integration and the extent to which competition is encouraged where this is economically feasible; (ii) the ability of government to adequately control the behaviour of state-owned enterprises without regulation; and (ii) government policy objectives regarding the transport sectors, including social imperatives.

It appears that regarding the role and functions of Transnet in particular, the price-setting frameworks contain many compromises. This situation flows from the conflicting objectives for Transnet, which veer between commercial performance and public utility imperatives, and indeed for the transport sector as a whole, which is officially acknowledged as an enabling sector for economy-wide growth, but which is often required to be self-funding in terms of infrastructure investment and social subsidies. This report aims to assess the effectiveness of the resultant framework for arriving at efficient prices.

Regulatory frameworks in the transport sector differ markedly from those prevalent in other network industries such as telecommunications and electricity. There is a strong emphasis on safety and standard regulation and a remarkable lack of economic regulation, such as price or revenue regulation and other controls commonly used in economic regulation. The sector is further characterised by state-ownership, limited private sector participation and the absence of independent regulators. As a result, the effective influence on prices by government is limited and prices are likely to contain monopolistic rents.

The most advanced form of economic regulation is found in the aviation sector where a dedicated, albeit part-time, regulatory body exists. A regulatory entity may

also be established in the port sector, where a precarious disentanglement of the ports authority from its current owner Transnet is part of the State-Owned Enterprise restructuring process.

The transport sector in South Africa, even though largely corporatised and commercialised, remains largely unregulated in the economic sense. Policy approaches, despite overarching policy reviews such as Moving South Africa, remain fragmented with mode-specific strategies and a proliferation of single-modal implementation agencies, each with their own unique mandate and institutional relationship to a government department. No overarching structure currently exists to coordinate the various agencies involved in transport infrastructure, leading to lack of alignment in terms of provincial spending on transport infrastructure; institutional gaps; and a lack of co-ordination across transport modes. Moreover, there is no coherent framework for price determination, and monitoring of efficiency in the delivery of transport services is virtually non-existent.

The lack of regulatory frameworks or independent regulators for port, passenger rail or rail freight services, combined with the continued existence of cross-subsidies and lack of separation between ownership and regulation, indicates that no formal or effective controls over the behaviour of the state-owned enterprises in terms of its pricing strategies have been established.

Inter-modal cross-subsidisation also continues to exist, most evidently between ports and rail. As a direct impact, port charges are higher than they need be or investment expenditure is lower than it could be. However, the indirect impact of this policy choice is a tax on trade, reducing international competitiveness of South Africa's industries. A further exacerbating factor is that customers, for instance general rail freight customers, do not cover the full cost of the service, which is only made possible by under-investment, threatening the long-term sustainability of the rail, ports and road systems and distorting price signals.

Cross-subsidies should be closely scrutinised and steps taken towards inter-modal rate rebalancing. The current opaque process of inter-modal cross-subsidisation between ports and rail, determined by a commercial entity is highly undesirable. If such cross-subsidisation were deemed necessary, more efficient outcomes would be rendered by transparent solutions, directed and monitored by government. Once the subsidies are made explicit, greater attention can and will be paid to the effectiveness and appropriateness of these subsidies and to their targeting.

As the current policy developments and restructuring processes in various transport modes are carried forward, the need for greater economic regulation will mount. Such regulation will be required in the ports, where a commercialised entity controls the infrastructure, and in railways, where, depending on the status of the envisaged commuter rail entity, a commercial entity will control both the infrastructure and provide or concession services.

Given the questions raised around the determination of the price cap in aviation and the general lack of economic regulation in the other transport modes under review, the need for improved regulatory approaches becomes resoundingly clear. The development of common principles in the approach to regulation in the transport sector should be at the foundation of this move towards greater regulatory coherence, taking sector specific needs and lessons from international experience into account.

In the context of an alarming proliferation of regulatory bodies, budgetary constraints and lack of human capital, the option of a cross-modal transport regulator deserves further investigation.

Furthermore, it is of critical importance that the concurrency of jurisdiction between the competition authorities and the transport regulator(s) is solved satisfactorily, either through the conclusion of memoranda of understanding, but preferably by clarification of the legal status of appeals on decisions by regulatory bodies. In addition, enhancing the ability of the competition authorities to handle anti-competitive practices in the regulated industries is advisable.

This brings to the fore a fundamental point in restructuring of SOEs and regulation of network industries. Generally speaking, the introduction of competition has been given limited attention in the transport sector reform processes. Limited scope for competition actually increases the regulatory burden and exacerbates capacity problems rather than circumventing them. The current debate regarding port restructuring is promising in this regard, and serves to underline the urgent need for efficient regulatory structures to be put in place in the transport sector.

2. INTRODUCTION

2.1 Objectives

This report covers the findings and conclusions of a study carried out for National Treasury focusing on the price determination processes in several transport sectors. This particular study forms part of a set of similar exercises commissioned by National Treasury, covering price determination in the telecommunications, water, electricity, health and education sectors.

The objective of the study was to assess the processes involved in setting prices or tariffs in selected transport modes in South Africa. By evaluating the efficiency, effectiveness and analytical rigour of the regulatory processes involved in setting prices for transport services, an assessment can be made of the likelihood that the resultant tariffs approach efficient levels.

2.2 Scope

As not all the transport modes are regulated in a similar fashion and some frameworks do not fit the 'administered pricing' profile, prices in three particular sectors were focussed on, namely aviation, ports and rail. Excluded from the review are therefore road transport and maritime transport. In aviation, the process to determine infrastructure tariffs (i.e. use of airspace and airports) involves a part-time regulator, whose tariff setting procedures and methodology are discussed in the second section of this report. As no regulator exists for ports and rail charges, leaving the price determination to a large extent up to the state-owned enterprise Transnet, which is both service provides and owner of (part of) the infrastructure, these charges are prime case studies for an enquiry into administered prices. These are discussed in the third and fourth sections of this paper.

The report emphasises the processes involved in determining prices, not the actual price levels themselves. An analysis of the institutional and procedural framework was complemented by an assessment of the practical forces impacting on price levels in an industry, which may or may not be captured in the official decision making framework. For example, public opinion may be an important effective 'cap' on prices of infrastructure services, although this force may not feature prominently in the regulatory framework. Likewise ministerial approval of tariffs could in practice entail anything from heavy-handed ministerial interference to a procedural 'rubber-stamping' mechanism.

It is important to note that the need for and effectiveness of price regulation depends to a large extent on factors exogenous to the price setting process, such as: (i) sector structure and market design, including the degree of vertical or horizontal integration and the extent to which competition is encouraged where this is economically feasible; (ii) the ability of government to adequately control the behaviour of state-owned enterprises without explicit economic regulation; and (iii) government policy objectives regarding the transport sectors, including social imperatives.

It appears that regarding the role and functions of Transnet in particular, the price-setting frameworks contain many compromises. This situation flows from the conflicting objectives for Transnet, which veer between commercial performance and public utility imperatives, and indeed for the transport sector as a whole, which

is officially acknowledged as an enabling sector for economy-wide growth, but which is often required to be self-funding in terms of infrastructure investment and social subsidies. This report aims to assess the effectiveness of the resultant framework for arriving at efficient prices.

2.3 Methodology

The report uses official documents and policy statements, complemented by extensive interviews with government officials, transport providers and stakeholders. By its very nature, this report is a qualitative and unavoidably subjective assessment of the price setting mechanisms in the transport sectors under review. The assessments contained in this document are based on the views expressed by sources holding divergent subjective opinions, and although inevitably resembling certain assessments more closely than others, extreme care has been taken to produce a balanced view. All views expressed – as well as any inaccuracies - in this report remain entirely the responsibility of the author.

3. TRANSPORT

3.1 Introduction

The transport sector in South Africa, even though largely corporatised and commercialised, remains largely unregulated in the economic sense. Policy approaches, despite the intentions of overarching policy reviews such as Moving South Africa, remain fragmented with mode-specific strategies and a proliferation of single-modal implementation agencies.

This is not unusual in international terms, e.g. many transport ministries are structured along similar lines with comparable sections and agencies, but it does require special attention to be paid to policy coordination, efficiency incentives and to investment in capacity. Added to the proliferation of mode-specific agencies, each with their own unique mandate and institutional relationship to a government department, is the co-ordination challenge posed by the three spheres of government involved in transport (national, provincial and local). No overarching structure currently exists to coordinate the various agencies involved in transport infrastructure, leading to lack of alignment in terms of provincial spending on transport infrastructure; institutional gaps; and a lack of coordination across transport modes[1].

What is further unusual is that the agencies concerned are almost exclusively dedicated to safety regulation, with little formal structures for economic regulation. The only area of economic regulation in the traditional sense of the word is found in aviation. It is therefore necessary to place the lack of economic regulation in the transport sectors (except for aviation infrastructure) in the context of the overarching transport policy framework.

3.2 The transport policy framework

The institutional framework for transport policy is characterised by a separation between policy development and governance, thereby rendering different Government Departments responsible for transport policy development and for the monitoring and restructuring of the state-owned enterprises involved in the transport sector. Transport infrastructure for different modes is owned by different entities and each has its own unique reporting procedures and price determination processes. In addition, the overarching policy framework for this restructuring contains a long list of, at times conflicting, policy objectives.

In such a setting, compromises in tariff setting policies are inevitable, requiring careful and deliberate balancing of commercial and social incentives. Unfortunately, the regulatory oversight in terms of prices, investment and social objectives that is required to provide the state-owned enterprises with adequate efficiency incentives is lacking in most transport modes.

---

[1] The Moving South Africa project recommended several changes to the institutional framework, including the establishment of customised institutions to fill institutional gaps. Moreover, the report specifically stated that such institutions should not be organised around modal interests, but around customer groupings, such as urban passengers or long-distance customers. Moving SA, p122.

The problem starts with the institutional arrangements for regulating prices in each transport mode, which include a complex web of overlapping and at times conflicting institutional roles. For instance, the Minister of Transport appoints the Regulating Committee – the regulator for the aviation sector –, whilst simultaneously acting as the majority shareholder for the regulated entities ACSA and ATNS. State-owned enterprise Transnet owns both the port infrastructure (NPA) and a dominant port service provider (SAPO) rendering the state player and referee. The Department of Public Enterprises is the sole shareholder in Transnet, mandated with monitoring its profitability – with an official as non-executive director on the Transnet Board – whilst at the same time being tasked with its restructuring in the context of overarching governmental objectives.

In addition, the establishment of commercial agencies responsible for service provision in the transport sector, such as the National Roads Agency (NRA), the Airports Company of South Africa (ACSA), the Air Traffic and Navigation Services Company (ATNS), etc. and the corporatisation and commercialisation of Transnet, was not accompanied by the concurrent establishment of independent regulators or even of formalised reporting and monitoring procedures. Presumably, retaining government ownership was expected to suffice to ensure desirable conduct by these agencies and companies, and as there were no real private monopolies involved, no independent regulators would be required.

However, establishing commercial entities that control vital transport infrastructure without ensuring proper economic regulation of these entities and without the introduction of competition, may have led to a situation less desirable than the initial state of affairs, namely publicly-owned, yet unregulated monopolies, acting as private monopolies. When no or limited scope for competition exists, commercialisation of vital enabling infrastructure such as transport networks, should be accompanied by strict application of tariff controls, both in terms of level and structure, investment targets, and planning coordination, to ensure compliance with government objectives.

Some of the lack of regulatory oversight may have been an unintended result of the creation of the agencies, which drained the NDOT of key skills required to monitor those agencies. The current situation of wide-ranging ministerial discretion is certainly undesirable from a policy credibility and predictability point of view and could be remedied by the establishment of independent regulatory structures.

When comparing the current state of transport frameworks with the objectives outlined in the 1996 White Paper on National Transport Policy, which included: an intended evaluation of state ownership of transport infrastructure; the separation of ownership and regulation of transport infrastructure; ending inter-modal cross-subsidisation; and emphasis on inter-modal competition and integration; the following is noted:

- Combined ownership and regulation continues to exist in the provision of aviation, rail and ports services;
- Appropriate economic regulation of prices is absent in the port and rail services;
- Inter-modal cross-subsidisation continues to exist;
- Transnet has a dual mandate, comprising of conflicting objectives, combining commercial revenues with weakly formulated social obligations; and

- Inter-modal competition tends to be an unintended result of inefficiencies in a particular mode, such as is the case between rail and road, rather than the optimised use of transport options by consumers and industrial users[2].

Although not included as a specific objective, no regulatory framework or independent regulators were established for port, passenger rail or rail freight services. Combined with the continued existence of cross-subsidies and lack of separation between ownership and regulation, this indicates that no formal controls over the behaviour of the state-owned enterprises in terms of its pricing strategies were established.

The most evident cross-subsidy is the one between ports and rail freight, both of which are operated by Transnet. This cross-subsidy has been defended on the basis that it will be costly to remedy, as there are debt issues such as the Transnet pension fund to deal with, and as this will require alternative (fiscal) subsidy arrangements. However, when evaluating these costs, it is helpful to analyse the counterfactual, namely what the actual costs incurred in the current situation are.

In the present transport framework there is little analysis of the direct and indirect impacts of cross-subsidisation or of the combination of social and commercial objectives without adequate targets or controls. It is often implicitly assumed that the pursuance of social objectives by a state-owned enterprise is somehow 'free of charge', as it obviates the need for fiscal transfers. Without adequate controls and efficiency incentives however, these opaque cross-subsidies and dual mandates could be more costly to the economy as a whole than transparent transfers and open tenders for infrastructure upgrading and services provision.

In order to provide a backdrop for the sectoral analysis of price-determining processes, the following sub-section will provide a brief background on the role and functions of Transnet.

3.3 The role and functions of Transnet

Transnet Limited has a long history, originating in the South African Railways and Harbour administration of the early 1900s and the subsequent South African Transport Services, which was ultimately incorporated as Transnet in 1990. Transnet operates and controls significant parts of South Africa's transport infrastructure and is active in transport operations outside of South Africa, mainly on the African continent. It is a public company of which the South African government, as represented by the Department of Public Enterprises, is the sole shareholder. It is structured as a holding company with wide-ranging transport/logistics interests. The company has about 80,000 employees and controls assets worth in excess of ZAR70-billion[3].

In the mid 1990s, the entity was internally restructured into a number of separate business units, and currently, the holding company consists of nine divisions covering various transport services and a number of subsidiaries and related businesses. The divisions, and their activities in short, include:

---

[2] This phenomenon was identified in Moving SA (1999) as 'price-based' inter-modal competition, rather than 'value-based' competition.

[3] Transnet's fixed assets are estimated at R72bn and in 2002 the company recorded a turnover of R35.8bn. Transnet website: www.transnet.co.za and Transnet 2002 Annual Report.

Transnet Unit	*Core Business*
Spoornet	*Rail transportation of freight, containers and mainline passengers. Includes Shosholoza Meyl – the country's only long-distance passenger transport provider- and General Freight Business – which provides rail freight services. Spoornet owns the long-distance railway track.*
Metrorail	*Provision of commuter rail transport services.*
National Ports Authority[4]	*Port infrastructure and marine-related services provision; management of port activities in a landlord capacity and the regulation of the port systems.*
SA Port Operations	*Port terminal and cargo operations in commercially viable business units*.
Petronet	*Transportation of petroleum products and gas through a high-pressure long distance pipeline network*[5]*.*
Freightdynamics	*Road freight business with a national network of operations, focuses on containerised goods, general cargo, and refrigerated cargo.*
Transtel	*Telecommunications unit of Transnet operating the largest private telecommunications network in Africa.*
Transwerk	*Engineering unit, leading manufacturer/refurbishers of railway rolling stock*.
Propnet	*Real estate unit, managing Transnet's property portfolio and commercial property development.*

Transnet's subsidiaries include South African Airways (Pty) Ltd, the national airline and dominant domestic air transport service provider.

From a transport regulation point of view Spoornet and Metrorail, the National Ports Authority, and the South Africa Port Operations in particular are worthy of further discussion.

Spoornet, the largest division of Transnet, owns and maintains the South African long-distance rail network (the stations and associated assets are owned by the South African Rail Commuter Corporation, a public-owned entity tasked with managing the concession contract of Metrorail). Its core business consists of freight

[4] The National Ports Authority and the South African Ports Operations constituted 'Portnet' previously.

[5] Pipelines will be economically regulated by the gas regulator, which will probably be incorporated into the National Electricity Regulator.

logistics for customers in mining, heavy and light manufacturing sectors. Spoornet consists of 6 business units, including a commodity freight transport unit, a commuter services unit, two dedicated commodity rail links, an international joint ventures business and a luxury train business[6].

The General Freight Business provides commodity freight transport. The commuter services unit, Shosholoza Meyl[7], provides commuter services, luxury travel and charters, mainly over long distances. The dedicated commodity rail links are Coallink (transporting export coal from Mpumalanga to Richards Bay's export terminal) and Orex (transporting iron ore from northern Cape to Western cape coast). These dedicated export links are highly profitable and are considered of world-class standards.

Metrorail is the only rail commuter operator in RSA. Its operations are currently loss-making: in 2002 'cost coverage' was 46.3% against a target of 47.6%[8], for the deficit Metrorail receives a subsidy from government. It faces several challenges, not the least of which is how to allow the state to reduce its subsidy whilst investing in infrastructure upgrading.

Spoornet has historically been a loss-making recipient of internal Transnet cross-subsidies, although this appears to be changing currently. Spoornet's financial results improved in 2002, compared to 2001, mainly due to improvements in the freight business, which were attributed to operational improvements and cost containment.

There are several restructuring proposals being discussed by the NDOT; DPE and Spoornet, including: a merger between Coallink and the General Freight Business to form an integrated freight company; a merger between Shosholoza Meyl, Metrorail and the SARCC, with a revised subsidy mechanism; the concessioning of Orex; and the concessioning or sale of Luxrail.

On the ports side, the restructuring of Transnet included a conscious move to separate the owner of the ports infrastructure (which is a natural monopoly at the single port level) from the provider of port operation services (which is potentially competitive). The ports infrastructure is owned and operated by the National Ports Authority and the port terminal and cargo operations are performed by the South African Port Operations unit of Transnet. The ports are the most profitable of all of Transnet's units and provide much of the cross-subsidy for Transnet's rail operations. Significant changes to the regulatory framework regarding ports are imminent. These proposals will be discussed in greater detail in the section on port regulation.

---

[6] The latter two include: Luxrail which operates the Blue Train, and manages contracts with other luxury rail operators such as Rovos Rail and Spier which use Spoornet's infrastructure; and Spoornet International Joint Ventures, which operates a consulting, management and operating business providing railway equipment and services to other countries, mainly in Africa, and through Comazar, a rail investment company of which Spoornet is the largest shareholder, which acts as a railway developer, concessionaire and operator, mainly in Francophone Africa.

[7] Formerly the 'Mainline Passenger Services' business unit.

[8] As it does not own the rail infrastructure network, more than 50% of Metrorail's costs are labour costs.

The other players involved in the provision and pricing of transport services, such as the SARCC, ACSA and the Regulating Committee will be introduced in the relevant sectors of the report.

As the regulatory framework and price determination processes are most advanced with regard to the provision of the aviation infrastructure services, the aviation sector will be discussed first, followed by a discussion of the price setting processes in port and rail services.

4. AVIATION

This section of the report provides an outline of the price setting mechanisms that are currently in place in the aviation sector. As commercial airline operations are not subject to price regulation (other than generic competition rules) the report focuses on the determination of tariffs for the infrastructure providers, namely the Airports Company of South Africa (ACSA) and the Air Traffic and Navigation Services Company (ATNS).

4.1 Introduction

ACSA owns the majority of South African airports, consisting of nine national and international airports. The company provides aeronautical services for which it receives airport charges (e.g. landing fees), as well as non-aeronautical services, such as parking, shops etc from which it derives property and retail revenues[9]. Prior to the establishment of ACSA in 1993, all airports in South Africa were owned and operated by the state.

The company is a partially privatised state-owned enterprise, whose majority shareholder is the Minister of Transport, and which operates on a commercial basis. In 1998 Aeroporti di Roma (an Italian airports management firm) won a competitive tender to become ACSA's strategic equity partner and bought 20% of ACSA's shares[10], with an option to acquire a further 10% stake by April 2004.

The Air Traffic and Navigation Services Company (ATNS) provides air traffic, navigation and associated services. ATNS is a 100% state-owned enterprise, also established in 1993, which operates on a commercial basis, and whose sole shareholder is the Minister of Transport.

ATNS and ACSA are prevented by law from involvement in air transport service provision (i.e. operating airlines), and their respective tariffs are regulated by a Regulating Committee, which is appointed by the Minister of Transport.

4.2 Formal regulatory mechanisms

Institutional framework

In order to thoroughly assess the price setting procedures in any industry, an initial review of the institutional framework is required. The institutional framework involved in regulating ACSA and ATNS consists of the Minister of Transport, the

[9] The airports operated by ACSA include Johannesburg, Cape Town, Durban, Bloemfontein, Port Elizabeth, East London, George, Kimberley and Upington. The Company has a 35-year concession to operate Pilanesberg International Airport near Sun City in the North-West Province. Together, these airports handle more than 200 000 aircraft landings and 10 million departing passengers annually.

[10] Other shareholders include five empowerment consortia, namely: G10 Investments, Telle Investments, Pybus Thirty-34, Up-Front Investments 64 and Lexshell 342 Investments Holdings, which together own 4,22%.

Regulating Committee and, theoretically at least, the Competition Commission. The Minister of Transport appoints the Regulating Committee, which consists of a chairperson and 4 members, all of whom are part-time.

Ministerial approval is required for the Regulating Committee's recommendations, which indicates that the Regulating Committee is not a fully independent regulator. Independence of the regulator is widely seen as a prerequisite for effective regulation, free from ministerial interference or undue public pressures. The institutional framework for aviation suffers from two additional weaknesses, namely (i) the combined roles of the Minister of Transport as shareholder of the regulated entities and as the person responsible for appointing the Regulating Committee; and (ii) concurrency of jurisdiction with the competition authorities, without a clear demarcation of jurisdiction or Memorandum of Understanding between the two entities.

Ideally, regulatory and shareholding responsibilities should be kept separate as their combination would create conflicting objectives, or at least the impression thereof. As a shareholder of ACSA and ATNS, the Minister of Transport has the right to demand reasonable returns, whereas the regulator's main responsibility is to keep those same returns in check and approaching competitive levels. In addition, the concurrency of jurisdiction with the competition authorities, in absence of operational agreements between the two entities, creates scope for 'forum-shopping', whereby regulated entities or consumers are likely to approach the organ of state most likely to be sympathetic to their views/complaints. This situation could easily lead to contradictory rulings which, in absence of a clear appeal processes, would have to be adjudicated upon by the courts.

In short, the institutional arrangements around the Regulating Committee, suggest that efficient price determination in aviation infrastructure may be hampered by conflicting objectives; regulatory unpredictability and jurisdictional uncertainties. The regulatory framework, described below, should be reviewed against this backdrop of formal reporting procedures and institutional arrangements.

Regulatory framework

As ACSA and ATNS both have exclusive control over the national aviation infrastructure required by airline carriers to provide services[11], their charges are regulated to prevent abuse of dominance or monopolistic rents. The economic regulation of infrastructure services pricing is the responsibility of the Regulating Committee[12]. Some basic principles of economic regulation are included in the respective acts of parliament establishing ACSA and ATNS, which prevent the companies from undue discrimination against or among various users of air navigation infrastructure or air traffic services; and prohibit restrictive practices. More detailed regulatory decisions are taken by the Regulating Committee, to which ACSA and ATNS submit airport and navigational services tariffs for approval.

Economic regulation of ATNS and ACSA is subsequently implemented by the granting of 'permissions' by the Regulating Committee[13]. ACSA's permission

[11] This involves the national airports only, although ATNS renders contract services at smaller airports. Aircraft operators are charged, per aircraft movement, for services provided.

[12] Note that the Regulating Committee does not regulate airlines.

[13] Airports Company of South Africa Act, 1993 and Air Traffic and Navigational Services Company Act, 1993.

enables the company to levy airport charges and the ATNS permission allows ATNS to levy air traffic service charges, both permissions contain limits on increases in such charges. The permissions are valid for 5 years and ACSA and ATNS re-apply for the permissions in the third financial year of its current permission (so that there is a two year overlap and effectively a triennial review of the companies' charges)[14]. The applications must be accompanied by business plans and any information required by the Regulating Committee.

For ACSA and ATNS, the individual permission may limit the total amount that may be levied by way of either airport charges or air traffic service charges respectively; may limit the amount of any particular (category) airport charge or air traffic service; or may employ a combination thereof. The permission also prescribes service standards for the relevant company.

The ACSA and ATNS Acts indicate that the Regulating Committee may determine the tariffs 'in such manner as it deems is best calculated', balancing the company's commercial activities with prevention of abuse of monopoly power, whilst promoting safety; user interests; timely investments and ensuring a reasonable prospect of the company earning a commercial return.

The Regulating Committee currently employs a price cap based on the CPI-X methodology[15], in which ACSA's X-factor (i.e. the percentage by which real prices must decrease or the 'efficiency discount') has been determined at:

X-factor for ACSA

Financial Year	X factor
2001/2	- 7.0%
2002/3	- 6.0%
2003/4	- 6.0%
2004/5	- 0.7%
2005/6	+ 1.4%

Source: Regulating Committee 2000[16]

[14] The triennial review allows the Regulating Committee to amend the conditions of the last two years of a permission, so that if the companies' applications and submissions show that the conditions for the last two years of the existing permission are 'inappropriate', the permission can be amended accordingly. Source: 'Approach to the 2004/5-2008/9 Permissions', Regulating Committee, 2003.

[15] Formula: if 0,67 * CPIFt < CPI < 1,33 * CPIFt, then RWPTIt< < (CPIt -XI + CFt) + K, or

if 0,67 * CPIFt> CPIt > 1,33* CPIFt, then ERWPTIt < (CPIt * CXt + CFt) + Kt.

Where ERWPTIt = the sum of the revenue weighted percentage tariff increases in airport charges in year t; CPIFt = the forecast percentage increase in the Consumer Price Index in year t; CPIt = the actual percentage increase in the Consumer Price Index in year t; Xt = the subtractive X factor for year t; CFt = the correction factor for year t, which shall be completely corrected for during year t:

Kt = the correction factor for year t (annually calculated correction factor to correct for over or under-collection of tariffs.); CXt = the multiplicative X factor for year t; CPIFt, as determined by the independent forecast for the regulating Committee has been set at : 5.1 % in financial year 2001 /02; 5.2% FY 2002/03; 4.5% FY 2003/04 ; 4.6% FY 2004/05; and 4.5% FY 2005/06.

At the predicted inflation rates[17] used for the calculations of 6%, this schedule meant that in the first three years of the permission nominal prices could increase by 12–13% and that real prices could rise by 6-7%. The final two years of the permission allowed either significantly smaller tariff increases (less than 1% in real terms in 2004/5) or demanded a real tariff decrease (of 1.4% in 2005/6). The level of X is set to enable the Company to reach a 16% rate of return (i.e. 10% real rate) in year 2005/06[18]. In other words, the X factor is chosen in such a way that if the expected efficiency gains are made, the rate of return would be 16%. In this case the X is negative, indicating that tariffs are allowed to increase in real terms, suggesting no efficiency gains are expected or required.

A similar formula is employed to cap ATNS' charges. In the case of ATNS, the X factor has been set as follows:

X-factor for ATNS

Financial Year	X factor
2001/2	- 5.3%
2002/3	- 5.0%
2003/4	- 6.3%
2004/5	+ 6.2%
2005/6	+ 5.0%

Source: Regulating Committee 2000[19]

The level of X is set to enable the Company to reach a 14% rate of return (i.e. an 8% real return) in year 2003/04 and maintain it at that level. This X-factor schedule was intended to allow real prices to increase (by 5.3-6.3%) in the first three years. In the last 2 years of the permission, nominal price decreases of 6.2 and 5.0% respectively will be demanded. The Regulating Committee can make changes to the permission conditions, except during the last two years of the permission[20], subject to Ministerial approval.

---

[16] Regulating Committee (2000), The 2001/2-2005/6 Airports Company of South Africa Regulating Committee Permission to Levy Airport Charges, Government Gazette, Vol. 427, No. 21980, 19 January 2000, Notice 155 of 2001.

[17] Predictions made in 1999/2000.

[18] Source: Regulating Committee (2000), The 2001/2-2005/6 Airports Company of South Africa Regulating Committee Permission to Levy Airport Charges, Government Gazette, Vol. 427, No. 21980, 19 January 2000, Notice 155 of 2001.

[19] Regulating Committee (2000), The 2001/2-2005/6 Air Traffic and Navigation Services (ATNS) Company Permission to Levy Air Traffic Service Charges, Government Gazette, Vol. 427, No. 21980, 19 January 2000, Notice 157 of 2001.

[20] During the last two years the Regulating Committee can however change the X factor for the two overlapping years.

Mandate Regulating Committee

The Regulating Committee sets the limits on airport and air traffic services charges and is free to choose a methodology in this regard. Its legal mandate[21] obliges the Regulating Committee to:

- Restrain ACSA and ATNS from abusing their monopoly position in such a manner as not to place undue restrictions on the company's commercial activities;
- Promote reasonable interests and needs of users of any navigation infrastructure or air traffic services;
- Promote the safe, efficient, economic and profitable operation of air navigation infrastructure, air traffic services and air navigation services;
- Encourage timely improvement of air navigation infrastructure so as to satisfy anticipated demands by the users of the infrastructure; and
- Ensure that the company, after taking into consideration any compensation paid or to be paid to the company by the State in terms of the provisions of this Act or any other law, is able to finance its obligations and have a reasonable prospect of earning a commercial return.

This mandate provides potential for conflict as it not only expects the regulator to balance commercial revenues (i.e. the incumbent's interests) with the potential for monopoly rents (i.e. the users/consumers' interests); but also imposes on the regulator the responsibility for financial viability of the regulated entity. Moreover, the regulator is expected to allow the regulated entity to meet its finance obligations and have a commercial return. While it is not uncommon for regulators to be required to seek to ensure the financial viability of monopoly providers of essential public services, these obligations are usually conditional on the operator running, and financing, the business in an efficient manner. These approaches recognise that the users of the services should not be forced to pay for, for example, inefficient debt financing or infrastructure 'gold-plating'.

Where regulated entities are responsible for investment decisions and are guaranteed a return on such investment (for instance under pure rate of return regulation) the 'Averch-Johnson effect' - over-investment in infrastructure - is commonly found. Some regulators therefore construct a cost model of a theoretical optimised service provider with ideal debt-equity ratios[22] as well as optimal investment levels and impose the revenues required for the theoretical ideal on the regulated entity, regardless of its gearing, so as to provide incentives to move towards a more efficient financing model and infrastructure investment. In order to eliminate operational inefficiencies, similar benchmarking is performed for the operational expenditure of the regulated entity.

The Regulating Committee therefore has to tread carefully when imposing price caps, incorporating investment requirements, viability, users' needs and commercial returns.

---

[21] ACSA Act, 1993 & ATNS Act, 1993.

[22] Ratios considered 'ideal' for the industry involved.

Interaction between the regulated companies and government takes place either directly, with the Minister of Transport, or indirectly, with the Regulating Committee. The Minister of Transport is a shareholder of ATNS and ACSA and therefore meets with the ATNS Board of Directors in that capacity. The Minister of Transport also appoints the Regulating Committee.

The Regulating Committee formally consists of a chairman and four members (of whom at least two are not civil servants), appointed by the Minister[23]. Remuneration is also determined by the Minister. All administrative work associated with the Regulating Committee is performed by officials employed by the Department of Transport[24]. The members of the Regulating Committee have limited price regulation experience and have limited corporate finance skills, so that consultants are extensively used in the performance of their tasks. The Regulating Committee submits annual reports to the Minister, which are subsequently tabled in Parliament. Appeals regarding its decisions can only be submitted to the courts on procedural grounds. There is no formal appeal procedure for substantive decisions by the Regulating Committee.

The price cap experience to date

The airlines (who are the users of the regulated infrastructure), as represented by inter alia the Airlines Association of South Africa (AASA) and its international counterpart, the Board of Airline Representatives of South Africa (BARSA), have found the decisions of the Regulating Committee too lenient on ACSA and ATNS at times, and argue that the price caps set by the Regulating Committee allow 'excessive returns'. The concurrency of jurisdiction between the Regulating Committee and the Competition Commission was given its first test this year, after the AASA and BARSA lodged a complaint with the Competition Commission against the Regulating Committee regarding ACSA and ATNS tariffs[25].

The charge essentially claimed that the two SOEs are charging 'excessive prices', which is one of the examples of abuse of dominance prohibitions covered by the Competition Act (1998). The complaint relates to passenger, landing and parking fees and in particular the applicants object to the 16% return that ACSA is allowed to reap, when 11% according to AASA, is considered a more appropriate number for this industry. The Competition Commission launched an investigation which resulted in a so-called non-referral[26]. Interviews with the relevant Competition Commission officials reveals that the Commission considered the methodology followed by the Regulating Committee to be sound and has indicated that the main reason for not referring the matter to the Competition Tribunal at present, lies in the short-term period to which the current complaint refers. The Competition Commission is of the opinion that the return rates should be reviewed over several years and has indicated that it will investigate any future complaints of this nature.

---

[23] Currently no member of the Regulating Committee is a civil servant. In 2002/3, the Committee comprised of the Chairperson and two members. Source: 'Annual Report 2002/2003 for the Regulating Committee'.

[24] A major point of contention was the appointment of the chairman of the Regulating Committee as the Acting Director General for the Department of Transport. This situation was rectified by the appointment of a new chairperson after complaints were made by industry stakeholders.

[25] Chalmers (2002), Business Day 26 August.

[26] The reasons for the non-referral have not been published yet.

The case illustrates the potential for 'forum-shopping' that is created by the concurrency of jurisdiction framework. What is particularly disturbing about this case is that it does not simply involve a complaint about prices set by a dominant firm, but that it involves a complaint about excessive pricing mandated by a regulatory entity.

The essence of the disagreement between the airlines and the Regulating Committee concerns the rate of return, and the components on which it is based, namely the appropriate risk premium and the rate base[27]. The problem that AASA has flagged concerning the rate base is that the price cap is based on the 'return on capital employed' methodology (i.e. including the assets plus borrowed/available funds), which provides a broader rate base than if based on assets alone[28].

The risk premium is established as a premium over South Africa's risk-free rate, the R135 government bond. Obviously this risk-free rate depends on fluctuation in the financial sector, and particularly interest rates, which tends to be high in South Africa compared to international standards. The risk premium for the aviation infrastructure companies has been set at 2% for ATNS (allowing its rate of return to reach 14%) and at 4% for ACSA, which has a greater involvement in commercial activities via its retail businesses (allowing ACSA's rate of return to reach 16%. The Regulating Committee underpins these rates by arguing that as a partially privatised entity, ACSA would not be attractive to investors if the rate was below the risk free rate, and by pointing to the portfolio of non-aeronautical activities that ACSA has developed. This reasoning is however flawed in several ways as (i) it is questionable if a non-listed infrastructure monopoly with limited private sector investment requires returns above the risk-free rate as the required rate of return is simply what the government indicates it requires and (ii) it is inappropriate for a regulated infrastructure company to pursue a higher risk portfolio, financed partly by revenues from regulated activities, and receive higher returns as a reward[29].

The Regulating Committee maintains that benchmark studies with international airports companies illustrate that the adopted methodology is widely used. The AASA on the other hand has argued that by not adjusting for South Africa specific circumstances (such as a high risk-free rate) excessive returns are earned by the infrastructure companies. International comparisons, such as performed regularly by the UK based Transport Research Laboratory indicate that ACSA's 16% rate of return is unusually high for a regulated company. The Finnish airport group

---

[27] Although the AASA believes both the rate of return for ACSA and for ATNS are unreasonable, its complaint is mainly targeted at ACSA, which is considered to be a much more commercially aggressive entity. The remainder of the discussion will therefore focus on ACSA's rate of return.

[28] It is a generally accepted accounting convention in regulatory practice that borrowed funds are only included in the rate base once an investment has been made and the loan has been turned into an asset, not before. According to the approach document for the 2004/5-2208/9 permissions, the ROCE is defined as the returns available to the providers of finance divided by the average net finance available (i.e. the debt and equity), which includes non-invested borrowed or retained funds.

[29] Most airport companies need to fund their aeronautical services from non-aeronautical income and such cross-subsidies are part of the rationale for the high rate of return. However, according to industry experts, the international model of non-aeronautical income subsidising aeronautical income is not entirely applicable in South Africa as the aeronautical business is profitable in itself. ACSA has managed to make significant commercial profits from non-aeronautical business, which is traditionally only 25% of income. Non-aeronautical income accounted for 48% of ACSA's total income in 2002. Source: ACSA (2002), Audited Results for the Year Ended 31 March 2002.

operates on the basis of a government expectation of a 4% long-term return on equity (after tax), representing a 6% margin on turnover, whilst the Swedish Civil Aviation Administration operates under a government instruction to achieve a return on equity (after tax) of 8%.[30]

According to its 2002 report on airport performance indicators, based on an extensive sample of commercially operated airports, ACSA has the second highest return on capital employed, amounting to 22.2%. The world average is 7.4%. Interestingly, according to the same report, the highest return is earned by Aeroporti di Roma, ACSA's strategic equity partner, whose earnings rate amounts to 23.5%. The table below provides some comparisons.

Table 1. Operating profits and returns on capital employed – selected countries

Airport	Operating Profit	Return on Capital Employed
World average	25.7%	7.4%
Auckland	56.5%[31]	11.5%
ACSA	49.6%[32]	22.2%
Aeroporti di Roma	17.5%	23.5%[33]
Finnish Airports Group	11.3%	3.4%
Swedish Airports Group	18.3%	9.6%

Source: Transport Research Laboratory, Airport Performance Indicators 2002.

The disparities between these returns is caused in part by the higher South Africa risk free rate of 9.8%, compared to a world average of 7.4%, and in part by a higher risk premium. The world average premium over the risk free rate is 5.2%, whereas South Africa's premium amounts to 12.4%. Many of the comparisons used in the survey underpinning the Transport Research Laboratory survey support the AASA's view that the price cap regime in South Africa is rather generous[34].

The 16% rate of return is considered a relic from South Africa's experience of high inflation periods by industry experts. Even when compared to domestic examples, ACSA's rate of return appears high. Moreover, the ROCE is calculated on an 'after tax' basis, contrary to generally accepted accounting principles which suggests that return rates should be calculated on a 'before tax' basis. AASA has commissioned additional research which included a benchmark of ACSA's returns against SA parastatals which shows that other state owned enterprises earn significantly lower

[30] Transport Research Laboratory, Airport Performance Indicators 2002.

[31] Highest operating profit in the world.

[32] Second highest in the world.

[33] Highest in the world.

[34] Transport Research Laboratory, Airport Performance Indicators 2002.

returns. (When calculated using consistent methods, Eskom's ROCE is 9.4%, and Telkom's ROCE is 9.5%, compared to ACSA's 22.2%).[35]

In practice, ACSA has also achieved higher effective returns by underspending on infrastructure investment (i.e. by not using the amount allocated to infrastructure investment by the rate of return formula). According to AASA, ACSA has under spent its Capex allowance by ZAR 400 mln pa, which after deduction of taxes and dividends, translates into profits. This phenomenon has been acknowledged by the Regulating Committee, which in its approach document for the 2004/5-2008/9 notes that '*over the last two permission periods actual capital expenditure of the Companies is … materially different to that forecast'* and '*failure to invest the sums allowed for in a price review … may allow the company to earn additional revenue in terms of rate of return and depreciation on the amount not spent. A rate of return may therefore be earned in excess of that upon which the price cap formula was based'*.[36] According to the price cap formula, this windfall would be transient in nature as the annual correction factor is meant to clawback such excessive returns, albeit with a regulatory lag. However, the correction factor has not been used consistently according to the AASA (it was allegedly applied only three times in the last 10 years), and the current chairman of the Regulating Committee has not applied the 'CF' or correction factor over the previous permission. Of greater concern is that the calculation of the correction factor appears to focus exclusively on the difference between actual and predicted CPI values, not necessarily on clawing back excessive returns[37].

The correction factor is of great importance to effective regulation as large deviations between forecasted and realised revenues are possible. If for instance passenger traffic is underestimated in the tariff structure that is based on the allowable returns (e.g. assuming annual growth of 2% instead on 5-6%), the approved tariff per passenger translates into a higher income. Similarly costs can be overestimated to achieve the same result.

According to the AASA, the disparity between allowable and achieved returns has grown to a significant proportion in ACSA's case. In 2000 ACSA's allowable returns were 10% in real terms, but actual returns allegedly amounted to 17.2% according to the AASA's calculations. The Regulating Committee has allegedly acknowledged this overrun but has to date not applied the correction factor in 2000, 2001, 2002 or 2003, apparently in part due to the fact that the 2000 returns were achieved during the previous permission.

The question that arises from this debate is whether the price cap is likely to give cost containment and other efficiency improvement incentives. By its very nature, price caps do not prevent a company from increasing its returns, in fact the cap on prices is meant as an incentive for efficiency improvements, which would translate into higher returns. In this case however, the price cap appears based on a very high allowable return[38], which could undermine the effectiveness of the price cap

---

[35] Source: based on unpublished research commissioned by the Airlines Association of South Africa.

[36] Source: 'Approach to the 2004/2005-2008/9 Permissions', Regulating Committee, p.18.

[37] Source: 'Approach to the 2004/2005-2008/9 Permissions', Regulating Committee, p.16.

[38] A price cap determination exercise generally includes a determination of an allowable return (e.g. weighted average cost of capital to be applied to the allowable assets (Regulatory Asset Base). On this basis, allowable revenues are calculated that, combined with projected units sold, determine the initial price level over which an X-factor will be applied.

as there would be little stimulus for further return improvements. In other words, a price cap is only effective if applied in a reasonable range, outside of which it is unlikely to stimulate cost containment.

Whether or not the final price cap permission is in the desirable range, depends to a large extent on the process and forces involved in setting the price cap, which are discussed next.

4.3 Pricing influences

The price cap determination process is shaped by the Regulating Committee. The Regulating Committee meets monthly or bi-monthly in the first three years of the permission, and its meetings accelerate towards the review of the price cap for the last two years of the permission. The Regulating Committee bases its permission on data provided by ACSA and ATNS, which are scrutinised and analysed by consultants.

The price cap determination process involves extensive financial modelling and obtaining reliable data has been a problem for the Regulating Committee. The financial model used by ACSA and ATNS previously was inadequate for rigourous price cap applications, as the relationship between costs and prices was indeterminable and no estimation could be made of efficiencies. A new financial model, incorporating activity-based costing is currently operational (since 2003) and was developed on insistence by Regulating Committee.

In the price cap determination process, the Regulating Committee has informal consultation with stakeholders, such as the AASA, BARSA and IATA. The Regulating Committee's recommendations requires Ministerial approval before being granted as a permission to ACSA and ATNS.

4.4 Assessment of pricing influences

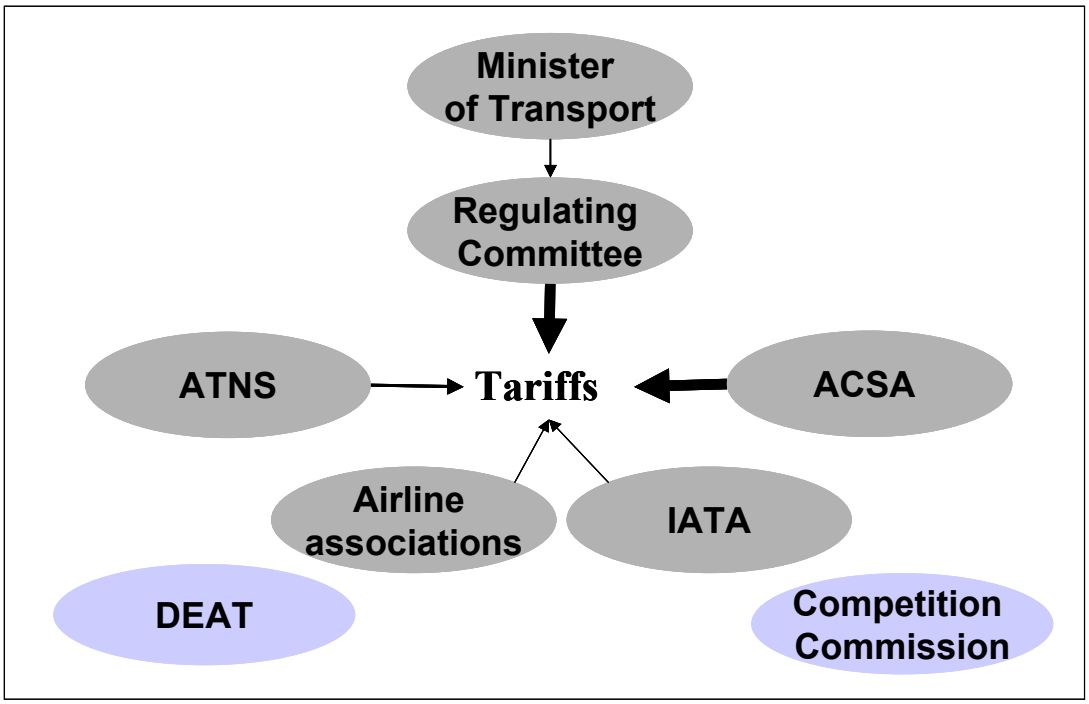
The abovementioned formal regulatory framework sketches a highly sophisticated system of price control, suggesting that prices are likely to be under significant regulatory pressure.

Although the institutional roles of the Minister of Transport suggest that the Regulating Committee is dependent on the Minister in the price-determination process for ACSA and ATNS, this is not necessarily the case in practice. In practice, the influence of the Minister has been limited to appointing the Regulating Committee and 'rubberstamping' its recommendations. To date, the Regulating Committee's recommendations have not been challenged by the Minister. However this does not mean that the Minister would not intervene (i.e. withhold approval) if the price cap was set at a level where it would erode ACSA's profits. As a majority shareholder in both ACSA and ATNS, the Minister of Transport has responsibilities in terms of the companies' sustainability and profitability, which are contrary to strong and effective regulation.

Nevertheless, whilst the Regulating Committee is the main decision-maker in the price cap process, its reliance on consultants to analyse the data provided by ACSA and ATNS should not be underestimated. Moreover, as any regulator, the Regulating Committee is significantly dependent on ACSA and ATNS providing

reliable and accurate information.[39] The choice of consultants and cooperation from the regulated entities can therefore have a significant impact on the price setting process and affect its scientific basis.

Figure 1: Pricing pressures: aviation infrastructure



On the other hand, it would be expected that the users of the services provided by a regulated monopoly are given plenty of opportunity to voice concerns and that some sort of 'regulatory tension' exists between the regulator and the regulated entity. Surprisingly, there appears to be little regulatory tension between ACSA and ATNS on the one hand and the Regulating Committee. No decision by the Regulating Committee has been taken on review by the courts as a result of a challenge by the companies, nor have these entities made statements indicating their unhappiness with the level of the approved price caps.

The users on the other hand have repeatedly voiced their concerns and have engaged lengthy correspondence with the Regulating Committee. Both the Airlines Association of South Africa and the International Airline Trade Association (IATA), its international counterpart, have raised objections and questions with the Regulating Committee. Although the Regulating Committee provides answers to their questions, this does not appear to alter its decisions. The fact that the organised users have lodged a complaint regarding the Regulating Committee's decisions with the Competition Commission and have engaged numerous experts to provide information to the Regulating Committee, suggests that the users do not believe that the price determination process is leading to efficient prices.

[39] ACSA was instructed in 1998 to develop an improved financial model ad and given a 9 month deadline. The final draft was submitted in august 2003.

The Competition Commission is not involved in the price cap process at all, and neither are other government departments that could have an interest in competitive air traffic and airport charges, such as the Department of Environmental Affairs and Tourism or the Department of Trade and Industry.

The dependence of the part-time Regulating Committee on consultants has been criticised, and whereas the Regulating Committee claims that the consultants are simply advisors on corporate finance issues, who scrutinise the financial detail of the permission applications by ATNS/ACSA, industry players claim that the consultants effectively decide on the price cap as the Regulating Committee lacks the capacity to astutely and independently evaluate the advice it is given.

From a regulatory point of view, there need not be a problem with contracting specialist skills, since this allows for a lean and focussed organisation using independent advisory services, as long as the regulator retains sufficient ownership of the consultants' decisions. Likewise the part-time nature of the regulator has advantages, in the sense that highly-skilled individuals can be attracted to serve on the Committee and is essentially reflective of the cyclical nature of the permission investigations.

A problem arises when this model of the Regulating Committee modus operandi is insufficient to fulfil its mandate. Here one could certainly argue that a Regulating Committee that focuses almost exclusively on the annual review of the permissions and has only 6-12 meetings per annum, will not be able to implement continuous monitoring of the industry to prevent and remedy abuse of dominance by the regulated entities or to adequately monitor efficiency improvements.

Stakeholders have argued that the part-time nature and small size of the Regulating Committee results in a lack of human capacity and skills required to oversee this complex industry. Given the lack of capacity and of regulatory independence, the regulator's dual mandate aimed at safeguarding the regulated entities sustainability and profitability, and the complexity of ACSA's regulatory accounts, it is likely that the Regulating Committee errs on the side of safety in its tariff determination. The resultant prices are therefore unlikely to provide sufficient efficiency stimuli and erode monopoly profits. This deduction is supported by suggestions of persistent and growing profits by the regulated entities (in particular the difference between price and marginal or average costs results in over-recovery); unrelenting user complaints, yet seemingly content incumbents.

4.5 Conclusions and preliminary recommendations – Aviation

Although the regulatory framework for aviation infrastructure services is the most advanced and sophisticated of all modes of transport regulation, the scientific basis of the methodology is undermined by its less scientific implementation. The Regulating Committee lacks the skills and resources required for a rigorous price cap regime and continuous monitoring of efficiency improvements. The effectiveness of the regulatory methodology employed hinges on critical assumptions made regarding the rate of return, the rate base and risk assessments, which do not take account of the fact that ACSA and ATNS are public-owned entities, for which commercial returns and private sector risk assessments may be inappropriate. Neither the lack of regulatory independence nor the shareholding role of the Minister of Transport adds to the Regulating Committee's regulatory credibility.

The strongest suggestion of inefficient resultant prices is given by the fact that the operating profit for ACSA proves to be the highest of all airports companies in a large international survey. Other suggestions of inefficient prices are provided by the persistent user complaints; combined with little resistance from the regulated entities and the high margins and profits realised by the companies.

The main lesson of this experience is that a state-of-the-art framework does not guarantee success. In particular, a regulator needs to have a clear and unambiguous mandate in order to pursue efficient prices. The regulator also needs to be provided with the tools to fulfil its mandate, in particular, it requires accurate data, sufficient resources and appropriate skills.

In order to improve regulatory effectiveness some institutional changes could be made. Firstly, a separation of the ministerial duties of shareholding and regulation is advisable, as these duties may require contradictory actions in a given situation. The fiduciary responsibility of the Minister of Transport as a member of the ACSA board may conflict with the responsibility to appoint an independent and empowered regulator that is supposed to balance the interests of all stakeholders. Secondly, regulatory credibility would be greatly enhanced if the independence of the Regulating Committee were ensured. This would involve an institutional separation between the NDOT and the Regulating Committee; and the eradication of Ministerial approval for recommendations.

Regarding the regulatory framework and its interaction with competition legislation, it is of paramount importance to clarify the demarcation of jurisdiction between the competition authorities and the Regulating Committee. The co-existence of a sector-specific regulator and economy-wide competition authorities presupposes some degree of cooperation and jurisdictional certainty. In the case of aviation the co-existence of both institutions is complicated by the fact that the aviation Regulating Committee is only responsible for regulation of the infrastructure companies and not for anti-competitive practices in air transport services provision (i.e. between airlines).

Rigorous and swift application of competition laws is of particular importance in the airline industry where predatory pricing for instance can lead to a sudden demise of an airline. Internationally, the impact of deregulation in aviation in terms of tariffs and operators, has led to an increased focus on behavioural regulation (e.g. competition regulation) and the need for rapid implementation of such regulation has been widely recognised. Some international examples of dedicated competition divisions for aviation (EU and US) illustrate the necessity for vigilant and specialist application of competition laws.

In the current framework, the South African competition authorities could enhance their capacity to deal with anti-competitive practices by airlines in order to meet this need. In addition enhanced airline consumer protection (e.g. against overbooking, or code-sharing problems) should be developed. Alternatively, the Regulating Committee could be transformed into a fully-fledged sector regulator. The latter option appears less advisable in the absence of regulatory independence and more permanent structures. At present the demarcation of jurisdiction between the sector-specific regulator and the competition commission is an unsatisfactory one. More research is therefore required into alternative arrangements for co-existence of sector specific and economy-wide competition regulation.

A final issue regarding the framework concerns policy coordination between the responsible government department and the commercial agencies established in

an effort to move government away from operations to focus on policy. The establishment of commercial entities requires some mechanisms for alignment to policy developments. This is particularly important in transport where the development of infrastructure is interdependent on policies in other areas, including tourism policy, industrial policy, trade policy etc.

Policy coordination and implementation are complicated in aviation by two aspects. Firstly, the separation of air traffic services and airports means that coordination is required to ensure that the two sets of infrastructure develop in tandem, e.g. improvements in ATNS' operations could allow it to navigate and land more aircraft, but without simultaneous improvements to ACSA's infrastructure, these aircraft would not be able to off-load. Secondly the commercialisation of the infrastructure companies requires the development of detailed investment planning and targets/incentives or performance contracts to ensure facilitation of government policy. Thus a proactive and assertive policy making department, with rigorous planning capability, is imperative to the successful coordination and implementation of aviation policy. In short, the creation of commercial agencies deepens, rather than reduces, government involvement in policymaking and implementation.

5. PORTS

5.1 Introduction

The tariffs associated with use of South Africa's ports consists of two parts, infrastructure fees, charged by the National Ports Authority (NPA), and handling fees, charged depending on the operator, which is either state-owned South African Port Operations (SAPO) or a private sector company. As prices in handling services could be determined competitively and since there are plans to introduce competitive tendering in this part of the port activity chain, this report will not include a thorough analysis of the price setting processes for the SAPO. This part of the report will thus focus on the charges applicable to the monopoly infrastructure, owned by the NPA.

The NPA, as a ring-fenced Transnet division, faces a dual mandate: it is considered to be a utility by many, but has a clear mandate for commercial operations, enshrined in the Transnet Act. This means that this division too is performing a balancing act without a detailed mandate to guide its decisions other than commercial imperatives. The social mandate becomes apparent when the NPA is instructed by government to build a new port, where it would not have done so otherwise.

The NPA's tariffs have been the subject of much debate, and port users have often complained about the levels of these tariffs and the perceived absence of their use for port upgrading and other investment. The following sections will describe the formal regulatory mechanisms involved in port tariffs and assess the practical influences facing the NPA.

5.2 Formal regulatory mechanisms

The regulatory framework for ports infrastructure charges is quite distinct from the framework for aviation infrastructure discussed earlier. Although the infrastructure and monopoly service provider are part of one commercial entity, Transnet, no independent regulator exists. The public ownership of Transnet allows the DPE to approve business plans and to monitor the performance of Transnet in terms of its 'Compact', but this does not involve formal approval of tariffs for the individual business units of Transnet. In terms of the Compact, DPE can influence the financial targets that Transnet is subject to, and could therefore, in theory at least, influence Transnet's price setting processes.[40] In particular, targets could be set on returns, prices, investment and other indicators, and could be benchmarked against international averages. However, due to capacity constraints, this control lever tends to amount to no more than a rubberstamping of business plans and confirming compliance with the Public Finance Management Act.[41]

It is further important to note that the performance monitoring functions that the DPE performs are related to its functions as a shareholder, not as an organ of state or policymaking government department.[42] Corporate governance principles further

[40] The details of the Compact agreement are not publicly available.

[41] Source: DPE, interviews.

[42] Although some control is exercised by Board representation of one DPE official.

restrict the ability of DPE to intervene in the pricing process (as a shareholder). As business plans and service charges are approved by the Transnet Board, DPE, as a shareholder, has limited ability to interrogate such board-approved decisions. Like any shareholder, DPE would need serious grounds for exercising its rights in this regard and would effectively have to give the Board, which is appointed by the Minister of Public Enterprises, a vote of no confidence. The main source of control over Transnet by DPE is therefore the appointment of Board members. This situation suggests that the current institutional relationship is unsatisfactory, as in the absence of a regulator with a clear mandate, the DPE should have greater control to steer Transnet towards the fulfilment of transport policy objectives.

The DPE's capacity in terms of performance monitoring is further restricted by its limited resources, the performance monitoring team currently consists of five persons, tasked with reviewing multifaceted operations in nine large and complex Transnet divisions. By comparison, Transnet employs approximately 80 000 people and its fixed assets are valued at R 72 billion.[43]

In the case of ports, port tariff proposals are submitted annually by the NPA to the Transnet Tariff and Marketing Committee and determined by Transnet board, which evaluates the tariffs in context of the overall profitability Transnet. Transnet is not formally required to submit these tariffs to the Department of Public Enterprises.

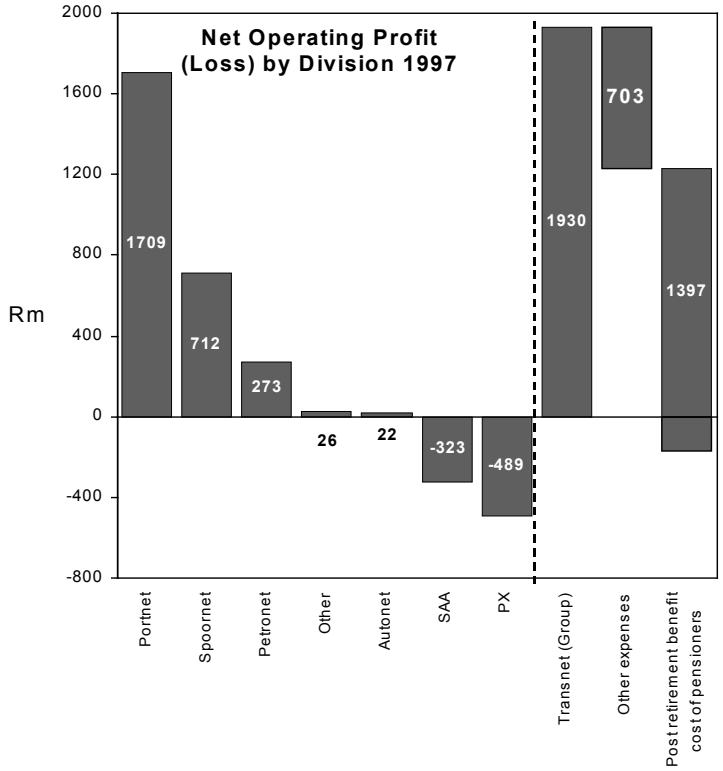
The Transnet pricing processes contain many layers of pricing decisions, and by the time the cost allocations and cross-subsidies of a single profit centre or unit have gone through a process of allocation and cross subsidy decisions at divisional level (i.e. Spoornet or NPA level), the final pricing decisions at group level provide diluted pricing signals. The port infrastructure tariffs for instance apply across all SA commercial ports operated by the NPA, preventing inter-port competition and containing significant cross-subsidies.

In understanding these pricing processes it is important to take cognisance of Transnet's historical development and current divisional distribution of profits. The ports are highly profitable and responsible for as much as approximately 80% of Transnet's profit. Despite this high profitability, port infrastructure suffers from investment backlogs, and port delays are a well-known problem. As the profits from all its business units are appropriated by Transnet, port profits do not necessarily translate into port investment. Investment proposals by the NPA are considered in terms of Transnet's overall investment fund availability, and the NPA is required to fund port investments by borrowing from Transnet. The port profits, apart from contributing to Transnet's headline earnings, are used to make up losses in other units, most notably rail services, resulting in extensive inter-modal cross-subsidisation.

A profitable unit not only hands over profit, but is also obliged to borrow from Transnet at a higher rate (than at which Transnet borrows in financial markets). Transnet also assigns 'cash flow on investment' targets to the units, which vary with the unit's profitability. As the NPA is highly profitable, its required return on investment – its hurdle rate – is 15.7%. In addition to these finance charges, the Transnet restructuring has required Transnet to allocate some of its accumulated debt among its units. In 2002 the NPA was allocated ZAR 3.2 bln of debt to service.

[43] Transnet Annual Report, 2002.

Such cross-subsidisation creates capital expenditure shortfalls (e.g. in ports) and rewards some customer segments over others. For example, Spoornet and Freightdynamics are to a large extent insulated from the consequences of their performance, as losses are covered profits from other Transnet business units[44]. The figure below indicates the distribution of profits and losses across Transnet units in 1997[45]. The profitability of Transnet remains unevenly spread across its divisions, with the NPA recording the greatest profits, and SAA, Spoornet, Propnet, Transtel, Transwerk and Petronet recording smaller profits. Freightdynamics is currently loss-making and Metrorail would be loss-making without the government subsidy[46].



Source: Transnet Annual Report 1997

As there is no strategic or deliberate policy basis for the cross-subsidies, they are not exactly the type of 'Robin Hood pricing' they are sometimes made out to be, whereby operations serving the poor or strategic industries are subsidised by highly profitable operations elsewhere. It is more simply a way of allowing inefficient operations to continue without repercussions.

[44] Moving South Africa, p.174.

[45] Reproduced from: Moving South Africa, p.52. The figure does not reflect true losses by rail operators as it includes the government subsidy. No more recent figured were available.

[46] Transnet Annual Report 2002.

At present, significant changes are proposed to this framework. Proposed institutional changes are included in the National Ports Authority Bill and the White Paper on Commercial Ports Policy. These proposals envisage the NPA with landlord responsibilities (infrastructure manager) and the future removal of the NPA from Transnet. Whilst the NPA is part of Transnet an *interim* regulator is proposed, to prevent discrimination between SAPO and other port operators and to regulate the relationship between Transnet and the NPA. The NPA will in future operate as a separate commercial – tax paying – entity, and will therefore be able to retain its reserves. At present there is no clear time frame for this restructuring, which according to industry players may take up to two decades to complete.[47] The concessioning of port operations will allow for competition *for the market* and at present it appears that SAPO will cease to exist as it will not be allowed to tender for NPA concessions. The envisaged end state however, appears to be one without a permanent economic regulator for the ports, whereby the NPA would simply be subject to the Competition Act (1998), without specific regulatory oversight for tariff setting.

In particular the new policy seems to indicate an end to *unregulated* inter-modal cross-subsidies, although the government position that the NPA can only be fully independent from Transnet once the financial implications of this unbundling are manageable seems to contradict this policy stance. Until a transparent fiscal transfer is put in its place, opaque inter-modal cross-subsidies will therefore continue to exist.

5.3 Pricing influences

The current institutional arrangements and frameworks in the port sector are unsatisfactory from a regulatory and accountability point of view. As Transnet controls both the infrastructure (NPA) and operations (SAPO), this entity, and through its shareholding structure the state, is both player and referee. As there is some competition in operations (freight handling/terminal operation), the state competes with the private sector in handling services provision.

Despite its shareholding though, the control of government over the price-setting, investment decisions and other pertinent aspects of this critical infrastructure is limited and performed only indirectly via the Department of Public Enterprises. Moreover, the DPE is tasked with the restructuring of Transnet to *inter alia* enhance its profitability and make it more attractive for private investment. The cross-subsidisation of other business units, largely funded by port revenues, creates distortions and places an undue burden on importers and exporters, translating into an unregulated trade tax.

The only formal influences impacting on the port infrastructure charges are the Transnet Board and the shareholder, the Minister of Public Enterprises. As outlined above, the Transnet Board is primarily concerned with ensuring overall group profitability and has no specific mandate to ensure efficient prices or subject its tariff proposals to an economic regulator. Formally speaking, the DPE has very

[47] Transnet has indicated that unbundling the NPA from Transnet would require a significant transfer for Transnet to restructure its debt, including the pension fund and medical aid fund gaps, and subsidise currently loss-making operations. Transnet Chairman Bongani Khumalo indicated that taking NPA out of Transnet would wipe out all of Transnet's profits (in excess of ZAR 3 bln) and lead to a loss of more than ZAR 1.3 bln. Chalmers, R & Ensor, L (2003), *Timing of authority's separation from Transnet is crucial*, Business Day, 11 March.

limited direct influence on pricing and investment decisions and is hampered by Transnet's complicated cost structures and a lack of capacity to monitor Transnet's efficiency.

Widening the net of influences to practical influences, which may or may not be part of the formal regulatory or institutional framework, only one other force emerges. The influence of (organised) consumers on the pricing process is not insignificant as the following description of the NPA's tariff reform process highlights.

Historically, Transnet, including the port operations, employed an *ad valorem* based tariff structure. The tariff structure tended to be skewed in favour of infrastructure charges, so that too much was charged for infrastructure services and too little for handling.[48] The unbundling of Portnet into the NPA and SAPO made the implicit cross-subsidies between these two operations more explicit.

The *ad valorem* system, which implied that higher-value cargo, irrespective of size or weight would be more expensive to move through the ports than lower-value cargo, was an effective disincentive for higher value-added manufacturing and had no basis on efficiency grounds. In addition, due to Rand fluctuations, the amounts levied on imports and exports varied significantly. Imports faced higher port charges than exports, and as imports were charged port infrastructure charges based on foreign exchange value translated into Rands, the significant Rand depreciation led to a growing disparity between import and export charges. These escalating costs of port charges would add to already higher Rand prices of imported goods which, although providing alternative protection against imports and therefore perhaps favoured by domestic industries, ultimately add to - imported - inflation.

Port users had opposed the tariff structure for years and complained vociferously, targeting mainly the NPA. (Although the port system constitutes a national monopoly, certain significant port users, such as manufacturers in the motor industry, can move their operations elsewhere and therefore constituted significant countervailing power to the NPA).

Thus, the NPA initiated a tariff reform process in 2000/2001, which proposed a restructuring of tariffs that would reduce the overall level of tariff revenue and significantly alter the tariff structure. Most notably, the tariff reform proposals included a move from the *ad valorem* based system to a unit-based tariff system. The proposed tariffs were based on a viability model that incorporated depreciation of current assets, future investment requirements as well as a reasonable return. Although the new tariffs were more cost reflective, the charges would continue to be calculated across ports, thereby continuing to prevent inter-port competition.

The NPA consulted informally with its customers and concluded that future tariff increases should be kept below or at the inflation rate, so as to gradually erode the remaining surplus revenues to more reasonable and sustainable levels.

Although in the proposed tariff structure reform some charges would increase, particularly on high-volume low-value products, the overall reduction in tariffs would have led to a significant reduction in overall revenue for the NPA. The NPA projected a cumulative reduction of ZAR 800-million – ZAR 1-billion in revenues, to

[48] Source: DPE and NPA, interviews.

be implemented over 3 years. The first year of the tariff reform would consist mainly of reducing the *ad valorem* percentage, whilst in the second year the tariff structure would be radically changed to a unit-based system.

The proposal was presented to Transnet management and subsequently rejected by the Transnet Board. As a result, the tariff reform was limited to changing the tariff structure from *ad valorem* to unit based, with strict minimum tariffs. A severely toned down version of the original plan was subsequently implemented, ending the *ad valorem* system for port charges in 2002. Nevertheless, it is clear that one of the main drivers of this reform process was the countervailing power of consumers, indicating that the NPA at least can be held accountable for (in) efficient prices by its customers.

It is clear that some pressure is exerted by organised consumers and by port users who represent significant turnover to the NPA. Unfortunately the formal route for actual price disputes or complaints requires referral to Transnet, which does not instil much consumer or investor confidence in the appeal process. To date, Transnet's prices have not been brought before the competition authorities[49], which could provide an alternative for disgruntled consumers.[50] The influence of the competition authorities is therefore as of yet an unknown quantity.

Recently, the DPE has undertaken steps to increase its influence over tariff decisions by Transnet divisions. In an effort to create greater transparency regarding Transnet's tariffs, the DPE convened an interdepartmental meeting in March 2003, where all Transnet units presented their annual tariff changes. However, the purpose of this meeting was not facilitation of appropriate and efficient pricing decisions by Transnet, taking government objectives into account, but was simply to brief the attendees regarding the tariffs that had been approved by the Board in late 2002 and would be in force from 1 April 2003. The DPE and other government departments were therefore confronted with a fait accompli. It is further unclear what influence objections that may have been voiced by the National Treasury or the Department of Trade and Industry could have had on the price-setting processes as Transnet has no formal instruction or mandate to take their considerations on board.

The Department of Trade and Industry has a clear interest in Transnet's pricing processes, as transport costs and backlogs have a direct impact on consumers, exporters and small and medium enterprises (SMEs) in particular. Unfortunately, the practical influence of the Department of Trade and Industry in this process appears to be negligible as there are no levers – such as funding or approvals - controlled by the DTI or formalised negotiations between Transnet and government departments representing consumers or exporters.

---

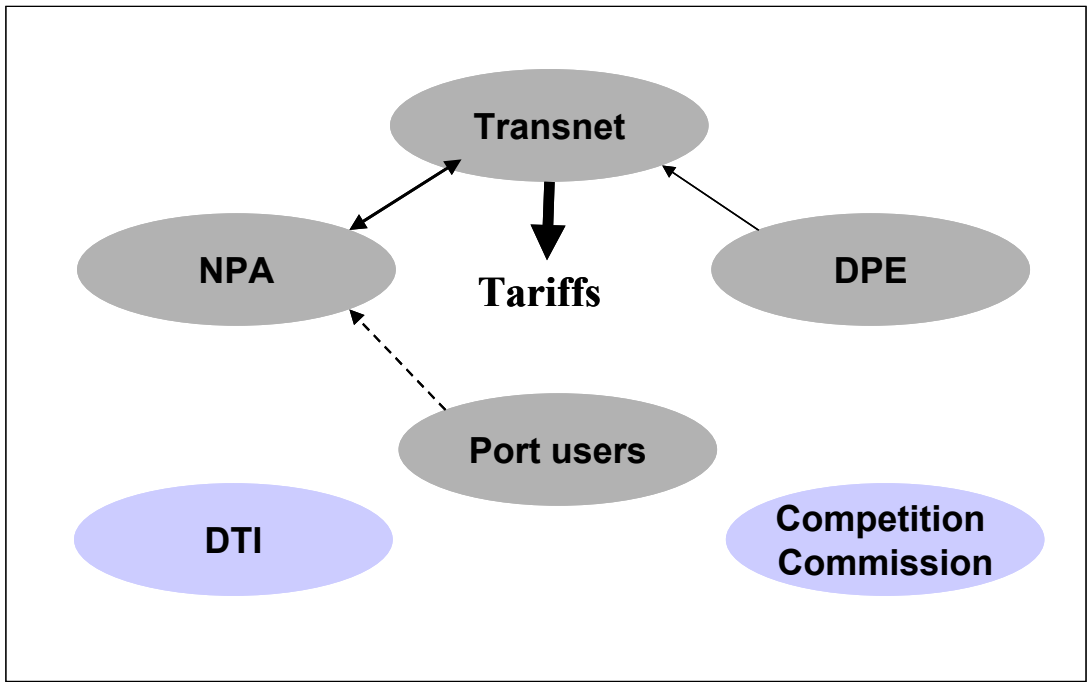
[49] Consisting of the Competition Commission, the Competition Tribunal and the Competition Appeal Court.

[50] Two issues should be noted (i) the likely charge of 'abuse of dominance' in such a case would be excessive pricing, which is extremely difficult to prove; and (ii) the experience of the Airline Association of South Africa in challenging sanctioned tariffs does not bode well. As there is no formal economic regulator in ports, the competition authorities could however rule differently from the aviation case.

5.4 Assessment of pricing influences

In light of the above discussion of price determination processes, it emerges that if any of Transnet's tariffs were found to be efficient and approaching competitive levels, this would be purely coincidental. The port tariffs are dependent on the cross-subsidies required for other Transnet business units; profits cannot be simply reinvested; and no pressure is exerted on the potential for monopoly rents by efficiency incentives or regulatory controls. As the graphical illustration below highlights, the main influences on port charges are Transnet and, albeit indirectly, organised or prominent port users.

Figure 2: Pricing pressures: port infrastructure



The Department of Trade and Industry has no formal influence and the influence of the Competition Commission has not been tested. The Competition Commission's involvement to date has been limited to providing comments on the proposed ports legislation. In summary then, port charges are determined by a state-owned monopoly, which is only summarily accountable to government. The processes involved in price determination are seriously flawed and devoid of regulatory interventions to curb abuse of market dominance, and therefore it is reasonable to assume that the resultant tariffs do not represent efficient prices.

5.5 Conclusions and preliminary recommendations - Ports

The current institutional arrangements and frameworks in the port sector are unsatisfactory from a regulation point of view. As Transnet controls both the infrastructure (NPA) and operations (SAPO), this entity, and through its shareholding structure the state, is both player and referee. As there is some

competition in operations (freight handling/terminal operation), the state competes with the private sector in service provision.

Despite its shareholding though, the control of government over the price-setting, investment decisions and other pertinent aspects of this critical infrastructure is limited and performed via the Department of Public Enterprises, which is tasked with the restructuring of Transnet to *inter alia* enhance its profitability. The cross-subsidisation of other business units that is largely funded by port revenues creates distortions and places an undue burden on exporters.

The implications of flawed price-setting processes in port charges could be significant as excessive or inefficient port charges amount to a trade tax and tend to aggravate imported inflation in times of Rand weakening. In absence of transparent processes regarding cross-subsidies and government-sanctioned targeting of such subsidies, many price distortions are introduced into the transport system.

Traditional and formal regulatory controls are non-existent in this context and the Department of Public Enterprises is therefore burdened with the thankless task of monitoring Transnet's performance, constrained both in terms of corporate governance options and in terms of its capacity to effectively monitor the performance of this sizeable organisation.

It this appears that the South African economy is burdened with an public-owned, yet unregulated monopoly, whose incentive structure and behaviour is no different from a private monopoly. As a result, the discrepancy between efficient price levels and actual price levels is likely to be high and approaching full-scale monopolistic rents.

The proposed institutional changes to the regulatory framework should go some way in addressing some of these concerns, but at present will stop short from establishing a permanent independent regulator responsible for approving tariffs; regulating access; and ensuring sufficient investment takes place in ports infrastructure. As a minimum requirement for effective control of port prices, the cross subsidisation between the NPA and other Transnet units should be eliminated, i.e. the NPA should be physically separated from Transnet and a regulatory authority should be created with a clear mandate to provide efficiency incentives and to erode monopoly rents. The shortfall in other Transnet units, such as Spoornet, could then be covered by a transparent and monitored fiscal transfer, which would improve the efficacy of subsidies and would allow greater monitoring of loss-making entities.

6. RAIL

6.1 Introduction

The provision of railway services involves several players in South Africa, covering two divisions of state-owned enterprise Transnet – namely Spoornet and Metrorail – the NDOT, as well as the South African Rail Commuter Corporation (SARCC), a government-owned entity accountable to NDOT.

Spoornet, the largest division of Transnet, maintains most of the South African rail network and consists of 6 business units, including a commodity freight transport unit, a commuter services unit, two dedicated commodity rail links, an international joint ventures business and a luxury train business[51]. The business units that are of importance for this report are briefly described below.

Spoornet supplies transportation of freight, containers and mainline passengers and includes Shosholoza Meyl[52], which provides long-distance passenger services and luxury rail travel, and the General Freight Business, which provides commodity freight transport. Metrorail, a ring-fenced Transnet unit, provides commuter rail transport services.

The dedicated commodity rail links are Coallink (transporting export coal from Mpumalanga to the Richards Bay's export terminal) and Orex (transporting iron ore from the northern Cape to the Western cape coast). These dedicated export links are highly profitable and are considered of world-class standards.

Metrorail is the only rail commuter operator in RSA. Its operations are loss-making: in 2002 'cost coverage' was 46.3% against a target of 47.6%[53]. Metrorail receives a subsidy from government to cover this operational shortfall. Spoornet on the other hand, receives no such explicit government subsidy and has historically been a loss-making recipient of internal Transnet cross-subsidies.

Although Spoornet owns and maintains most of the long distance rail track, the railway stations and surrounding land are not owned by Transnet, but by the public-owned SARCC.[54] The SARCC operates commuter rail services under concession agreements, which are mostly with Metrorail. Spoornet and Metrorail thus both provide passenger rail services, partly over the SARCC's infrastructure.

---

[51] The latter two include: Luxrail which operates the Blue Train, and manages contracts with other luxury rail operators such as Rovos Rail and Spier; and Spoornet International Joint Ventures, which operates a consulting, management and operating business providing railway equipment and services to other countries, mainly in Africa, and through Comazar, a rail investment company of which Spoornet is the largest shareholder, which acts as a railway developer, concessionaire and operator, mainly in Francophone Africa.

[52] Formerly the 'Mainline Passenger Services' business unit.

[53] Historically, this has been closer to 30-35% cost coverage in the recent past. NB As it does not own the rail infrastructure network, more than 50% of Metrorail's costs are labour costs.

[54] In 1990 the national railway operations were split between freight and commuter rail services. All rail commuter related assets (including infrastructure, rolling stock and stations) were transferred to the SARCC, whilst the long distance and freight related assets were transferred to Spoornet. The SARCC obtained stations and the surrounding land and approximately 2,000 km of track (out of a total of approximately 17,000 km of track).

The remainder of this section of the report will be divided between commodity freight services and commuter passenger services. As the regulatory framework for long-distance passengers is more closely related to the regulation of freight services (both are provided by Spoornet), long-distance services will be briefly discussed in the context of the rail freight services section.

6.2 Formal regulatory mechanisms – Commuter Rail

The regulatory framework for passenger rail services is similar to the current approach to port regulation, whereby Transnet manages the service provider as one of its business units and is indirectly managed by DPE. There are some notable differences between the regulation of commuter rail and ports however.

First, Transnet does not own all the infrastructure required for providing commuter rail services, approximately half of which is owned by the SARCC. Secondly, unlike port services, passenger rail transport services (provided by Metrorail) are explicitly subsidised by government (via the NDOT budget) and the service delivery by Metrorail is monitored by the SARCC and thus indirectly by the NDOT. An institutional equivalent for the SARCC does not occur in either the provision of port services or in the provision of air travel infrastructure services as the SARCC is a contract management agency overseeing Metrorail's performance, but not an economic regulator in the formal sense.[55]

The SARCC has a regulatory function regarding Metrorail in terms of its contract management, but lacks any formal price-setting powers. The public ownership of Transnet allows the DPE to approve business plans and to monitor the performance of Transnet in terms of its Compact, but this does not involve formal approval of tariffs for the individual business units of Transnet.

The tension between the roles of a public utility and a commercial agency, found in most of the transport modes, is implicitly enshrined in the SARCC's mandate. The SARCC's mandate requires it to exploit the assets under its management in a commercial manner and to provide commuter rail services in the public interest under a subsidy. At its inception the SARCC was envisaged to be an asset owner cum planner cum funding manager, but not a regulator and was therefore never given a legal mandate to economically regulate Metrorail.

The NDOT provides the funding for the SARCC, consisting of an operational subsidy and a capital grant for infrastructure investments. It has been difficult to determine the correct level for the capital grant. In the run up to the 1990 restructuring of commuter rail, significant disinvestment in the infrastructure occurred, so that in 1990, the SARCC was confronted with a massive backlog for which it had to borrow on international money markets.

In addition, a budgetary slip-up in 1991 meant that the allocation for the operating shortfall was not included, so that in that particular year, the SARCC, had to borrow both the capital grant and the operating shortfall. Over several years, the shortfall compounded to nearly ZAR 2 bln, which was eventually taken over by the fiscus in FY 2000/2001.

[55] A separate rail safety regulator was recently established.

The SARCC believes that in the meantime, the backlog in maintaining the current system (i.e. without any infrastructure roll-out or upgrade) has risen to over ZAR10-bn (in 2003), translating into a projected annual investment requirement of ZAR1.7bn over several years, whilst currently only ZAR400m is invested annually.

History of regulatory frameworks in commuter rail

The regulatory framework for commuter rail has gone through three distinct periods of development in the last decade or so.[56] In the first phase (between 1990 and 1995) the institutional framework was established: Metrorail was ring-fenced, the SARCC established, financial records were produced for Metrorail and the cross-subsidisation between Metrorail and Transnet was replaced with a commuter subsidy from the National Budget. The subsidy formula, managed by SARCC, was based on a cost plus agreement, which led to an effective subsidy for costs incurred that was decreasing in real terms as costs on average were allowed to increase with inflation minus 4.3% only between 1990 and 1995.

The split between SARCC and Metrorail, dividing assets and operations over two distinct public-owned entities was inspired by two arguments: (i) the integrity and safety of the railway operations would be maintained by commuter and freight operations remaining in one company, i.e. Transnet and (ii) the large staff complement of Metrorail at the time – approximately 12,000 employees – would have lost the benefits of centralised bargaining by being separated from Transnet and thus resisted the full separation from Transnet.

The second phase of commuter rail policy reform spans the period between 1996 and 1999. In this period, several policy changes were agreed on. The land passenger policy, as defined by the 1996 White Paper, was aimed at addressing several imbalances, including the investment backlog in rail infrastructure; the disproportionate subsidy to rail commuters (rail receives approximately 50% of the total available commuter transport subsidy, although rail travel is responsible for a much smaller percentage of the market share of all commuting trips) and the deficit subsidy system.

The White Paper envisaged 'regulated competition' in commuter rail services, which basically entailed competition 'for the market' not 'in the market'. The proposed vehicle was a concession agreement. The concession system was to encourage private investment and innovation into commuter rail provision, and provide efficiency incentives by moving from an input-based agreement to an output-based agreement.

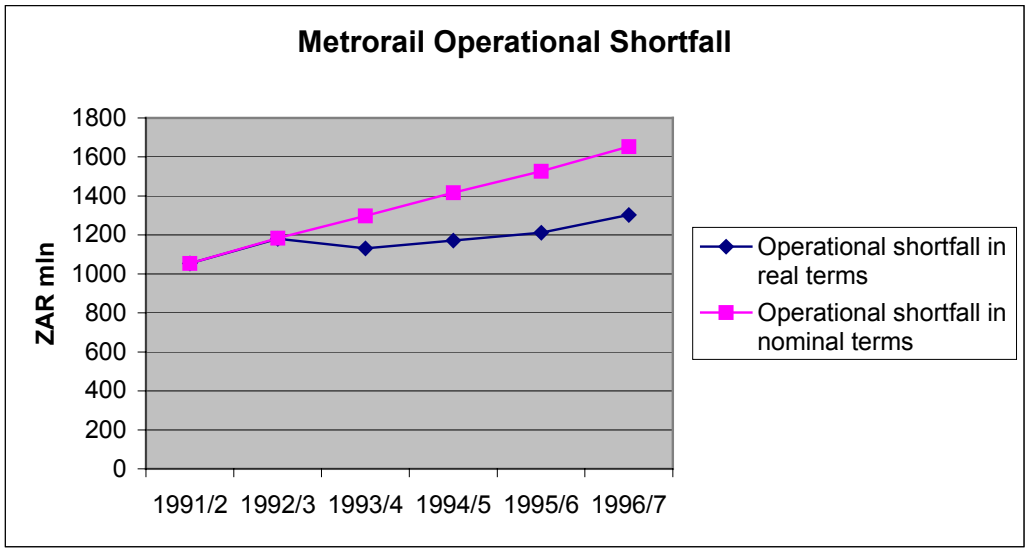
The 1996 National Framework Agreement provided for concessioning of commuter rail services which, due to conflicting stakeholder interests, was reduced to the following compromise. The first concession of commuter rail services would be an exclusive agreement with Metrorail for the first 4.5 years whilst a pilot project of competitive concessioning was conducted on 10% of the network. After this trial period full competition for the market would be adopted. The first concession, awarded for the period 1999-2003, did not include competitive bidding, but was based on a single bid, constructed using Metrorail's estimated costs. This – exclusive – concession agreement with Metrorail effectively prevented the envisaged benefits of concessioning to come to fruition.

[56] Based on interview with and internal SARCC documents by Mr. Van Der Walt.

The period between 1996 and 1999, was aimed at preparing for the concession, due to start in 1999. It was envisaged as a 'get fit' period, during which Metrorail could prepare itself for competition and the SARCC could enhance its regulatory skills, although the entity was never intended to become a fully-fledged regulator. Targeted subsidy allocation and more rigourous cost accounting of Metrorail's activities were introduced.

In this period, the SARCC had quite a large influence in driving down Metrorail's subsidy, achieved largely by improving the cost allocations, such as reducing the number of employees allocated to providing commuter rail services as opposed to freight services (which was blurred by the previously combined operations of commuter and freight services). These cost reductions were therefore somewhat artificial as they resulted mainly from improved allocation and not from reductions.

The graph below illustrates the real operating shortfall (the actual subsidy received in the years under consideration) compared to the original level indexed with CPI for the corresponding years (operational shortfall in nominal terms).



Source: SARCC

Despite the intended move towards competitive concessioning, the achievements of this 'get fit' period were mainly restricted to improved accounting oversight of Metrorail. Towards the end of this period the pilot project was put on ice (1998/99) after sustained criticism of privatisation in general and concessioning in particular from organised labour and civil society organisations. The project was never revived.

Experience with concessioning

The period between 1999 and 2003 (the concession ended officially in March 2003) was thus characterised by an exclusive concessioning regime. The concession agreement between the SARCC and Metrorail was essentially a type of 'cost-plus contract', whereby Metrorail charged the SARCC for the costs incurred in providing commuter rail services and a management fee, which is approximately 10% of its fare revenues. The agreement formally stipulated that rail fares (tariffs) are approved by the NDOT through the SARCC, but in practice Metrorail simply

submitted its tariff proposal to the SARCC, which generally approved them without major changes.

The system suffered from several flaws, including (i) a monopoly market structure, without an independent economic regulator or effective competition for the market; (ii) lack of proper efficiency incentives for Metrorail; (iii) incomplete and imperfect cost allocation systems and (iv) the determination of tariffs based on the Transnet revenue requirement instead of costs.

The concession was effectively a negotiated deal with the parastatal involved and did not provide the SARCC with appropriate regulatory levers over Metrorail. The SARCC approval of Metrorail's tariff proposals was limited to confirming they are in line with the agreed increases and scrutinising income and expenditure statements. Generally, the proposals are passed on to the minister virtually unchanged.

Formally, the concession agreement consisted of a price cap type formula for setting fares, which after protracted negotiations was set at CPI +2%. As cost increases were estimated to amount to 7% per annum, nominal prices could increase by 9% in each year of the concession period, which effectively entailed a large increase in the absolute subsidy provided to Metrorail. Although certain incentives and penalties were included in the concession agreement with Metrorail, aimed at incentivising Metrorail to reduce costs and increase turnover (i.e. increase passenger movements), no strict performance monitoring was implemented. The performance regimes that were envisaged, were not finalised prior to the implementation of the concession.

Moreover, Metrorail was instrumental in determining the relevant performance indicators and as the incentives were linked to reducing income shortfalls, without setting clear quality targets, the main cost reductions were achieved by reduced quality and maintenance expenditure instead of enhanced efficiencies. This was mainly made possible by the lack of unambiguous cost allocation within Metrorail's operations, despite the improvements made to separate Metrorail from other Spoornet businesses.

Due to the nature of the formal price cap as strongly input driven, the existing inefficiencies within Metrorail were thereby perpetuated into the exclusive concession agreement. This problem was compounded by the changed nature of Metrorail, which had become an explicitly profit-making division of Transnet. Between 1999 and 2003 Metrorail's service and rolling stock were found to deteriorate significantly.[57]

The concession officially came to an end in March 2003, as the development of an acrimonious relationship between Metrorail and the SARCC prevented the renegotiation of the agreement, despite an existing renegotiation clause. During the exclusive concession period, no preparations had been made to implement a fully-fledged concession process upon its termination, as it appeared that the political enthusiasm for this option had waned significantly.

As a result, Metrorail and the SARCC currently operate under an interim arrangement, consisting of a concise Memorandum of Understanding, whilst a new agreement is being negotiated. No deadline has been set for the finalisation of this process. The current agreement is technically not a concession but a management

[57] Based on industry interviews.

agreement, via which fares are set as in the pre-concessioning period, namely by submission of tariff proposals to the SARCC subject to NDOT approval, without strong regulatory controls or powers.

Planned restructuring

There are several restructuring proposals being discussed by the NDOT and Spoornet, including: a merger between Coallink and the General Freight Business to form an integrated freight company; a merger between Shozoloza Meyl, Metrorail and the SARCC, with a revised subsidy mechanism to form an integrated rail passenger company; as well as the concessioning of Orex; and the concessioning or sale of Luxrail.[58]

The envisaged merger between Metrorail, the service provision part of the SARCC and Shosholoza Meyl would combine all commuter rail services and the infrastructure it employs, whilst leaving the option open to allow the 'regulatory capacity' part of the SARCC to evolve into a genuine economic rail regulator.[59] Unfortunately, these changes are in a preliminary phase only, and no clear policy or legislation has been developed.

The proposed merger makes sense from an operational point of view as it reunites maintenance and investment planning decisions, currently split between Metrorail, which is responsible for operational maintenance decisions but has an incentive to reduce such expenditure, and the SARCC, which is responsible for investment planning decisions, although these are strongly related to maintenance decisions. By reuniting these functions, the system can incorporate life cycle asset management methods.

However, the merger would also undo the split between operations and infrastructure, which is an enabling factor for concessioning. The debate on the proper placement of this merged entity is another cause for concern as placement in Transnet would be a step backwards rather than a step forwards in the general drive towards SOE restructuring. It appears that, as an absolute minimum, the merged entity requires an economic regulator, into which the remainder of the SARCC could be transformed.

6.3 Pricing influences – Commuter Rail

When assessing the influences on commuter rail prices a distinction needs to be made between the period under concession (1999- March 2003) and the current interim arrangement.

During the concession period, the price influences were largely based on the details of the exclusive concession agreement. The concession agreement was strongly influenced by Metrorail and negotiated with the NDOT.[60] The NDOT was

[58] The concessioning experience in passenger rail appears to have had limited impact on the intention to concession these Transnet divisions.

[59] Currently, the future role of the SARCC is unclear. Support for a commuter rail regulator is not universal, with the SARCC, the NDOT and DPE currently formulating their own views on the matter.

[60] Organised labour was also influential in the determination of the concession agreement, particularly regarding the exclusive nature of the agreement.

not intensely involved in the annual fare approval process, which was primarily a mechanical verification exercise, implemented by the SARCC. The DPE was also not involved in the practical fare setting process, with its interests limited to its roles as a shareholder and restructuring agent.

Metrorail was particularly influential in the determination of the terms of the concession, as it had the most information about costs and was subject to Transnet's profit requirements which were built into the bid for the concession.

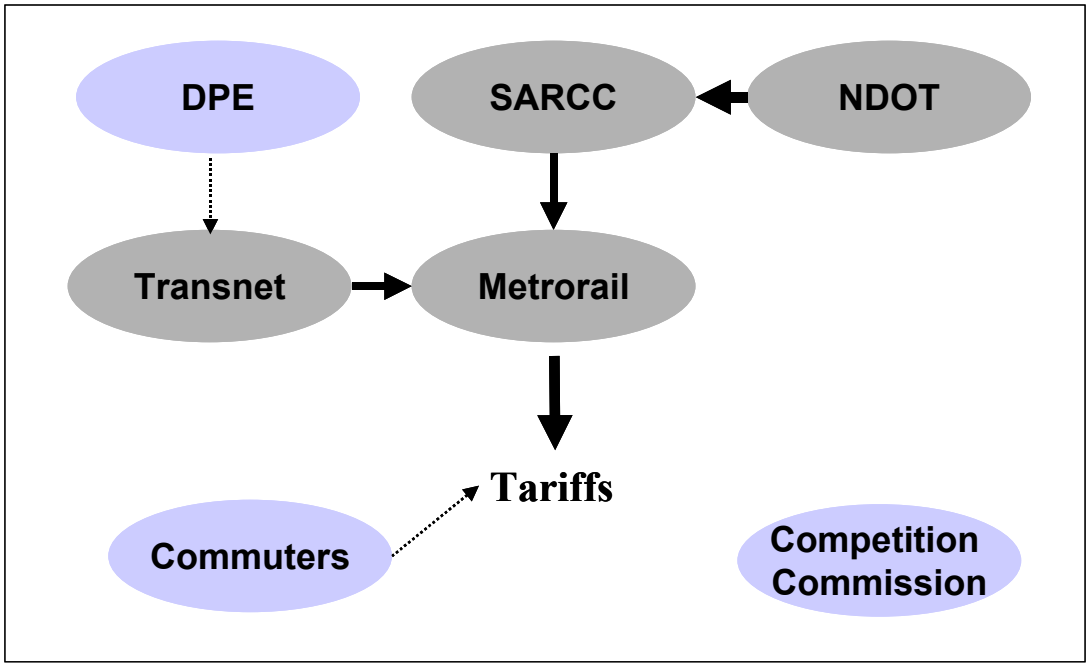
In the current transition period, prices are largely set by Metrorail, formally subject to approval by the SARCC, but due to the breakdown in the relationship between the two entities and the lack of formal regulatory powers by the SARCC, this amounts to rubber stamping in practice.

The Minister of Public Enterprises has issued warnings in the media against SOE price increases, which could act as a ceiling on price increases. Likewise consumers can exert some pressure on Metrorail, mainly expressed through political pressure, which limits prices to a certain extent.

6.4 Assessment of pricing influences – Commuter Rail

As the graphical illustration below highlights, there are a few notable gaps in the price setting processes for commuter rail. First, the SARCC is not an economic regulator and has been given insufficient powers to adequately and appropriately control Metrorail's prices. Secondly, although the Competition Commission has jurisdiction, it has not entered into a Memorandum of Understanding with the SARCC and has effectively not played any role in the commuter rail sector.

Figure 3: Pricing pressures: commuter rail



As a result, the influence of Transnet on Metrorail's tariffs is rather disproportionate and not adequately balanced by the SARCC, the NDOT, the DPE or the Competition Commission. Commuters can only play an indirect role and, as substitutes for Metrorail's services are limited, their frustrations tend to be expressed by vandalism and damage to Metrorail's assets, rather than by discontinued custom.

Metrorail, as a public-owned yet commercially operated entity, should be subject to more rigorous economic regulation, encompassing fares, service quality, and investment decisions. The current price-setting framework performs none of these functions and tends to be more input than output oriented, with fares determined based on inadequate cost allocations systems devoid of efficiency incentives.

6.5 Formal regulatory mechanisms – Rail freight

As is the case with other Transnet divisions Spoornet determines its pricing strategy subject to approval by Transnet's Tariff and Marketing Committee and the Transnet board, which evaluates the tariffs in the context of the overall profitability of Transnet. Transnet is not formally required to submit these tariffs to the Department of Public Enterprises for evaluation or approval.

The regulatory framework for rail freight services (and long-distance passenger services) is similar to the current approach to port regulation, whereby Transnet manages the service provider as one of its business units and is indirectly managed by DPE. No economic regulator or monitoring body currently exists for rail freight services.

Significant problems arise in the determination and evaluation of Spoornet's prices due to Spoornet's dual role as a commercial entity and a utility or monopoly provider of essential services. Spoornet considers its social responsibilities to be mainly focussed on the tariffs for Shosholoza Meyl, which provides long-distance passenger services, consisting *inter alia* of significant migrant labour movements, although freight customers and policy makers also attribute social imperatives to Spoornet's freight services, provided by the General Freight Business. Government also sees rail freight, as all transport services, as an enabling industry for achieving economic growth through exports and international competitiveness.

The real stumbling block in this framework is that Spoornet's social mandate, which is often alluded to, is an unwritten assumption not verbalised or concretised in any formal directive. In absence of such mandate with clear targets or objectives, Spoornet can hardly be accused of not fulfilling its key performance indicators or missing targets, as Spoornet simply does not know how it is measured in terms of social indicators.

Similarly, Spoornet also does not receive hard financial targets from government in terms of its commercial obligations. Any strategic direction of this nature comes from Transnet only. Moreover, no systematic efficiency monitoring is currently applied to Spoornet by either DPE or NDOT.

The DPE is entitled access to certain information in terms of the shareholder Compact between DPE and Transnet, but this does not set sophisticated financial or operational targets for individual or combined business units.

In its pricing of services that have critical social implications, such as Shosholoza Meyl's tariffs, the tariffs are based on Spoornet's regular costing exercises, supplemented by some affordability test. Whether this affordability test is based on simple monopoly pricing arithmetic (i.e. setting the price as high as possible to maximise revenue) or on assessments of disposable income and price elasticities so as to minimise the social impact of price increases is unclear. Political pressure, or fear thereof, may well prove to be a determining factor on Shosholoza Meyl tariffs.

Cross subsidies

The combination of rail freight services and long-distance passenger services in Spoornet has led to cross-subsidisation between GFB and Shosholoza Meyl.[61] Shosholoza Meyl has been a loss-making unit for a long time and does not receive a subsidy from government, so that is informally cross-subsidised by other Spoornet units such as GFB, Orex and Coallink.

The cross-subsidisation is further believed to extend from inter-customer cross subsidisation (e.g. between iron ore freight customers and long distance passengers) to intra-customer cross-subsidisation (e.g. between different classes of freight customers). However, without detailed information regarding cost allocation mechanisms, this claim cannot be verified.

GFB Tariffs

Rail freight tariffs have historically been set on an *ad valorem* basis (similar to port charges in the past). This system was largely phased out from the early 1990s onwards, although some residual effects on the tariff structure remain.

For most of the 1990s, GFB price increases have been below inflation (PPI), this was largely due to the absence of a profit motive before the Transnet incorporation, supported by lapses in infrastructure development. The long-distance rail network currently faces significant investment backlogs. Estimates for sustainable rail freight provision suggest that price increases of 20% p.a. are required for the next three years.[62]

The GFB tariffs are currently linked to a 'standard cost application programme' (SCAP), which attributes costs to an associated service (although it is not developed to the level of fully-fledged activity-based costing). Be this as it may, conflicting views exist regarding the rate of return. Whilst absolute revenue requirements are determined by Transnet, Spoornet has considerable discretion in determining the rate of return on various services.

The DPE is of the opinion that the system of rate of return determination according to the 'return on assets under management' formula, approaches *ad valorem* pricing. Under this system, the rate of return for GFB would equal the rate of return in the industry served.[63] This system of increasing costs for more profitable industries, as a 'Robin Hood' type of tariffication method, may appeal to some

[61] Although widely acknowledged, no statistical information is currently available to assess the magnitude of these cross-subsidies.

[62] Based on interviews with Spoornet. No independent verification of this claim is possible at present.

[63] Note that the actual use and interpretation of this system could not be confirmed with Spoornet.

customers (particularly those with low margins), but is severely problematic in a network industry with a single provider. The problem is that in this system the link between prices and costs is severed, which is only possible due to the guaranteed absence of competition.

Moreover, in absence of strict performance monitoring, not only costs are allocated to profitable customers, but inefficiencies too. Ultimately, this system is similar to *ad valorem* pricing, and can have significant negative impacts on the competitiveness of downstream industries. In practice, highest margin customers will be allocated capacity first, and in reality the company can simply price itself out of the market in segments with loo yields.

The *ad valorem* nature of freight tariffs is disputed by Spoornet, who claims to be setting tariffs according to the cost implications of the cargo, regardless of profitability of the industry or value added of that cargo. However, it is likely that the tariffs applicable to consistent high volume freight, which are the lowest, are applicable to natural resource commodities such as minerals, whereas the tariffs applicable for less regular and smaller freight movements, which are higher, will apply to less homogeneous or higher value added product. This could very well reflect cost differentials, but without close monitoring of GFB's cost allocation it will be impossible to determine this precisely.

It is important to bear in mind that GFB's tariffs are to a certain extent negotiable, especially for large or organised customers. Some customers accuse Spoornet of 'road haulage parity pricing' (i.e. pricing slightly below the opportunity cost of using trucks for freight transport), and consider this to be an abuse of its dominance. Anecdotal evidence regarding these negotiated tariffs suggests that Spoornet is seen to use convenient data (e.g. unusually high inflation in some month or quarter, is used as a prediction for the next year) to justify its price increases, knowing that its customers cannot purchase these services from an alternative provider. Without clear cost allocation and efficiency monitoring however, neither position can be verified.

GFB has recently introduced a revamped tariff structure, entitled the 'GFB 3 Traffic Categories Programme', which provide a framework for GFB's tariff structure, but stops short of setting fixed tariffs for all services provided.[64] In this framework GFB tariffs are based on the cost associated with a specific trajectory and type of service. The categories programme is aimed at distinguishing between regular 'rail friendly' bulk freight services and irregular charter services and should facilitate more efficient capacity management (together with upgraded logistical capacity and quarterly instead of weekly base load train plans). The new tariffs came into effect in April 2002 and led to significant consumer complaints as tariffs were rebalanced according to the new system.

6.6 Pricing influences – Rail Freight

The main players involved in the determination of rail freight charges are GFB, Spoornet, Transnet and the DPE. As is outlined above, Spoornet determines the

[64] The 3 categories include: Mega rail tariffs for large consistent volumes for which fixed train slots and trip plans (pre-allocated capacity) will be scheduled, based on a take-or-pay basis; Flexi rail tariffs for irregular services without pre-allocated capacity, depending on availability; and Access rail for small irregular consignments, allocated on a 'first-come-first-serve' basis for allocated capacity on a fixed schedule train plan on a 'hub-to-hub' basis.

tariffs required for its business units and proposes these annually to the Transnet Tariff and Marketing Committee, subject to approval by the Transnet board.

Overall pricing and investment decisions are included in Transnet's business plans, which are submitted to its shareholder, the DPE. The DPE is further entitled to assess the profitability of the company and its compliance with the Public Finance Management Act. As the next section will show however, the practical influence of DPE on the individual tariff decisions of Transnet units is extremely limited.

6.7 Assessment of pricing influences

The regulatory oversight of Transnet by DPE is limited to prudential oversight of financial management and adherence to the Compact agreement between Government and Transnet. The DPE has a very limited information base regarding the pricing and performance of Spoornet, and relies on information disclosed in terms of the Public Finance Management Act (PFMA) and shareholder corporate governance requirements, which gives DPE insight into financial statements and the business plans. However, the information that is available provides only high-level assessments, such as confirmation of the solvency of the company, but does not allow detailed efficiency assessments. Moreover, the DPE does not impose hard financial targets for returns or prices.

In terms of its shareholding responsibilities the DPE can question the business plans and even tariffs, but would require substantive grounds for real interrogation as this is in contrast to accepted corporate governance principles. Transnet, as a corporate entity, has a board that is tasked with overseeing the sustainability and profitability of the company, and in the current institutional framework the shareholder cannot take on the role of a regulator.

Moreover, as a restructuring agent, the DPE is more likely to pursue profitability targets than social indicators as its mandate in this regard is clearly focussed on turning the former parastatals into commercially viable entities.

However, the DPE has also undertaken steps to exert more influence over tariff decisions by Transnet divisions, for example by convening interdepartmental meetings (first one in March 2003), where all Transnet units are to present their annual tariff changes. According to government officials, these meetings are not meant to act as a formal approval of Transnet's tarrifs but are aimed at briefing the attendees regarding the tariffs that had been approved by the Transnet Board. In absence of a legal framework for tariff approval, these meetings could at best exert some pressure on Transnet towards more efficient prices, without any carrot or stick. In addition, the DPE is currently devising an improved benchmarking framework, using international examples for efficiency targets.

Separate from these initiatives by DPE officials, the Minister of Public Enterprises has expressed concern about the effect of administered price increases on inflation, after similar statements were made by Reserve Bank governor Tito Mboweni regarding the effect of rising administered prices such as electricity on SA's ability to meet its inflation targets.[65] The Minister is said to be considering including inflation target restraints on tariff increases in the protocols of state-owned enterprises.

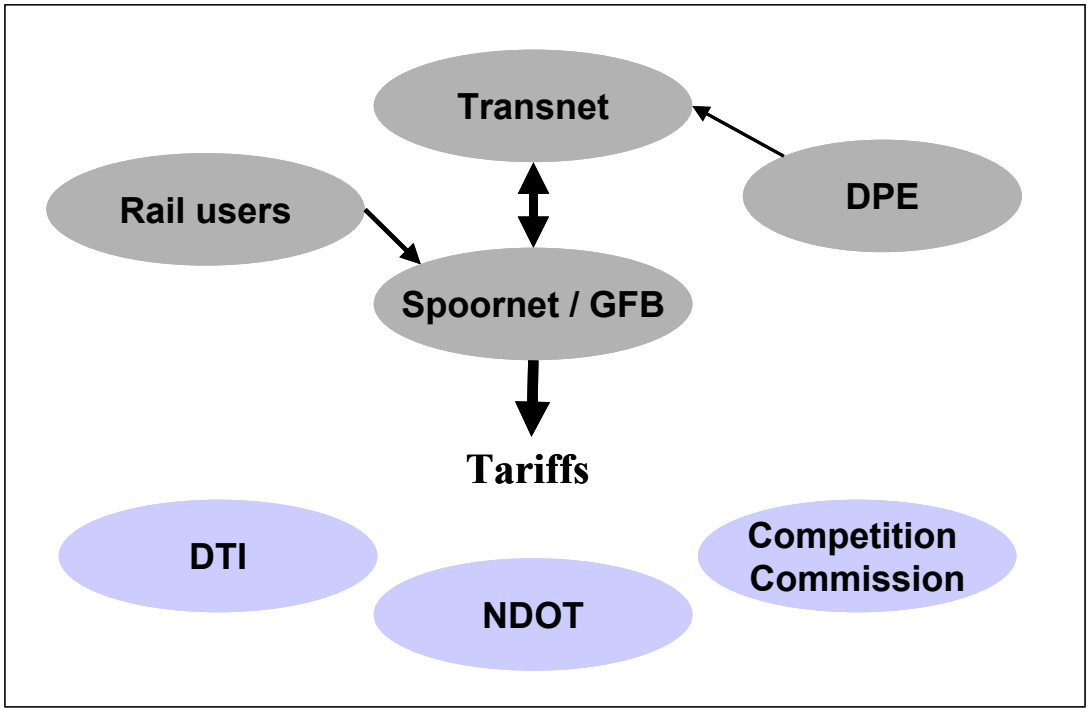
[65] Ensor, L (2003), State Considers Inflation Target Limits on Tariff Increases, Business Day (2003), 20 March.

Spoornet's interpretation of these moves by Department and the Minister of Public Enterprises appears to be rather ambiguous. Spoornet claims that it considers the presentation of tariffs to an intergovernmental meeting as a type of approval process, yet does not interpret the Minister's statements as an instruction to Spoornet to restrain tariffs.

The role of the NDOT is particularly limited in this process as the policy makers, have no mandate to engage in implementation processes such as investment and tariff determination. Likewise, the DTI, whose interests are aligned with exporters and manufacturing industries using the railways in general, has had very little influence but is increasingly engaged in the transport sector restructuring processes, where the importance of adequate rail freight capacity for downstream industries and international competitiveness is stressed. The Competition Commission has to date not been involved in any of Spoornet's pricing decisions.

Influential or organised consumers on the other hand, can have significant influence. As Spoornet tariffs are negotiable, organised consumers such as the grain council or other industry associations or individual large companies, apparently have considerable influence on the tariffs they face. If there is a dispute however, they can only complain to Transnet.

Figure 4: Pricing pressures: rail freight



Hence the following picture emerges. The influence of DPE on GFB tariffs is indirect and limited, notwithstanding its efforts to benchmark and statements made by the Minister of Public Enterprises. Rail users have some negotiating capital, but ultimately have no choice of substitutes and cannot take any tariff decision by Spoornet on review other than lodging a complaint with Transnet. The other Government Departments with a stakeholder perspective on Spoornet's tariffs, namely the DTI and NDOT, are largely irrelevant to the price determination

process. Lastly, the potential role of the Competition Commission remains untested, but this could change in the future.

6.8 Conclusions and preliminary recommendations - Rail

Despite the establishment of the SARCC as a monitoring agency, the price setting processes for commuter rail services are unlikely to result in efficient prices as both the SARCC and the DPE have limited influence on commuter rail fares and no coherent system of benchmarking or efficiency incentives exists. As a result, the influence of Transnet on Metrorail's tariffs is rather disproportionate, which is not adequately balanced by the SARCC, the NDOT, the DPE or the Competition Commission.

As an unregulated monopoly provider of commuter transport services, Metrorail should be subject to more rigorous economic regulation, encompassing fares, service quality, and investment decisions. The current price-setting framework performs none of these functions and tends to be more input than output oriented, with fares determined based on inadequate cost allocations systems devoid of efficiency incentives.

Similarly in tariff determination for long-distance rail passengers, Spoornet is the main influence on Shosholoza Meyl's tariffs, which apparently involves some affordability test. Whether this affordability test is based on simple monopoly pricing or on assessments of disposable income and price elasticities from a social perspective is unclear. Political pressure, or fear thereof, may well prove to be a more influential factor on Shosholoza Meyl tariffs. Either way, efficiency incentives are low and no systematic system for benchmarking or monitoring exists. The cross-subsidies from GFB and the other units of Spoornet, such as Orex and Coallink, denote that manufacturing industries in South Africa are essentially paying a non-transparent tax to finance long-distance rail passengers.

In the determination of rail freight tariffs, the DPE can only exert indirect and limited influence, notwithstanding its efforts to monitor Spoornet and statements made by the Minister of Public Enterprises. Rail users have some negotiating capital, but ultimately have no choice of substitutes and cannot take any tariff decision by Spoornet on review other than lodging a complaint with Transnet. The other Government Departments with a stakeholder perspective on Spoornet's tariffs, namely the DTI and NDOT, are largely irrelevant to the price determination process. The lack of regulatory control over rail freight prices is a cause for concern. Not only are the resultant tariffs unlikely to be efficient, certain issues, such as the under-investment in rail infrastructure will lead to significant negative externalities throughout the economy, and require urgent policy attention.

In its defence, Spoornet is expected to balance conflicting and largely undefined objectives. For instance the peak periods for Shosholoza Meyl are April and December, when there is insufficient network capacity to schedule the long-distance trains required, as well as the regular Orex and Coallink services. Spoornet has to consider whether or not to cancel politically sensitive long-distance passenger services or to cancel highly profitable services for economically important exporters, without a clear mandate.

In order to address the lack of efficiency in rail tariff determination, some form of regulatory oversight is required. Currently, no regulator exists, even the SARCC does not have a mandate for economic regulation. This could take the form of a

fully-fledged independent regulator or of economic regulation of Transnet by a Government Department, although this option is less desirable from a regulatory credibility and predictability point of view.[66] As it would be inappropriate to require that the shareholder is also the regulator, this should ideally not be the DPE.

In order for enhanced regulatory mechanisms to be put in place, a minimum requirement is the development of clear cost accounting mechanisms for Spoornet and Metrorail. This would help in eradicating opaque and discretionary cross subsidies as well as provide the means for rigorous efficiency monitoring.

The cross-subsidies should ideally be ended altogether, although a transparent and controlled mechanism would already be an improvement to the current situation. Eradication of cross subsidies requires institutional separation of Shosholoza Meyl from GFB and at a higher level, of Spoornet from Transnet. (Obviously a concurrent move to remove the NPA from Transnet is assumed). In this way, if revenues in a certain mode are found to be insufficient to cover operating and investment expenditure, a transparent transfer, fiscal or otherwise, could be considered in a framework of conscious subsidy targeting.

Different institutional options exist for the SARCC and Metrorail, e.g. Metrorail can remain in Transnet as a ring-fenced entity with an independent regulator; or the division could be moved out of Transnet altogether and operated as a state-owned entity subject to regulatory oversight. However, regulatory oversight with minimum standards for investment, safety and operational targets and maximum user charges will be required regardless of the institutional variant chosen.

The various restructuring proposals, although promising, do not contain a clear vision of the regulatory 'end-state' or of approaches to subsidy reform. Enhancing the regulatory control of the rail infrastructure and its pricing is of crucial importance to the reform of the transport sector and to moving prices closer to efficient levels.

[66] In the context of an alarming proliferation of regulatory bodies, budgetary constraints and lack of human capital, the option of a cross-modal transport regulator deserves further investigation.

7. CONCLUSIONS

Regulatory frameworks in the transport sector differ markedly from those prevalent in other network industries such as telecommunications and electricity. There is a strong emphasis on safety and standard regulation and a remarkable lack of economic regulation, such as price or revenue regulation and other controls commonly used in economic regulation. The sector is further characterised by state-ownership, limited private sector participation and the absence of independent regulators. As a result, the effective influence on prices by government is limited and prices are likely to contain monopolistic rents.

The most advanced form of economic regulation is found in the aviation sector where a dedicated, albeit part-time, regulatory body exists. A regulatory entity may also be established in the port sector, where a precarious disentanglement of the ports authority from its current owner Transnet is part of the State-Owned Enterprise restructuring process.

Regulatory framework

The 1990s witnessed the establishment of numerous commercial transport agencies such as the SARCC, ACSA, ATNS, and the NRA. In addition, the corporatisation and restructuring of Transnet led to the formation of business units within Transnet responsible for port operation, rail services etc. However, this commercialisation drive was not accompanied by the establishment of independent regulators or formalized reporting procedures to ensure policy implementation by these agencies.

The National Department of Transport has a surprisingly small mandate in terms of economic regulation, and, although responsible for policy, has limited direct control over policy implementation as there is no direct management of Transnet, which is monitored by the Department of Public Enterprises, and as its agencies are corporatised and commercialised entities, not part of its line management structure.

Implications for efficient prices

The transport sector in South Africa, even though largely corporatised and commercialised, thus remains largely unregulated in the economic sense. Policy approaches, despite overarching policy reviews such as Moving South Africa, remain fragmented with mode-specific strategies and a proliferation of single-modal implementation agencies, each with their own unique mandate and institutional relationship to a government department. No overarching structure currently exists to coordinate the various agencies involved in transport infrastructure, leading to lack of alignment in terms of provincial spending on transport infrastructure; institutional gaps; and a lack of coordination across transport modes. Moreover, there is no coherent framework for price determination, and monitoring of efficiency in the delivery of transport services is virtually non-existent.

The regulatory framework for each transport mode includes a complex web of overlapping and at times conflicting institutional roles without independent regulators or, even, formalised monitoring. Presumably retaining government ownership was expected to suffice to ensure desirable conduct by these agencies. However, establishing commercial entities that control vital transport infrastructure without ensuring proper economic regulation of these entities and without the introduction of competition, may have led to a situation less desirable than the

initial state of affairs, namely publicly-owned, yet unregulated monopolies, acting as private monopolies. When no or limited scope for competition exists, commercialisation of vital enabling infrastructure such as transport networks, should be accompanied by strict application of tariff controls, both in terms of level and structure, investment targets, and planning coordination, to ensure compliance with government objectives.

The lack of regulatory frameworks or independent regulators for port, passenger rail or rail freight services, combined with the continued existence of cross-subsidies and lack of separation between ownership and regulation, indicates that no formal or effective controls over the behaviour of the state-owned enterprises in terms of its pricing strategies have been established.

Cross-subsidisation

Inter-modal cross-subsidisation continues to exist, most evidently between ports and rail. As a direct impact, port charges are higher than they need be or investment expenditure is lower than it could be. However, the indirect impact of this policy choice is a tax on trade, reducing international competitiveness of South Africa's industries. A further exacerbating factor is that customers, for instance general rail freight customers, do not cover the full cost of the service, which is only made possible by under-investment, threatening the long-term sustainability of the rail, ports and road systems and distorting price signals[67]. The effects of under-investment in one mode are generally not isolated to that mode as under-investment causes negative externality effects in other modes. For instance, under-investment in rail infrastructure has led to increased industrial road use, leading to greater maintenance costs in the road network. Cross-subsidies and under-investment thus tend to have reverberating effects in all transport modes and even in other sectors and should be closely scrutinised and steps taken towards inter-modal rate rebalancing.

The cross-subsidy between ports and rail freight (both of which are operated by Transnet) has been defended on the basis that it will be costly to remedy, as there are debt issues such as the Transnet pension fund to deal with, and as this will require alternative (fiscal) subsidy arrangements. However, when evaluating these costs, it is helpful to analyse the counterfactual, namely what the actual costs incurred in the current situation are. In the present transport framework there is little analysis of the direct and indirect impacts of cross-subsidisation or of the combination of social and commercial objectives without adequate targets or controls. It is often implicitly assumed that the pursuance of social objectives by a state-owned enterprise is somehow 'free of charge', as it obviates the need for fiscal transfers. Without adequate controls and efficiency incentives however, these opaque cross-subsidies and dual mandates could be more costly to the economy as a whole than transparent transfers and open tenders for infrastructure upgrading and services provision.

Cross-subsidies should therefore be closely scrutinized and steps taken towards inter-modal rate rebalancing. Cross-subsidies are not per se taboo, but the current opaque process of inter-modal cross-subsidisation between ports and rail, determined by a commercial entity is highly undesirable. If such cross-subsidisation were deemed necessary, more efficient outcomes would be rendered by transparent solutions, directed and monitored by government. Once the

[67] Moving SA (1999), p.37, p.50.

subsidies are made explicit, greater attention can and will be paid to the effectiveness and appropriateness of these subsidies and to their targeting.

Closely related to the cross-subsidy problem is the fact that social objectives are not adequately defined or quantified in the transport sector. Moreover, there appears to be a persistent belief that by instructing SOEs to roll-out infrastructure or contain price increases for certain customers, this is somehow 'free of charge'. Unfortunately, this is far from the truth as in reality the social objectives are not only paid for by other users, they are also not subject to competitive tendering or other mechanisms that could contain their cost. In the main, the assumption that SOEs are benevolent extensions of the state is fallacious and leads to lax monitoring and insufficient economic analysis of the SOE's behaviour. Thus, a policy decision needs to be taken regarding the nature of Transnet, essentially deciding the balance between the profitability aspect and the utility aspect of Transnet, which then needs to be appropriately incentivised and adequately monitored.

The influences on prices in the aviation, ports and rail sectors are briefly summarised below.

Aviation

The economic regulation of infrastructure services pricing is the responsibility of the Regulating Committee. ACSA and ATNS both have exclusive control over the national aviation infrastructure, and their charges are thus regulated to prevent abuse of dominance. The Regulating Committee's mandate provides potential for conflict as it not only expects the regulator to balance commercial revenues (i.e. the incumbent's interests) with the potential for monopoly rents (i.e. the users/consumers' interests); but also imposes on the regulator the responsibility for financial viability of the regulated entity.

Although the regulatory framework for aviation infrastructure services is the most advanced and sophisticated of all modes of transport regulation, the scientific basis of the methodology is undermined by its less scientific implementation. The Regulating Committee lacks the skills and resources required for a rigorous price cap regime and continuous monitoring of efficiency improvements. The effectiveness of the regulatory methodology employed hinges on critical assumptions made regarding the rate of return, the rate base and risk assessments, which appear based on international practices, but do not take into account that the entities in question are public-owned entities for which private sector risk premiums may be inappropriate. Neither the lack of regulatory independence nor the shareholding role of the Minister of Transport adds to the Regulating Committee's regulatory credibility.

The strongest suggestion of inefficient resultant prices is given by the fact that the operating profit for ACSA proves to be the highest of all airports companies in a large international survey. Other suggestions of inefficient prices are provided by the persistent user complaints; combined with little resistance from the regulated entities and the high margins and profits realised by the companies.

The main lesson of this experience is that a state-of-the-art framework does not guarantee success. In particular, a regulator needs to have a clear and unambiguous mandate in order to pursue efficient prices. The regulator also needs to be provided with the tools to fulfil its mandate, in particular, it requires accurate data, sufficient resources and appropriate skills. Moreover, its mandate should

specify that efficient prices are of imperative importance as monopoly rent-seeking will occur.

Ports

The current institutional arrangements and frameworks in the port sector are unsatisfactory from a regulation point of view. As Transnet controls both the infrastructure (NPA) and operations (SAPO), this entity, and through its shareholding structure the state, is both player and referee. As there is some competition in operations (freight handling/terminal operation), the state competes with the private sector in service provision.

Despite its shareholding though, the control of government over the price-setting, investment decisions and other pertinent aspects of this critical infrastructure is limited and performed via the Department of Public Enterprises, which is tasked with the restructuring of Transnet to *inter alia* enhance its profitability. The cross-subsidisation of other business units that is largely funded by port revenues creates distortions and places an undue burden on importers and exporters.

The implications of flawed price-setting processes in port charges could be significant as excessive or inefficient port charges amount to a trade tax and tend to aggravate imported inflation in times of Rand weakening. In absence of transparent processes regarding cross-subsidies and government-sanctioned targeting of such subsidies, many price distortions are introduced into the transport system.

Traditional and formal regulatory controls are non-existent in the port context and the Department of Public Enterprises is therefore burdened with the thankless task of monitoring Transnet's performance, constrained both in terms of corporate governance options and in terms of its capacity to effectively monitor the performance of this sizeable organisation.

Thus it this appears that the South African economy is burdened with an public-owned, yet unregulated monopoly, whose incentive structure and behaviour is no different from a private monopoly. As a result, the discrepancy between efficient price levels and actual price levels is likely to be high and approaching full-scale monopolistic rents.

The proposed institutional changes to the regulatory framework should go some way in addressing some of these concerns, but at present will stop short from establishing a permanent independent regulator responsible for approving tariffs; regulating access; and ensuring sufficient investment takes place in ports infrastructure. As a minimum requirement for effective control of port prices, the cross subsidisation between the NPA and other Transnet units should be eliminated, i.e. the NPA should be physically separated from Transnet and a regulatory authority should be created with a clear mandate to provide efficiency incentives and to erode monopoly rents. The shortfall in other Transnet units, such as Spoornet, could then be covered by a transparent and monitored fiscal transfer, which would improve the efficacy of subsidies and would allow greater monitoring of loss-making entities.

Rail

Similarly for the railways, the lack of regulatory control over consumer prices is a cause for concern. The restructuring proposals, although promising, do not contain

a clear vision of the regulatory 'end-state' or of approaches to subsidy reform. Enhancing the regulator control of the rail infrastructure is of crucial importance to the reform of the overall transport sector.

Despite the establishment of the SARCC as a monitoring agency, the price setting processes for commuter rail services are unlikely to result in efficient prices as both the SARCC and the DPE have limited influence on commuter rail fares and no coherent system of benchmarking or efficiency incentives exists. As a result, the influence of Transnet on Metrorail's tariffs is rather disproportionate, which is not adequately balanced by the SARCC, the NDOT, the DPE or the Competition Commission.

As an unregulated monopoly provider of commuter transport services, Metrorail should be subject to more rigorous economic regulation, encompassing fares, service quality, and investment decisions. The current price-setting framework performs none of these functions and tends to be more input than output oriented, with fares determined based on inadequate cost allocations systems devoid of efficiency incentives.

Similarly in tariff determination for long-distance rail passengers, Spoornet is the main influence on Shosholoza Meyl's tariffs, which apparently involves some affordability test. Whether this affordability test is based on simple monopoly pricing or on assessments of disposable income and price elasticities from a social perspective is unclear. Political pressure, or fear thereof, may well prove to be a more influential factor on Shosholoza Meyl tariffs. Either way, efficiency incentives are low and no systematic system for benchmarking or monitoring exists. The cross-subsidies from GFB and the other units of Spoornet, such as Orex and Coallink, denote that manufacturing industries in South Africa are essentially paying an non-transparent tax to finance long-distance rail passengers.

In the determination of rail freight tariffs, the DPE can only exert indirect and limited influence, notwithstanding its efforts to monitor Spoornet and statements made by the Minister of Public Enterprises. Rail users have some negotiating capital, but ultimately have no choice of substitutes and cannot take any tariff decision by Spoornet on review other than lodging a complaint with Transnet. The other Government Departments with a stakeholder perspective on Spoornet's tariffs, namely the DTI and NDOT, are largely irrelevant to the price determination process. The lack of regulatory control over rail freight prices is a cause for concern. Not only are the resultant tariffs unlikely to be efficient, certain issues, such as the under-investment in rail infrastructure will lead to significant negative externalities throughout the economy, and require urgent policy attention.

In its defence, Spoornet is expected to balance conflicting and largely undefined objectives, and during peak periods has to decide whether or not to cancel politically sensitive long-distance passenger services or to cancel highly profitable services for economically important exporters, without a clear mandate.

In order to address the lack of efficiency in rail tariff determination, some form of regulatory oversight is required. Currently, no regulator exists, even the SARCC does not have a mandate for economic regulation. This could take the form of a fully-fledged independent regulator or of economic regulation of Transnet by a

Government Department, although this option is less desirable from a regulatory credibility and predictability point of view.[68]

In order for enhanced regulatory mechanisms to be put in place, a minimum requirement is the development of clear cost accounting mechanisms for Spoornet and Metrorail. This would help in eradicating opaque and discretionary cross subsidies as well as provide the means for rigorous efficiency monitoring.

The cross-subsidies should ideally be ended altogether, although a transparent and controlled mechanism would already be an improvement to the current situation. Eradication of cross subsidies requires institutional separation of Shosholoza Meyl from GFB and at a higher level, of Spoornet from Transnet. (Obviously a concurrent move to remove the NPA from Transnet is assumed). In this way, if revenues in a certain mode are found to be insufficient to cover operating and investment expenditure, a transparent transfer, fiscal or otherwise, could be considered in a framework of conscious subsidy targeting.

Different institutional options exist for the SARCC and Metrorail, although regulatory oversight with minimum standards for investment, safety and operational targets and maximum user charges will be required regardless of the institutional variant chosen. Enhancing the regulatory control of the rail infrastructure and its pricing is of crucial importance to the reform of the transport sector and to moving prices closer to efficient levels.

Preliminary recommendations

As the current policy developments and restructuring processes in various transport modes are carried forward, the need for greater economic regulation will mount. Such regulation will be required in the ports, where a commercialised entity controls the infrastructure, and in railways, where, depending on the status of the envisaged commuter rail entity, a commercial entity will control both the infrastructure and provide or concession services.

Institutional changes

The restructuring of Transnet raises several fundamental issues regarding the utility or enabling function of transport infrastructure; inter-modal cross-subsidies; and effective control of public-owned enterprises. Explicit economic regulation in terms of tariff levels and structures; access to the networks; and investment targets to ensure sufficient infrastructure maintenance and upgrading would assist in at least transforming the current opaque processes regarding these critical decisions into explicit policy choices.

Institutional changes to be considered include severing the links between the NPA, Spoornet/Metrorail and Transnet, or at least discontinuing the inter-modal cross-subsidy links that exist within Transnet. Different institutional options exist for the NPA, although permanent regulatory oversight with minimum standards for investment, safety and operational targets and maximum user charges will be required regardless of the institutional variant chosen.

[68] In the context of an alarming proliferation of regulatory bodies, budgetary constraints and lack of human capital, the option of a cross-modal transport regulator deserves further investigation.

If revenues in a certain mode are found to be insufficient to cover operating and investment expenditure, a transparent transfer, fiscal or otherwise, should be considered in a framework of conscious subsidy targeting.

The policy objectives of Transnet's overall profitability, monitored by the DPE, and competitive port charges and services, required by NDOT and many other government departments such as the Department of Trade and Industry, need to be clearly prioritised in this setting. A policy decision needs to be taken regarding the nature of Transnet, essentially deciding the balance between its profitability and utility aspects.

Improved economic regulation

Given the questions raised around the determination of the price cap in aviation and the general lack of economic regulation in the other transport modes under review, the need for improved regulatory approaches becomes resoundingly clear. The development of common principles in the approach to regulation in the transport sector should be at the foundation of this move towards greater regulatory coherence, taking sector specific needs and lessons from international experience into account.

Regulatory jurisdiction

In the context of an alarming proliferation of regulatory bodies, budgetary constraints and lack of human capital, the option of a cross-modal transport regulator deserves further investigation.

Furthermore, it is of critical importance that the concurrency of jurisdiction between the competition authorities and the transport regulator(s) is solved satisfactorily, either through the conclusion of memoranda of understanding, but preferably by clarification of the legal status of appeals on decisions by regulatory bodies. In addition, enhancing the ability of the competition authorities to handle anti-competitive practices in the regulated industries is advisable.

Reform and competition

This brings to the fore a fundamental point in restructuring of SOEs and regulation of network industries. Generally speaking, the introduction of competition has been given limited attention in the transport sector reform processes. Limited scope for competition actually increases the regulatory burden and exacerbates capacity problems rather than circumventing them. The current debate regarding port restructuring is promising in this regard, and serves to underline the urgent need for efficient regulatory structures to be put in place in the transport sector.

8. REFERENCES

8.1 Bibliography

ACSA (2002), *Audited Results for the Year Ended 31 March 2002*, available: www.acsa.co.za, accessed 19 July 2003.

ATNS (2002), *Presentation to the Civil Aviation Authority and ATNS Executive teams*, 27 November 2002.

Chalmers, R (2002), *Aeronautical charges in SA are astronomical; Airlines Association accuses ACSA of excessive pricing*, Business Day, August 26, available www.bday.co.za, accessed 7 May 2003.

Chalmers, R & Ensor, L (2003), *Timing of authority's separation from Transnet is crucial*, Business Day, 11 March, available www.bday.co.za, accessed 7 May 2003.

DPE (2003), *National Ports Authority Bill*, available: www.gov.za, accessed 20 May 2003.

Ensor, L (2003), *State Considers Inflation Target Limits on Tariff Increases*, Business Day (2003), 20 March, available www.bday.co.za, accessed 7 May 2003.

NDOT (1993), *Airports Company Act 1993*, available: www.gov.za, accessed 14 May 2003.

NDOT (1996), *White Paper 0n National Transport Policy*, 20 August 1996, available: http://www.gov.za, accessed 3 May 2003.

NDOT (1999), *Moving South Africa: A Transport Strategy for 2020; Report and Strategy Recommendations*, available: http://www.transport.gov.za/projects/msa, accessed 3 May 2003.

NDOT (2001), *'Draft Regulations to govern the proceedings of the Regulating Committee of the Airports Company of South Africa and the Air Traffic and Navigation Services Company'*, available: www.gov.za, accessed 3 May 2003.

NDOT (2002a), *Road Infrastructure Strategic Framework for South Africa; A Discussion Document*, available: http://www.transport.gov.za, accessed 18 Apr. 03

NDOT (2002b), *White Paper on National Commercial Ports Policy*, available: http://www.transport.gov.za, accessed 8 May 03

Regulating Committee (2000), *The 2001/2-2005/6 Airports Company of South Africa Regulating Committee Permission to Levy Airport Charges*, Government Gazette, Vol. 427, No. 21980, 19 January 2000, Notice 155 of 2001.

Regulating Committee (2000), *The 2001/2-2005/6 Air Traffic and Navigation Services (ATNS) Company Permission to Levy Air Traffic Service Charges*,

Government Gazette, Vol. 427, No. 21980, 19 January 2000, Notice 157 of 2001.

Regulating Committee (2001), *Regulations to Govern the Proceedings of the Regulating Committee of the Airports Company of South Africa and the Air Traffic and Navigation Services Company - Draft*, Government Gazette, 24 August, Notice 1894.

Transnet (2002), *Annual Report 2002*, available: www.transnet.co.za, accessed 21 April 21, 2003.

Transport Research Laboratory, *Airport Performance Indicators 2002.*

Van Der Walt (2002), Dries, *Background to Commuter Rail Transport,* SARCC internal document.

Van Der Walt, Dries (2002), *Regulatory Requirements and Considerations: Rail Commuter Services,* SARCC internal document.

Vermooten, Joachim, *Address on Regulatory Barriers in Air Transport*, presentation TIPS Conference on Privatisation, Competition and Regulation in South Africa, 24-25 February 2003.

Websites

ACSA: www.airports.co.za

ATNS: www.atns.co.za

Airports Council International: www.airports.org

Business Day: www.bday.co.za

International Airline Trade Association: www.iata.co.za

NDOT: www.transport.gov.za

SANRAL (NRA): www.nra.co.za

Transnet: www.transnet.co.za

8.2 Interviews

Thanks to following individuals and their organisations for granting interviews and for giving so generously of their time.

	Name	Designation	Department
1	Mr. Richard Goode	Chief Director: Transport (Restructuring)	Department of Public Enterprises
2	Ms. Khibi Manana	General Manager: Passenger Transport Policy	National Department of Transport (NDOT)
3	Mr. Mawethu Vilana	Manager: Freight Transport Policy	NDOT
4	Ms. Grace Senyatsi	Manager: Economic Analysis	NDOT
5	Mr. Andrew Maswangamye	Manager Aviation and Maritime Policy	NDOT
6	Ms. Wrenelle Stander	General Manager – Business Development	ATNS
7	Mr. Ulrich Joubert	Group Economist, Economic Services	Transnet
8	Mr. Frik Nolte	Senior Manager: Policy & Research	National Ports Authority of South Africa (NPA)
9	Mr. Nico Walters	Executive Manager: Trade and Logistics	NPA
10	Mr Siyabonga Gama	CEO	NPA
11	Mr Sipho Khumalo	Deputy Director-General	NDOT
12	Mr. Joachim Vermooten	Aviation expert	Chairman Rentsure Holdings Limited
13	Prof. Mebard Rwelamira	Director General	NDOT
14	Mr. Riad Kahn	Deputy Director Transport Restructuring	Department of Public Enterprises
15	Mr. Mohamed Sizwe	Chairperson	Aviation Regulating Committee
16	Mr. John Morrison	CEO	Airlines Association of South Africa
17	Mr. Dries vd Walt	General Manager	South African Rail Commuter Corporation
18	Ms. Cynthia Ndaba	Executive Manager Strategic Market and Planning	Spoornet
19	Mr. Geoff Parr	Chief Economist	Competition Commission