



**CCRED**

**Centre for Competition,  
Regulation and Economic  
Development**

## **Review of regulation in the Ports Sector**

**By Trade and Industrial Policy Strategies (TIPS)**



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## Abbreviations and Acronyms

Australian Competition and Consumer Commission (ACCC)  
Cost, Performance, Value (CPV)  
Darwin Port Corporation (DPC)  
Department of Transport (DoT)  
Depreciated Optimised Replacement Cost (DORC)  
Essential Services Commission (ESC)  
Excessive Tariff Increase Margin Credit (ETIMC)  
Fund for Research into Industrial Development, Growth & Equity (FRIDGE)  
Industrial Development Zone (IDZs)  
Industrial Policy Action Plan (IPAP)  
Key Performance Indicators (KPIs)  
Long-run marginal cost pricing (LRMC)  
Marine Services Act (MSA)  
Market risk premium (MRP)  
National Association of Automobile Manufacturers of South Africa (NAAMSA)  
National Commercial Ports Policy (NCP)  
National Ports Authority (NPA)  
Office of the Regulator General (ORG)  
Port Consultative Committees (PCCs)  
Port of Melbourne Corporation (PoMC)  
Ports and Maritime Administration Act (PMAA)  
Private Ports and Terminals Association (PPTA)  
Queensland Competition Authority (QCA)  
Regulator's Record of Decision (RODs)  
Regulatory Asset Base (RAB)  
Return on capital employed (ROCE)  
Short-run marginal cost pricing (SRMC)  
South African Maritime Safety Authority (SAMSA)  
Statement of Corporate Intent (SCI)  
Tariff Authority for Major Ports (TAMP)  
The competition and Infrastructure Reform Agreement (CIRA)  
Transnet National Ports Authority (TNPA)  
Transnet Port Terminal (TPT)  
United Nations Conference on Trade and Development (UNCTAD)  
Very Large Carriers (VLCCs)  
Victoria Channel Authority (VCA)  
Weighted average cost of capital (WACC)  
Wholesale Price Index (WPI)

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## 1. Executive Summary

The South African economy has eight commercial ports: Cape Town, Durban, East London, Mossel Bay, Ngqura, Port Elizabeth, Richard Bay and Saldanha Bay; with four (*Durban, Cape Town, Port Elizabeth and East London*) operating as multi-purpose ports, two as predominantly bulk ports (*Saldanha and Richards Bay*) and one (*Mossel Bay*) as a fishing port which also supplies the offshore oil & gas industry. The port of *Ngqura* is a relatively new port and handles both unitised cargo and break-bulk cargo, with plans for it to handle bulk cargo.

South Africa's trade with the rest of the world is primarily through its ports, and it is estimated that approximately 96% of South Africa's exports (by volume) are by sea<sup>1</sup>. The competitiveness of the country's ports therefore has a direct bearing on the competitiveness of its industry and minerals exports. Ports are also important in terms of job creation, which is a priority area for the South African government.

The market and competition dynamics in and between South African Ports are fairly limited and the table below highlights that the ports infrastructure is 100% state owned through Transnet National Ports Authority (TNPA) and the overwhelming majority of port operations are run by Transnet Port Terminal (TPT).

Given its geographical location and size, the growth of the South African economy would be severely constrained without the necessary ports infrastructure in place, however, the efficiency of that infrastructure and pricing to use the infrastructure are of critical importance. Skewed pricing and high tariffs of South African ports have been raised as a concern in recent government economic policy documents.

The differences exist in port size, depth, capacity, infrastructure and volumes passing through; type of cargo / commodities that are handled; and proximity to markets, amongst other things. Yet the tariff structure is largely standardised<sup>2</sup>, which does not incentivise users to make use of less busy ports and results in minimal competition between the ports. Ports in relatively close proximity also compete relatively little in terms of cargo / commodities that are handled by the port.

The Ports Regulator noted in its Annual Report of 2011/12 that they performed a global comparison with different jurisdictions around the globe on economic regulation in ports and their finding was that there is no standard approach<sup>3</sup>. The unique nature of the South African ports system stems from the different evolution pattern that the country followed and the continued strong presence of the state in the ports sector during a period when many countries either privatised their ports, introduced private competition into the ports or facilitated state owned ports companies to become internationally competitive.

Over the past few years the focus of South Africa's ports has shifted: Between 1994 and 2002 the model was largely that of a public sector service port. Although there were some private

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<sup>1</sup> South Africa: investor's Handbook 2011/2012

<sup>2</sup> There are a few differences between ports e.g in dry dock charges

<sup>3</sup> Ports Regulator of South Africa 2012:7

terminals most of the infrastructure and services were provided by a single public sector entity owned by Transnet. Then in 2002 South Africa followed many other countries in separating port infrastructure from port services, creating two separate bodies within Transnet. However, the lack of alignment between the industrial policy imperatives of the government and the financial and other imperatives driving Transnet became apparent as the institution drove a strategy to strengthen its balance sheet.

The monopoly in the ownership of South African ports by Transnet National Ports Authority has been argued to create a situation where the port charges in South Africa are higher than international tariffs, the efficiency levels are lower, the services provided by the ports authority are not up to international standards and the prices charged at the different ports within South Africa are fairly uniform despite the different locations and features of the ports.

There have been attempts since the dawn of democracy in South Africa to address this challenge through the restructuring of Transnet's balance sheet, the development of a vision for the sector, the introduction of new legislation that put forward institutional realignment and the establishment of a Ports Regulator.

Left to itself and in the absence of an economic regulator over the ports sector (i.e. prior to 2009 when the Regulator was established) as well as lack of competition within / between South Africa's ports there was little incentive to improve the productivity levels in the ports, maintain the infrastructure to the required standards, invest in sufficient additional infrastructure or update the technology used in the ports. A further outcome of the 'self – regulation' approach was the pricing of tariffs that were not in line with major ports around the world.

At the heart of the matter was the conflict of interest between Transnet owning both the landlord company (NPA) and the company that is the main user of the ports (TPT). That conflict, linked to the approach of Transnet to use the excess profit generated by the ports operation to subsidise other operations in the group led to underinvestment in Port infrastructure.

Following a broad consultative approach, the National Commercial Ports Policy (NCP) was Gazetted in August 2002. The Policy laid out the framework for the role of the different players in the ports sector, the challenges that needed to be addressed and the approach to regulation. The important role that ports play in broader economic development was clearly articulated in the document and was a bold attempt to bring coherence between industrial development and the ports sector. The NCP recognised that: *“The basis for pursuing a national commercial ports policy is the recognition that trade, distribution, transport and logistics are among the most vital facets of the South Africa economy and should play a crucial role in the realisation of sustainable economic development.”* and that *“Ports are integrated and crucial nodal points in a transport system, and play a strategic role in the country's economic growth and social development.”* (NCP 2002:7).

To achieve this coherence the NCP saw as critical the need to *“establish appropriate institutional arrangements and legislation to support the governance of ports”* (IBID: 9). What had become clear to the new democratic government was that State monopoly ownership of South African ports and ports enterprises through State Owned Entity Transnet had not

created an environment conducive to stimulating much needed economic development and had not obviated the need to ensure that the Ports were regulated. Similarly the Department of Transport's National Freight Logistics Strategy (approved by Cabinet in September 2005), which maps out the way forward for the transport sector, notes that the regulatory environment in the transport sector is fragmented and the existence of unregulated monopolies results in inefficient outcomes.

The NCPP put forward the following guiding principles of the new port dispensation, the features of which were embodied in the 2005 National Ports Act:

- The current National Ports Authority within Transnet will be positioned outside Transnet in accordance with the restructuring programme of Transnet;
- The National Ports Authority post Transnet would be established as a new State-owned corporate entity;
- The 'National Ports Authority' would be the landlord of the South African ports and will own all the land and the port infrastructures within the port estates;
- Greater private sector involvement in operations would be sought through leases and concessions;

The ensuing legislation and regulations governing the South African ports sector recognised the negative impact of the institutional arrangements that were in place and made provision for these arrangements to be changed in line with the above guiding principles. The objective of separating out the National Ports Authority (NPA)<sup>4</sup> from the rest of the group and for the NPA to become the regulator of companies providing port services, was to ensure that the ports operate in the best interests of the country in line with the mandate spelt out in the legislative framework rather than the narrow interests of the Transnet Group. NPA would then report directly to the Department of Public Enterprises.

The policy framework in the NCPP covered the roles of the different institutions involved in the governance of the sector; including the Department of Public Enterprises, Department of Transport and National Ports Authority. The policy makers at the time recognised that such institutional realignment was complex and there were massive financial implications for the Transnet Group in separating out one of their most lucrative businesses with billions of Rands in assets from the group. Consequently they proposed the establishment of the National Ports Regulator as an interim measure until the separation could take place; with this institution seen as playing an important part of the broader governance and regulatory issues in the sector:

The National Ports Act (2005) provided the legal basis for the establishment of the Ports Regulator. The Act is clear on the need for the regulator to manage more than the pricing and to look at other factors such as service, quality, responsiveness and access. The role of the regulator would be to either ensure that if the monopoly remains it does not behave in a way that negatively impacts on industry and South Africa's broader economic development

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<sup>4</sup> The document uses both Transnet National Ports Authority (TNPA) and National Ports Authority (NPA); these refer to the same company; the company name at present is Transnet National Ports Authority (TNPA) however the Ports Act refers to it as the National Ports Authority in anticipation of it being separated out of the Transnet Group.

objectives. The establishment of an effective regulator would also provide the scope for the introduction of competition into the ports system.

Addressing the high tariffs and the introduction of more competition into the ports sector was seen as the remit for the proposed independent National Ports Authority, it was intended to create an environment where “*Government will allow for a more competitive environment to ensure that efficiency is achieved in the port operations*” (National Commercial Ports Policy 2002:14). While the regulator in its interim capacity needs to consider competition issues, it was stated in the National Ports Act that the Ports Regulator should work closely with the competition authorities on matters that fall within the Competition Act. Limited competition however remains an issue in the South African ports sector.

The National Ports Act limits the role of the regulator to only regulate the NPA and not companies providing port services. However port services account for a relatively high proportion of the costs of moving cargo through South African ports.

The part time members of the Regulator were appointed in the 2007/8 financial year. They were given the mandate of establishing the secretariat and appointing contract staff. The Port Regulator secretariat was only able to start its operations in 2009 and permanent staff were only appointed from the 2011/12 financial year. Due to a variety of factors including the limited staffing and the high port charges, the main focus of the work of the regulator has been on addressing tariffs charged by the NPA. As the Regulator has established itself, so it has made an increasing impact on tariff pricing. The approach taken by the regulator was in the initial years to limit the tariff increases; however the 2013 tariff decision saw a significant reduction in key tariff lines.

The policy is clear in stating that the National Ports Authority will not be engaged in port operations and that as owner of the land, it should ensure that licensees and concessionaires provide adequate, efficient and affordable terminal operations and port services to all port users. Both the policy and legislation unequivocally state that the National Ports Authority should be established outside of Transnet as a separate state owned enterprise. Regulation needs to cover port services as well as infrastructure, and because Transnet owns both the ports authority (TNPA) and major provider of port services (TPT) there is a major conflict of interest in allowing TNPA to regulate TPT, and to restrict access to TPT’s competitors.

By 2013 that separation had not taken place and there have been calls in some quarters for that aspect of the policy to be revisited – arguing that the contribution of TNPA to the balance sheet of Transnet is critical for the financial stability of the group, and that the cross subsidy between the ports and other sections of Transnet operations should be allowed to continue. Reversal of the decision to separate the National Ports Authority from Transnet would have implications for the institutional framework that has been envisaged for the port sector, including the introduction of private sector competition and the ongoing conflict of interest; should this transpire the role of the regulator would therefore need to change - and it would in all likelihood need to be strengthened to provide greater oversight over TNPA.

The regulatory performance of the ports sector needs to consider the different players involved in the ports sector, and not just the Ports Regulator: these other players include, the



Department of Transport, the Department of Public Enterprises, the National Ports Authority, and the South African Maritime Safety Authority (SAMSA).

The Ports Regulator has recognised that it has not been able to take forward all of these areas of work, and the 2012 Port Regulators Strategic Plan identified a number of challenges, including:

- Failure to separate TNPA from Transnet
- Establishment of a Single Economic Regulator
- Ambiguous policy environment: the level of port capacity required to support the South African economy; whether to increase capacity through squeezing assets or building new ones
- Inert stakeholders: tariffs (unstructured, self interested responses); complaints that are never formalised for fear of victimisation
- Global financial crisis: increased risks of industrial restructuring; lack of expansionary space for regulatory intervention
- Lack of resources; regulator operating at 45% of full strength.

Ports pricing is often a complex and opaque matter that results in debates about cross-subsidies, captive markets and abuse of monopoly power. Pricing of port infrastructure and services should be proportional to the costs incurred, including the cost of cargo handling and marine services and the time for which the infrastructure is used.

Bennathan & Walters (1979) theorised that although ports may be operated under different conditions there are two distinctive doctrines or approaches: the European doctrine and the Anglo-Saxon doctrine. Since then a third “Asian” doctrine has also appeared in the literature. The different doctrines reflect how governments utilise the port system as an instrument of their approach to industrial policy; and define the relationship of ports, port tariffs and port developments / investments to the broader economy.

According to a report on Strategic Port Pricing by the United Nations Conference on Trade and Development (UNCTAD) in 1995<sup>5</sup>, ports tariffs/pricing methods can be divided into three groups; costs based tariffs, performance based tariffs and value based tariffs. This Cost, Performance, Value (CPV) can be seen as an approach where all three issues converge on a tariff structure which best satisfies the port’s multiple objectives within the constraints imposed by its financing requirements and the external competitive environment.

The port pricing formula should be designed to be consistent with the objectives of the ports, which may be economic development, financial, marketing or operational. However existing port pricing formulas suffer from trying to satisfy different conflicting objectives. Economists, governments, port users and port authorities all have different views on what constitutes an efficient port tariff.

South Africa’s port charges have been said to be among the most expensive in the world, and if correct this would undermine the government’s strategy to promote growth of the manufacturing sector and the export of manufactured goods. Because of this widely held view

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<sup>5</sup> Strategic Port Pricing; UNCTAD Secretariat, Feb 1995.

on the high tariff structure of the South African Ports, the Ports Regulator undertook a tariff benchmarking exercise.

While there are methodological challenges with benchmark studies in the ports sector, the tariff comparison research conducted by the Ports Regulator in April 2012 revealed that the total general cargo tariffs at the Ports of Durban and Cape Town were high by world standards. Similarly the automotive cargo tariffs were above comparator ports. The *Global Port Pricing Comparator Study* undertaken by the Ports Regulator found that TNPA charges US\$275,000 for an average vessel, a price significantly more than the global average of US\$150,000. The average cost<sup>6</sup> per vessel call in Durban and Cape Town were higher than US\$450,000 compared to less than US\$200,000 for Singapore. The study looked at specific sectors and found that the tariff for export of primary commodities mainly coal and iron ore were below the global average, while the tariff on containers and automotive are significantly higher than the average.

The study confirmed the view that South African ports are expensive. High port prices coupled with inefficiency are seen as factors that are contributing to rising cost of doing business in South Africa. The Regulator noted that the findings of the study *“provides a reason to assess and shift port pricing in a direction that better reflects the global reality and actually aligns with South African economic structure, economic policy, industrial policy and economic development policy.”* (National Ports Regulator 2012:11)

The study coupled with the subsequent tariff decision represented a concerted effort to reduce South African tariffs in order to stimulate economic development by bringing South African tariffs more into line with those at other ports.

During the period of 2005-2008, TNPA maintained port charges adjustment below the inflation rate, with 2009 seeing an increased rate. However, since the establishment of the Ports Regulator there has been a large difference between the tariff increases applied for and those approved. In 2010 the tariff applied for was 10,6% and the Ports Regulator approved tariff increase was 4.42 %, slightly above the country's inflation rate of 4.30%. In 2011, TNPA applied for an 11.91% tariff increase, the Regulator approved 4.49%, also slightly below the country's inflation rate of 5.0%. In 2012, TNPA applied for an increase of 18.06%, which was above the country's inflation rate of 5.50% and the Regulator approved an increase of 2.76%. However the largest challenge to the tariff structure was in 2013, where the TNPA applied for a 5.40% increase for the period of April 2013 to March 2014, the Regulator declined the proposed tariff increase and decreased the tariff on cargo dues in certain areas: (container full export cargo dues reduced by 43.2%; container full imported cargo dues reduced by 14.3%; and motor vehicles exported on own wheel (Ro-Ro) cargo dues reduced by 21.1%).

The competitive pricing of South Africa's port tariffs have an impact on export competitiveness of manufacturing export sectors, including the automotive sector. The National Ports Regulator, as part of its tariff comparator study undertook a specific study on the automotive sector. The study notes the different tariff categories and compares the Port of Durban (as

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<sup>6</sup> The report methodology notes that “The most appropriate comparator base for port pricing comparisons, in our opinion, is a standardised vessel call. This vessel call has a standard vessel, standard port stay duration and a standard cargo profile.” (Port Regulator 2012:1)

one of the main automotive export ports) with 16 other ports. The findings put Durban on the upper end of the cost spectrum (before rebates and discounts); however even after taking those factors into consideration it remains significantly above the average.

The high port tariffs have been raised as a concern by the National Association of Automobile Manufacturers of South Africa (NAAMSA)<sup>7</sup>. The Port Regulator and NAAMSA have been engaging with each other as part of the Regulator's industry engagement process, and submissions were made to the regulator by NAAMSA on the need to lower the port tariffs to support the long term sustainability of this key manufacturing sector. The automotive sector contributes between 12% - 15% to South Africa's manufacturing industry output and 6% to the country's GDP.<sup>8</sup>

NAAMSA's argument is that a reduction in automotive manufacturing sector's port charges would directly improve the export competitiveness of the automotive industry. Improved competitiveness would result in increased exports as well as the opportunity to secure contracts from within the global operations of their members. Ultimately they argue that the improved port tariffs would contribute to the economic development objectives of the country to create jobs and increase investment.

As noted above the Port Regulator has played a role in significantly reducing the automotive tariff charges in the tariff book adjustments for the tariff year 2013/14; with Motor vehicles exported on own wheel (Ro-Ro) cargo dues reduced by 21.1%. The industry however note that there is still scope to reduce these charges further over time to bring the port charges closer to international pricing.

Since 2009 TNPA has been required to apply for approval of tariff adjustment by the Port Regulator. The process is for the Port Regulator to call for stakeholders' submissions and comments on TNPA's proposed port tariff application. The Port Regulator then assesses TNPA's proposal and stakeholders' submissions in line with the National Ports Act 12 of 2005, National Commercial Port Policy (NCP) of 2002 and 2007 Department of Transport Regulations to make a decision on the port tariff application. TNPA uses the Revenue Requirement (RR) method to calculate its proposed tariff increase. This method ultimately entails that port users pay for all port investments and all ports operating costs, whilst allowing TNPA to make an agreed rate of return on its assets. The stakeholders argue that the tariff methodology does not provide any incentive for TNPA to reduce costs or improve efficiency, as it guarantees TNPA full cost recovery and profit, even though some of the cost items may be higher than is necessary due to inefficiencies.

The percentage tariff increase allowed by the Regulator each year has been calculated by:

- Estimating the Revenue Requirement that will enable TNPA to make a specified rate of return on its regulatory asset base, whilst covering its operating, depreciation and finance costs, and nominal tax payments. The formula includes a claw back provision to correct for differences between actual and forecast outcomes in previous tariff periods, and a

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<sup>7</sup> NAAMSA is an industry association that represents 22 Automotive Manufacturing Companies

<sup>8</sup> South African Yearbook 2012

mechanism for smoothing out future tariff increases caused by spikes in capital expenditure (the Excessive Tariff Increase Margin Credit or ETIMC) ;

- Deducting the revenues obtained from real estate (unregulated) to obtain the revenue requirement for TNPA's marine businesses (regulated);
- Estimating the marine business revenue that would be obtained for the tariff year in question with no tariff increase but allowing for TNPA's forecast increase in traffic;
- Dividing the revenue requirement by the forecast revenues with no increase in tariffs to obtain the required percentage increase in tariffs.

The Revenue Requirement Methodology formula is as follows<sup>9</sup>:

$$\begin{aligned} \text{Revenue Requirement (RR)} &= [\text{Cost of Capital} \times \text{Regulatory Base (RAB)}] + \text{Operation Cost} \\ &+ \text{Taxation Expense} - \text{Claw Back} \\ &- \text{Financial Requirement Costs Previous Year} \times (1 \\ &+ \text{Cost of Capital previous year} \\ &+ (-)\text{Excessive Tariff Increase Marginal Credit (ETIMC)} \end{aligned}$$

South African ports tariffs have a number of imbalances which include high level of cargo dues, and large differences in the levels of cargo dues between different cargo types and commodities for which there is no clear justification. Cost-based maritime services tariffs are relatively low resulting in cross-subsidisation of some services and low revenue collection compared to international landlord port authorities. The question facing the Ports Regulator and TNPA is whether a robust methodology, based on a clear set of principles and rules, would result in improved tariffs while still maintaining the sustainability of TNPA – and how to effectively and transparently implement that methodology.

Tariff regulation in the ports sector has been in place for only four years (from FY 2010/11) and is still evolving. One of the first tasks of the Regulator has been to reach agreement with TNPA on a common methodology for determining the overall level of tariffs, as under the 2005 Ports Act there is no requirement for TNPA and the Ports Regulator to use the same methodology for proposing and approving tariffs.

The focus in tariff regulation has so far been on the calculation of TNPA's overall Revenue Requirement. This has been converted into "across the board" tariff increases, with the structure of tariffs remaining largely unchanged until the most recent review, when the Regulator reduced cargo dues for container imports and exports and automotive exports by large and unexplained amounts.

It is recognised by both TNPA and the Regulator that the existing tariff structure does not reflect government economic policy objectives. In addition, there is no correspondence between costs and revenues at a disaggregated level i.e. for different commodities or types of cargo, or even for individual facilities and services.

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<sup>9</sup> Each element of the formula is discussed in detail in the paper.

To overcome this problem, TNPA is in the process of developing a new pricing strategy which will be used to divide up the agreed Revenue Requirement between different categories of user. An outline of the strategy has been published for consultation purposes, but approval of the general principles is not expected until March 2014. Further work will then be undertaken by TNPA to develop detailed proposals for individual tariff items which can be submitted to the Regulator for approval. The target is to have the new tariff structure in place by 2015/16.

The proposed new pricing strategy is aimed at enabling the on-going investments in the maintenance and extension of the South African ports system, and ensuring effective cost recovery across all national ports. TNPA argues that the pricing strategy will address the requirements of the Government's policy direction, as well as concerns communicated to TNPA by stakeholders. The Port Regulator has proposed that an alternative and independent asset valuation be undertaken as the basis of a cost recovery model for the pricing strategy. This would provide a better basis for establishing the overall revenue requirement to be recovered from users, but would make a very limited contribution to the restructuring of tariffs to support the economic development strategies being promoted by the government.

The following principles have been proposed for the new pricing strategy;

- Is based on defensible asset allocation principles.
- Applies the user pays and the cost recovery principles to ensure port users contribute to the Required Revenue.
- Allows future tariff adjustments to be based on changes in Required Revenues by port user group.
- Charges shipping lines for the costs of marine services and for maintenance of common wet infrastructure.
- Improves alignment to the financial structure of a landlord port (with higher real estate revenues).
- Results in a considerable drop in cargo dues for manufacturing industry, particularly for containers and the automotive sector.
- Supports the South African economic objective of encouraging the export of beneficiated goods.

An important change that is likely to be made to the structure of regulated tariffs is the introduction of lower tariffs for exports produced through the beneficiation of South Africa's natural resources. This is in line with **the dti** policy objective of increasing local value added.

The rebates are directly related to the local value added included in their manufacture. For example TNPA's beneficiation proposals for the metals sector are that iron ore, a raw material, would receive no rebate, whilst pig iron would receive a 10% discount, rolled steel and pipes a 60% discount, and structural steel, machinery and white goods an 80% discount.

One of the features of the ports system in South Africa is the limited competition. The primary distinctions when analysing port competition are between:

- Inter-port and intra-port competition;
- Common user facilities and captive user facilities;
- Competition in the market and competition for the market.

Inter-port competition occurs between ports, whereas intra-port competition is mainly between operators of similar types of terminals or providers of similar types of services within the same port. South Africa has very limited exposure to either type of competition, and this is one of the reasons why port charges have remained so high. For a number of reasons inter-port competition is very limited in South Africa: including that TNPA is the only legally-permitted developer of ports in South Africa, manages the South African ports system as a single entity, and has a tariff structure which – for equity reasons – is broadly similar at all ports.

Unlike many other countries, South Africa has not yet liberalised its ports sector, and this is a serious impediment to inter-port competition. At the same time, it does not achieve the full benefits of centralised planning because of weak policy guidance from DOT/DPE on the government's economic strategy and its requirement for supporting port facilities.

Intra-port competition is equally limited for reasons including TNPA's sister company TPT still has a dominance over certain sub-sectors of the cargo handling market and most terminals are highly specialised (except in a few areas such as dry bulks, traffic volumes at individual ports are insufficient to support more than one terminal of any particular type, creating a string of natural monopolies).

There is scope for an increase in competition in some areas of the ports system, of which container handling is probably the most important. It is however not clear whether the government wishes to increase competition in the ports sector, and whether the benefits would be large enough to justify the potential disruption from strikes and the financial weakening of Transnet. Some countries, of which Singapore and Dubai are the most obvious examples, have chosen not to introduce competition, and aim to achieve similar outcomes through a mixture of shareholder pressure and regulation. This option is also available for South Africa. Whether or not to pursue an increase in competition is an important government policy decision which will have an impact on the role of the Ports Regulator.

In conclusion, despite the challenges facing the regulatory bodies and within the policy environment, the Port Regulator has taken a relatively short period of time to develop its methodology and effectively challenge the tariffs of TNPA. The Ports Regulator has recently been effective in bringing down selected tariffs however the implication of less profitability of the National Ports Authority will result in less income for the Transnet Group, and because of the cross subsidy in place may have implications on their capital expansion programme, most notably in the area of railroads.

It is clear that there is a need for better co-ordination across the two government departments (DoT and DPE) that are involved in the ports sector. While the two departments would most certainly have regular interaction at a broad policy level, it is not clear how they ensure effective outcomes to drive the growth and development of the ports sector.

Although it is a key feature of the National Port Act, the separation of TNPA out of Transnet has not been implemented. The challenge from a regulatory perspective is that an autonomous National Ports Authority would be better able to manage the pricing and service levels of ports operators – including TPT.

The large differences between the tariff increases applied for and the tariff increases approved have arisen in part because of differences of opinion as to how individual items in the formula should be valued. However the Regulator's Record of Decision (RODs) statements do not set out these differences in a manner which would allow the two sets of calculations to be reconciled.

There is therefore a need for the valuation methodologies and input information used in the Revenue Requirement formula to be modified, or for the Regulator to adopt a different tariff regulation methodology which gives more weight to factors such as international tariff comparisons, the impact of port tariffs on South Africa's international competitiveness, and government economic policies.

There are two areas in which further academic research would be useful in establishing an appropriate overall level for tariffs:

- The calculation of an appropriate rate of return on equity, taking into account the government's economic development objectives;
- The development of regulatory accounts, and their reconciliation with TNPA's financial accounts.

## **2. Introduction**

Given its geographical location and size, the growth of the South African economy would be severely constrained without the necessary ports infrastructure in place, however, the efficiency of that infrastructure and pricing to use the infrastructure are of critical importance. Skewed pricing and high tariffs of South African ports have been raised as a concern in recent government economic policy documents. The New Growth Path notes the need to have competitive pricing in ports (EDD 2010:18) and the Industrial Policy Action Plan (IPAP) states that high ports charges remain a significant constraint and a threat to the manufacturing employment, and that South African ports charges are among the highest in the world (the dti 2013:19). The link between industrial development and lower port tariffs have been drawn in IPAP, with the need identified for tariff prices to support the Industrial Policy effort. IPAP also raises a concern that the cost of export of value-added tradable goods has for some time been higher than both the cost of exports of primary commodities and the import of tradable goods. Furthermore, IPAP has a vision of growing ports related industry in the oil and gas service sector, boat building and ship repair – and requires that the constraints of “infrastructure, operational capacity, incentives, tariffs and customs regulations” are addressed and optimised. The National Development Plan reiterates this view and notes that South African “...ports are characterised by high costs and substandard productivity relative to global benchmarks.” (Presidency 2012, p183)

Over the past few years the focus of South Africa's ports has shifted: Between 1994 and 2002 the model was largely that of a public sector service port. Although there were some private terminals (mainly for bulks) most of the infrastructure and services were provided by a single public sector entity (Portnet) owned by Transnet. Then in 2002 South Africa followed many other countries in separating port infrastructure from port services, creating two separate

bodies within Transnet [National Ports Authority (NPA) and South African Ports Operator (SAPO)]. The country therefore already had a landlord port structure before the National Ports Act 2005 formalised this separation, and set out the future relationships between NPA, SAPO [renamed Transnet Port Terminal (TPT)] and – the main innovation – new private sector port service providers.

The Ports infrastructure and major terminal operator are both owned by Transnet, a State Owned Entity, whose balance sheet has been very weak for much of the 1990s and early part of the 2000s. As a result there has been a lack of alignment between the industrial policy imperatives of the government and the financial and other imperatives driving those institutions. These divergences have resulted in the unusually high tariffs witnessed at South African ports. There have been attempts since the dawn of democracy in South Africa to address this challenge through the restructuring of Transnet's balance sheet, the development of a vision for the sector, the introduction of new legislation that put forward institutional realignment and the establishment of a Ports Regulator.

Following a broad consultative approach, the National Commercial Ports Policy (NCPP) was Gazetted in August 2002. The Policy laid out the framework for the role of the different players in the ports sector, the challenges that needed to be addressed and the approach to regulation. The important role that ports play in broader economic development was clearly articulated in the document and was a bold attempt to bring coherence between industrial development and the ports sector:

*“The South African government is committed to building the economy. The basis for pursuing a national commercial ports policy is the recognition that trade, distribution, transport and logistics are among the most vital facets of the South Africa economy and should play a crucial role in the realisation of sustainable economic development, both as a link in the value chain of businesses and because of their own economic significance.*

*Ports are integrated and crucial nodal points in a transport system, and play a strategic role in the country's economic growth and social development. By being part of the transport network, port activity facilitates the meeting of the demand of the international market with means of production available in the country. In other words, the ports system, by virtue of being nodal points in the transport system, facilitates trade, which in turn fosters greater national economic activity. To maximise these benefits, the aspects of efficiency and effective management have to be introduced to the transport system.”* (National Commercial Ports Policy 2002:7).

To achieve this coherence the NCPP saw as critical the need to “*establish appropriate institutional arrangements and legislation to support the governance of ports*” (IBID: 9). What had become clear to the new democratic government was that State monopoly ownership of South African ports and ports enterprises through State Owned Entity Transnet had not created an environment conducive to stimulating much needed economic development and had not obviated the need to ensure that the Ports were regulated. The NCPP noted that:

*“Services within the ports are provided by either the National Ports Authority, the Port Operations, another division of Transnet Limited, or private enterprise. Having a national ports authority function as part of a transport company has resulted historically in the formation of*



*several undesirable conditions that have detracted from the primary purpose of ports, skewing prices, misallocating port revenues and creating suspicion in the maritime and transport industries about the impartiality of the port entity within a transport company.” (National Commercial Ports Policy 2002:10)*

The NCPP consequently put forward the following guiding principles of the new port dispensation:

- The current National Ports Authority within Transnet will be positioned outside Transnet in accordance with the restructuring programme of Transnet;
- The National Ports Authority post Transnet would be established as a new State-owned corporate entity;
- The ‘National Ports Authority’ would be the landlord of the South African ports and will own all the land and the port infrastructures within the port estates;
- Greater private sector involvement in operations would be sought through leases and concessions;

The ensuing legislation and regulations governing the South African ports sector recognised the negative impact of the institutional arrangements that were in place and made provision for these arrangements to be changed in line with the above guiding principles. The objective of separating out the National Ports Authority (NPA) from the rest of the group and for the NPA to become the regulator of companies providing port services, was to ensure that the ports operate in the best interests of the country in line with the mandate spelt out in the legislative framework rather than the narrow interests of the Transnet Group. NPA would then report directly to the Department of Public Enterprises.

At the heart of the matter was the conflict of interest between Transnet owning both the landlord company (NPA) and the company that is the main user of the ports (TPT). That conflict, linked to the approach of Transnet to use the excess profit generated by the ports operation to subsidise other operations in the group had, according to the Department of Transport’s National Freight Logistics Strategy, led to underinvestment in Port infrastructure and ultimately not been in the best interests of the country. Going forward the policy required that the landlord company would play a regulatory function and also facilitate the introduction of private sector players into ports operations.

The policy framework in the NCPP covered the roles of the different institutions involved in the governance of the sector; including the Department of Public Enterprises, Department of Transport and National Ports Authority. The policy makers at the time recognised that such institutional realignment was complex and there were massive financial implications for the Transnet Group in separating out one of their most lucrative businesses with billions of Rands in assets from the group. Consequently they proposed the establishment of the National Ports Regulator as an interim measure until the separation could take place; with this institution seen as playing an important part of the broader governance and regulatory issues in the sector:

*“As an interim measure, while the NPA will still be located within Transnet, the Minister of Transport will establish the Port Regulatory Framework to exercise oversight responsibility over NPA.” (National Commercial Ports Policy 2002:24).*

One of the key functions of the regulator was to monitor the business relationship between Transnet and the National Ports Authority to ensure that Transnet does not derive an unfair advantage over other transport companies, and that revenues generated by the port authority are used to the benefit of the authority, its customers and the national economy. The NCPP is clear that *“once the National Ports Authority is established outside Transnet, the role of the specialised Port Regulatory Body will be disbanded”* (IBID; 25).

The National Ports Act (2005) provided the legal basis for the establishment of the Ports Regulator, with the part time members appointed in the 2007/8 financial year. They were given the mandate of establishing the secretariat and appointing contract staff. Establishing a new institution with limited resources and capacity is not without its challenges, which is well captured in the 2011/12 annual report of the Regulator. The Chairperson states that:

*“On the appointment of the Members 5 years ago, we were given the task to set up the Regulator. That this was a much larger task than the then Minister suggested in such simple and clear words is an understatement. The Regulator had 9 part-time Members that were required to establish an office, set up the staff, finalise the Regulatory framework and start implementing.*

*There was no staff, no building, no policies, no systems and the sub-ordinate regulation was yet to be developed by us. It is a testimony to their character and commitment to this country that the Regulator Members did not run and hide and hope the task went away while they were hiding, although at times we were tempted. We decided that the critical task ahead was to set up the initial regulatory framework and commence its implementation.”* (Ports Regulator of South Africa 2012:6)

The Port Regulator secretariat was only able to start its operations in 2009 and permanent staff were only appointed from the 2011/12 financial year. Due to a variety of factors including the limited staffing and the high port charges, the main focus of the work of the regulator has been on addressing tariffs charged by the NPA. As the Regulator has established itself, so it has made an increasing impact on tariff pricing. The approach taken by the regulator was in the initial years to limit the tariff increases; however the 2013 tariff decision saw a significant reduction in key tariff lines.

While there are methodological challenges with benchmark studies in the ports sector, the tariff comparison research conducted by the Ports Regulator in April 2012 revealed that the total general cargo tariffs at the Ports of Durban and Cape Town were high by world standards. Similarly the automotive cargo tariffs were above comparator ports.

Addressing the high tariffs and the introduction of more competition into the ports sector was seen as the remit for the proposed independent National Ports Authority, it was intended to create an environment where *“Government will allow for a more competitive environment to ensure that efficiency is achieved in the port operations”* (National Commercial Ports Policy 2002:14). While the regulator in its interim capacity needs to consider competition issues, it was stated in the National Ports Act that the Ports Regulator should work closely with the competition authorities on matters that fall within the Competition Act. Limited competition however remains an issue in the South African ports sector.

The National Ports Act limits the role of the regulator to only regulate the NPA and not companies providing port services. However port services account for a relatively high proportion of the costs of moving cargo through South African ports. Competition for the provision of port services (which should put downward pressure on prices) has not materialised as expected, with the Transnet subsidiary TPT providing most of the port services in sectors such as containers and autos. Transnet does not publish detailed information about TPT's costs and revenues, so it is difficult to tell whether or not it is making monopoly profits, particularly in those sub-sectors with the greatest impact on South Africa's industrial policy.

The way forward for the Ports Regulator is uncertain. The National Ports Authority has not been made independent of Transnet and given the contribution that the NPA makes to the balance sheet of the group, it is unlikely that it will be separated out from Transnet in the near future. However, there have been strong suggestions that there is a need for a single transport regulator, which would have a mandate to cover the broader transport sector and not just look at the ports in isolation.

This report provides a brief overview of the ports in South Africa, it looks at the institutional arrangements that have emerged, and discusses the need to have regulation of the Ports. The report then goes on to give a synopsis of the regulatory issues and the different role players governing the regulation of the sector. The report looks at key outcomes of the Port Regulator tariff comparison and provides an in depth analysis of the tariff review methodology. Finally the report looks at some of the competition issues. The annexure of the report includes a review of two different approaches to ports regulation – that of Australia (light-handed regulation based on sector monitoring) and India (heavy-handed regulation based on independent determination of maximum tariffs).

## 2. Overview of the ports sector in South Africa

### 2.1 Overview

The South African economy has eight commercial ports: Cape Town, Durban, East London, Mossel Bay, Ngqura, Port Elizabeth, Richard Bay and Saldanha Bay; with four (*Durban, Cape Town, Port Elizabeth and East London*) operating as multi-purpose ports, two as predominantly bulk ports (*Saldanha and Richards Bay*) and one (*Mossel Bay*) as a fishing port which also supplies the offshore oil & gas industry. The port of *Ngqura* is a relatively new port and handles both unitised cargo and break-bulk cargo, with plans for it to handle bulk cargo. A brief description is provided below of each of the ports.

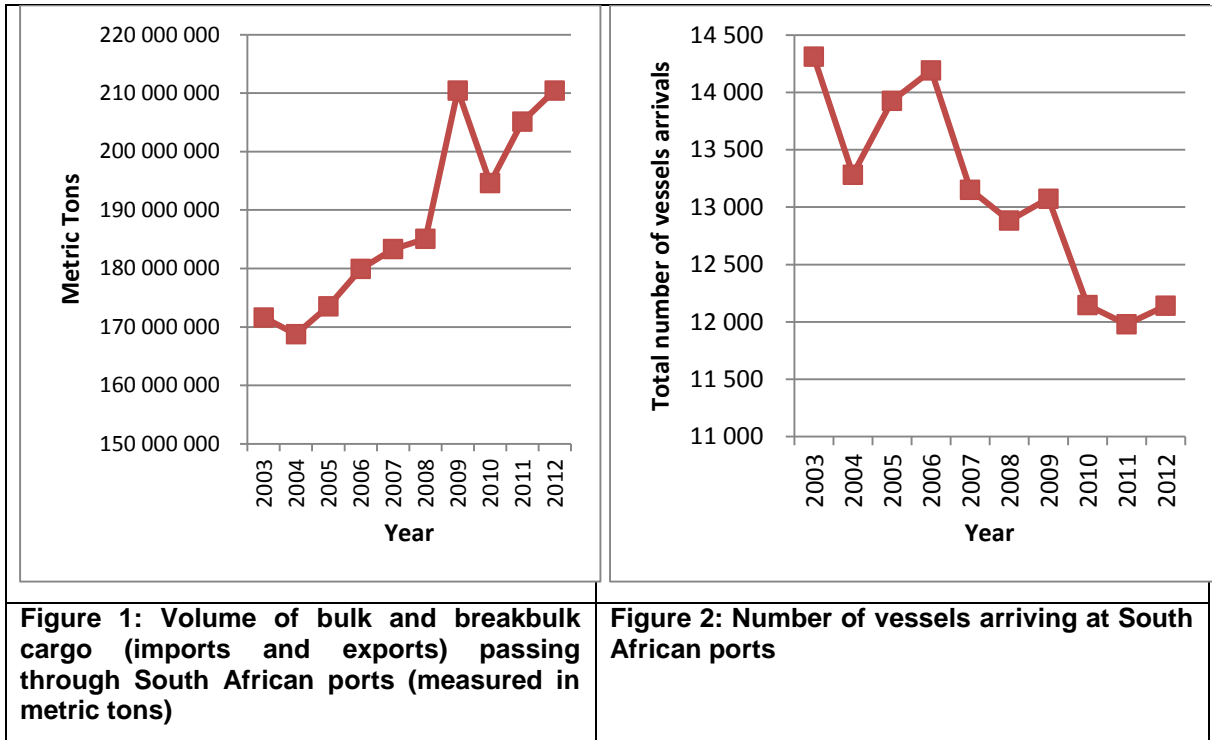
South Africa's trade with the rest of the world is primarily through its ports, and it is estimated that approximately 96% of South Africa's exports (by volume) are by sea<sup>10</sup>. The competitiveness of the country's ports therefore has a direct bearing on the competitiveness of its industry and minerals exports. Ports are also important in terms of job creation, which is a priority area for the South African government; Transnet alone employs 3,500 people directly at the ports and about 50,000 people<sup>11</sup> are directly employed in port-ancillary activities. There are also significant indirect employment benefits as well as local economic development that takes place around ports. The ports contribute significantly to the economies of Durban, Cape Town, East London and PE; and the establishment of Industrial Development Zone (IDZs) in Richards Bay and Saldanha Bay are aimed at attracting industry that would benefit from proximity to a port.

South Africa has experienced an increasing trend in the volume of cargo that passes through its ports. This can be contrasted with the declining number of vessels that are arriving on South Africa's shores. The economic downturn is one factor but the decline also needs to be seen in the context of larger ships being used to transport goods and a drive to greater efficiencies by the shipping lines which have faced enormous cost pressures since the start of the downturn in 2008/9 as well as changes in the cargo mix, with bulks (which use large ships) growing faster than general cargo (which uses smaller ships).

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<sup>10</sup> South Africa: investor's Handbook 2011/2012

<sup>11</sup> Transnet, 2012; Maharaj, 2013



Source: Transnet National Ports Authority

The market and competition dynamics in and between South African Ports are fairly limited and the table below highlights that the ports infrastructure is 100% state owned through Transnet National Ports Authority (TNPA<sup>12</sup>) and the overwhelming majority of port operations are run by Transnet Port Terminal (TPT). TNPA is primarily an asset manager (port infrastructure) which also provides a limited range of port services – mainly marine services such as pilotage and towage, but also some common (shared) services for terminal operators such as security, fire-fighting and environmental protection; while TPT is a cargo handling operation at the ports.

Service	TNPA	Port Operation	
		TPT	Private
<b>Marine Services</b>	<b>100%</b>		
<b>Bulk cargo handling<sup>1</sup></b>		<b>37%</b>	<b>63%</b>
<b>Break bulk cargos handling<sup>2</sup></b>		<b>78%</b>	<b>22%</b>
<b>Container handling</b>		<b>97%</b>	<b>3%</b>
<b>Car (on wheels) handling</b>		<b>100%</b>	

**Table 1: Public and private sector market share for major service categories**

<sup>12</sup> The document uses both Transnet National Ports Authority (TNPA) and National Ports Authority (NPA); these refer to the same company; the company name at present is Transnet National Ports Authority (TNPA) however the Ports Act refers to it as the National Ports Authority in anticipation of it being separated out of the Transnet Group.

Source: *Ports Regulator, 2010*

- 1. Bulk cargo in South Africa:** Iron ore and steel products shipped through the Port at Saldanha Bay; Manganese through the Port at Port Elizabeth; and 13 core commodities, including coal and woodchips through Richards Bay;
- 2. Break bulk Cargo:** This is cargo that must be loaded individually, e.g. cars or drums; and are not commodities / bulk cargo and not in containers.

## 2.2 Description of South Africa's Ports

The brief description of South Africa's ports below serves to highlight the very different type of ports that operate throughout the country. The differences exist in port size, depth, capacity, infrastructure and volumes passing through; type of cargo / commodities that are handled; and proximity to markets, amongst other things. Yet the tariff structure is largely standardised<sup>13</sup>, which does not incentivise users to make use of less busy ports and results in minimal competition between the ports. Ports in relatively close proximity also compete relatively little in terms of cargo / commodities that are handled by the port.

- **Port of Durban:** The Port of Durban is located on the eastern coast of South Africa and has a total land and water area of approximately 1,854 hectares. It is the busiest port in Africa and has the best equipped container terminal in the Southern hemisphere, with more than 4 000 commercial vessels calling at the port every year. It has the largest and busiest container and petroleum terminals in the country. It is the 42<sup>nd</sup> largest port in the world and is ranked 50<sup>th</sup> in the world best container ports<sup>14</sup>. The Port has 59 active berths and a single buoy mooring point at Isipingo for Very Large Carriers (VLCCs), allow the ships to discharge crude oil. Containers handled at the port represent 64% of the total number of containers handled in South African ports. The port is served with excellent rail and road links to Gauteng province. The main commodity categories handled at Durban are containers, vehicles, grains, forestry, liquid bulk, coal, agricultural products, steel and passengers.<sup>15</sup> Plans to further expand the port are underway with the dig out at the site of the old airport.
- **Port of Richards Bay:** The Port of Richards Bay was developed between the period of 1972 and 1976 in response to the export potential of coal from KwaZulu Natal and Mpumalanga province. The port cover a land surface area of 2,157 hectares and 1,495 hectares of water with the potential for expansion. Richards Bay port is the world's largest bulk coal terminal and although it was built for the export of coal, it has since expanded into other bulk and break-bulk cargoes. The port currently has twenty-one operational berths and has both public and private operators. The coal terminal is privately operated by the Richards Bay Coal Terminal Company; up to 200-wagon trains deliver coal to the terminal on continuous daily basis, with each payload averaging about 6,800 tonnes. The coal terminal can stockpile a maximum of six million tonnes. Other operations include

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<sup>13</sup> There are a few differences between ports e.g in dry dock charges

<sup>14</sup> World Shipping Council "Top 50 World Container Ports"

<sup>15</sup> Development Bank of Southern Africa, 2012; Ports & Ships, 2013

Sasol Agri which has facilities for bulk liquids storage and phosphoric acid loading, and several wood chip export terminals have also been established.<sup>16</sup>

- **Port of Cape Town:** The Port of Cape Town is South Africa's old port and is located on one of the world's busiest trading routes. It is the second busiest container port in South Africa and handles the largest amount of fresh fruit exports; it has an extensive fishing ship repair and maintenance services, and world famous waterfront leisure facilities. The port has 34 berths including lay-by berths and the terminals handle about 3,161 vessels per year. TPT operates the container terminal which has six deep sea berths equipped with post Panamax container cranes.
- **Port of East London:** The port of East London is the only commercial river port in South Africa. In past decades, the port was one of the main maize exporting terminals port of the country, however, this has declined in recent years and the automotive sector has become the dominant business sector of the port. The port has a total of 2,410 meters of quayside with 12 commercial berths. The port consists of a multi-purpose terminal (*which includes the container terminal*), a bulk terminal (*grain terminal*) and a car terminal. The grain terminal has the largest elevator in the country, with a storage capacity of 76,000 tonnes.
- **Port of Saldanha Bay:** The Port of Saldanha Bay is the largest natural port in South Africa, which can accommodate vessels of up to 21.5 metres deep, which includes Panamax and Cape size vessels with deadweight of approximately 300,000 tonnes. The port is situated 110 kilometres northwest of Cape Town, occupying a total area of 18,300 hectares of land and water, with an outer boundary of 91 kilometres. The port was established in the 1970s to support the export of iron ore, and it has become one of the world largest iron-ore ports. There are plans underway to expand the scope and operations of the port.
- **Port Of Port Elizabeth:** Port Elizabeth is located on the South East cost of South Africa. It was established in 1825, grew rapidly and became the principal port of the colonies by value in 1877, due to export trade of valuable merino wool and ostrich feathers. ( & ostrich feathers? <http://timespanner.blogspot.com/2012/02/ostriches-and-politics-helvetia-ostrich.html> [http://www.seligman.org.il/oudtshoorn\\_history.html](http://www.seligman.org.il/oudtshoorn_history.html) ). The port has enclosed water area of approximately 115 hectares and has more than 3,400 meters of quayage for commercial shipping and a container terminal. The port is equipped to handle dry bulk, bulk liquid, general cargo and container cargo; facilities at the port include a tanker terminal and a car terminal as well as a privately operated fresh produce terminal. The container terminal at Port Elizabeth handles about 1,271 ships annually with a total gross tonnage of about 25.8 million. The container terminal has an advantage of being able to load railway trains directly under the gantry cranes, without containers having to be double handled.<sup>17</sup>
- **Port of Mossel Bay:** The port of Mossel Bay is situated between Cape Town and Port Elizabeth and is the smallest of all the South African commercial ports with limited infrastructure. It is the only South African port that operates two off-shore mooring points

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<sup>16</sup> Development Bank of Southern Africa, 2012; Ports & Ships, 2013

<sup>17</sup> Development Bank of Southern Africa, 2012; Ports & Ships, 2013; U.S. Commercial Service, 2011

within the port limits. One is utilized as a marine tanker terminal and the other is used by feeder vessels from Cape Town and Durban. The port is utilised by the fishing industry and PetroSA's gas-to-liquids plant and is not popular for commercial activity.

- **Port of Ngqura:** The Port of Ngqura is the newest South African commercial port, and is situated 20 kilometers northeast of Port Elizabeth. It was initially planned to handle dry and liquid bulk cargoes but later adapted for container handling. Its commercial ship operations began in October 2009. Its main breakwater is the longest in the country and in its first year of operation it handled about 3.5 million tonnes of cargo. The port is the only South African port capable of handling new generation vessels carrying between 8,000 to 9,000 TEUs. The port has five berths totaling 1,800 meters of quay wall; one for liquid bulk, two for container vessels and two for dry bulk and break bulk. The port facilities also include an extensive rail system with links to the City Deep rail terminal in Johannesburg. In terms of expansion, plans are underway to increase the capacity of port's ore handling equipment to accommodate manganese exports from the port, which are currently handled by Port Elizabeth and will soon to be transferred to the Port of Ngqura.<sup>18</sup>

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<sup>18</sup> Development Bank of Southern Africa, 2012; Ports & Ships, 2013



### 3. Background to regulation in South African ports

The Ports Regulator noted in its Annual Report of 2011/12 that they performed a global comparison with different jurisdictions around the globe on economic regulation in ports and their finding was that there is no standard approach<sup>19</sup>. The unique nature of the South African ports system stems from the different evolution pattern that the country followed and the continued strong presence of the state in the ports sector during a period when many countries either privatised their ports, introduced private competition into the ports or facilitated state owned ports companies to become internationally competitive.

Gumede & Chasomeris, 2012 have categorised the forms of governance over South African ports into four different periods (a) the Pre-Union autonomous structures (1833-1908); (b) the South African Railways and Harbours (1909-1981) (c) the South African Transport Services (1982-1989); and (d) Transnet from 1989 until the present. Aside from the earlier period, the trend until the early 2000s was for South African ports to be consolidated into a single operation. From 2002 (and later formalised in the National Ports Act 2005) that trend was changed by separating out landlord function of the ports through the ringfencing of the National Ports Authority into a separate entity.

Duration	Organisation	Governance & Pricing Attributes
1833-1908	Autonomous Structure Pre-Union	<ul style="list-style-type: none"> <li>• The harbours were financially autonomous.</li> <li>• Each port authority administered its own tariffs.</li> <li>• Revenue generated as a result accrued to harbour administrations and was easily identifiable.</li> <li>• Inter-port competition was rife and promoted competitive tariffs.</li> </ul>
1909-1981	South African Railways and Harbours	<ul style="list-style-type: none"> <li>• The subsequent introduction of a uniform tariff structure brought to an end the prior inter-port competition.</li> <li>• The ports were supposed to be run according to sound business principles, generating enough revenue to remain self-sufficient, with the exception of providing preferentially cheap transport especially for the agricultural and industrial sectors.</li> <li>• There was a large degree of cross-subsidisation from the surplus profits generated by harbour activities to cover the losses incurred by the railways.</li> </ul>
1982-1989	South African Transport Services (SATS)	<ul style="list-style-type: none"> <li>• The SATS Act of 1981 transformed SATS into a business enterprise belonging to the state.</li> <li>• The ports physical capital, from an expenditure and revenue perspective, was controlled by SATS.</li> <li>• The Act also required that the “economic interest and the transport needs of the whole country” be taken into consideration, rather than just those of the agricultural and industrial sectors.</li> </ul>

<sup>19</sup> Ports Regulator of South Africa 2012:7

		<ul style="list-style-type: none"> <li>• Although SATS reduced inter-model cross-subsidisation that placed harbour profits in better perspective, there was still some surviving inter-model and considerable intra-port cross subsidization.</li> </ul>
1989-2008	Transnet	<ul style="list-style-type: none"> <li>• Corporatise the activities of SATS; resulting in the formation of Transnet on 1<sup>st</sup> November 1989, with government as the sole shareholder.</li> <li>• Transnet as the umbrella company, which maintains five (5) divisions: Spoornet (rail); Portnet; Petro-net; integrated inter model services (which included aspects of road transport); and South African Airways, all of which operated as separate companies. SAA has subsequently been removed out of Transnet.</li> <li>• In 2002, Port split into a landlord port authority (SAPO, which later became TNPA) and a ports operator (TPT).</li> <li>• The promulgation of the National Ports Act in 2005</li> </ul>
2009-present	Transnet and Ports Regulator	<ul style="list-style-type: none"> <li>• Ports Regulator was established under the provision of National Port Act of 2005.</li> <li>• From 2010-11 TNPA has to apply for tariff increases to the Port Regulator.</li> <li>• Port Regulator allows for industry comments on the TNPA tariff application and TNPA's responses to those comments and then makes a decision.</li> </ul>

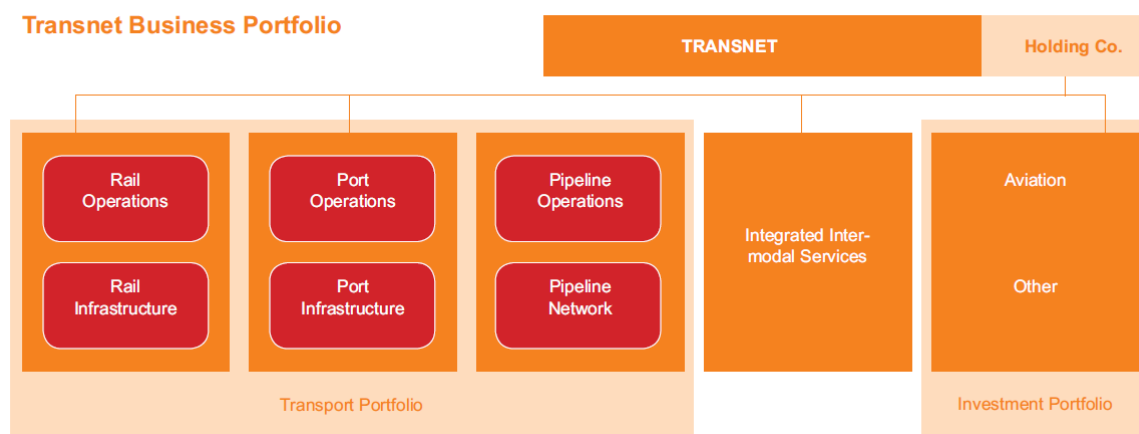
**Table 2: A brief history of South Africa's ports and governance and pricing**

*Source: TIPS based on Gumede & Chasomeris, 2012*

#### 4. The need for regulation of Ports

The monopoly in the ownership of South African ports by Transnet National Ports Authority has been argued to create a situation where the port charges in South Africa are higher than international tariffs, the efficiency levels are lower, the services provided by the ports authority are not up to international standards and the prices charged at the different ports within South Africa are fairly uniform despite the different locations and features of the ports.

In a paper for the OECD, Thompson argues that “Other observers have similarly concluded that the South African ports have productivity levels for containers and higher value cargo about 50 to 70 percent of comparable ports elsewhere, while the bulk ports are relatively efficient. Moreover, productivity at non-bulk ports appears to have been declining over time in some of the more important ports. In addition, water side congestion is generally rated as serious.” (Thompson; 2009)



**Figure 3: Graphical Representation of the Transnet Institutional Arrangements**

Source: Department of Transport, National Freight Logistics Strategy, September 2005<sup>20</sup>

The Department of Transport’s National Freight Logistics Strategy (approved by Cabinet in September 2005), maps out the way forward for the transport sector and notes that the regulatory environment in the transport sector is fragmented and the existence of unregulated monopolies results in inefficient outcomes. It goes on to say “monopolies with embedded regulatory power are able to operate without effective regulatory government oversight” and that “the situation of both player and referee is particularly evident in the case of Ports”. It confirms the view that “one of the contributors to poor economic efficiency is lack of regulation, lack of competition and high tariffs based on administered pricing.” (DoT 2005:10).

The strategy identifies that the lack of an appropriate regulatory framework has resulted in cross subsidisation across the Transnet group; in quite strong language it states that “the lack of an appropriate regulatory framework for the ports sector has allowed significant value to be stripped out of the sector to fund non-performing entities in other elements of the transport

<sup>20</sup> SAA has subsequently been removed from the Transnet portfolio

sector.” It goes on to argue that this cross-subsidy has had negative consequences on ports infrastructure, which has “not expanded at a sufficient rate” and in turn this has had a negative consequence on the broader economy. To remedy this situation the strategy argues strongly for the need to implement the National Ports Act in order to establish a Ports Regulator who would reform the ports tariffs – and see some of these benefits passed on to users and the remainder reinvested in much needed infrastructure. The strategy does not support the cross subsidy and funding of non-performing businesses in Transnet.

Left to itself and in the absence of an economic regulator over the ports sector prior to 2009 as well as lack of competition within / between South Africa’s ports there has been little incentive to improve the productivity levels in the ports, maintain the infrastructure to the required standards, invest in sufficient additional infrastructure or update the technology used in the ports. A further outcome of the ‘self – regulation’ approach was the pricing of tariffs that were not in line with major ports around the world.

Competition within and between the ports may have created pressure on players within the sector to respond to the investment, productivity, technology and pricing issues that would have resulted in benefits for the users. Given the dependence of the South African economy’s exports by sea, improvements at the ports and lower pricing would have had a pass through benefit to the rest of the economy.

Lack of competition can arise for different reasons; natural monopolies, imperfect markets or institutional monopolies. In the case of South African ports, it appears that elements of all three apply.

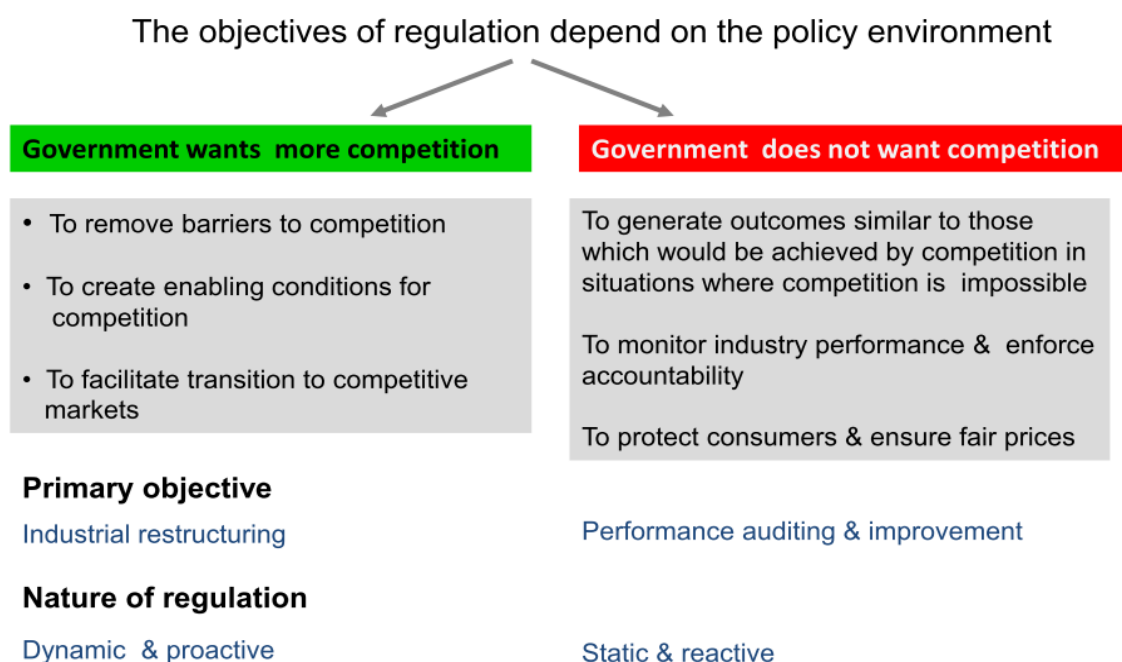
A natural monopoly, i.e. a monopoly that is created by circumstances rather than by law, arise because of the relatively high fixed costs are required by firms, which can create a barrier to entry for new entrants. Natural monopolies may also exist where there is a small market, which coupled with high initial fixed costs may keep other players out. Utilities, particularly Ports, require a significant initial investment. The existence of a natural monopoly in South African ports would therefore have an impact on the prices that the monopoly can charge; of particular relevance to ports would be the link between the pricing allocation between fixed and marginal costs; this issue is discussed in detail in chapter five.

Imperfect markets exist when there is insufficient competition and possible collusion between players in the market. Imperfect markets are an issue in the South African ports sector as there is insufficient competition between ports (rather than collusion) and the existence of policies to limit the competition between ports by having the same tariff structure across all ports and preventing neighbouring ports from competing on type of cargo / commodity handled. The only competition is therefore from neighbouring countries, however the distance, poor infrastructure and in particular the border complexities of these neighbouring states mean that they are at present not effective competitors to the South African ports. And while, for example, the port of Maputo is physically closer to Gauteng than the port of Durban, it has not been able to capture a significant share of the market although it has positioned itself as a competitor.

Institutional monopolies are created through legislative or other means, and may be desirable for a developmental state for positive outcomes in the rest of the economy; and can even use the monopoly situation in the port sector to create a national champion that can compete in other territories in the international marketplace. Examples of DP World (Dubai) or port of

Singapore are authorities that have on the back of their domestic success been able to find opportunities in several other jurisdictions.

Given the monopoly of Transnet, the impediments to growth created by this situation and the different elements of monopoly that exist in South Africa, the government recognised that there is a need for regulation. By better understanding the nature of the monopoly arrangements in South African Ports, the regulator would be able to understand the objectives of regulation and where it is able to make an impact. A key and current issue is however whether the policy objective is to introduce more competition into the ports system or to rather ensure that the state monopoly that is in place is better regulated to achieve particular outcomes – such as better pricing, improved services, greater investment, etc., which may not naturally occur in the absence of competition; or for example whether the outcome is to support the creation of a powerful national champion that is able to successfully enter other markets.<sup>21</sup>



**Figure 4: Objectives of regulation**

<sup>21</sup> Recent examples of this lack of clarity have been S56 tenders to concession various aspects of the port activities that have been withdrawn prior to the concession being awarded. Examples here include the suspension of the bidding process for the Port of Nqura container terminal in November 2013.

## 5. Different Approaches to Ports Regulation

Ports regulation can take a number of different forms, and only a few countries have opted for a port specific regulatory body. Port regulation can range from a very focused sector regulator, to regulation that is very generalised for example through a multi-sector regulator or a competition commission; it can require prior approval for decisions (ex-ante) in the case of a port regulator or after the event (ex-post) for example through a National Audit Office (Auditor General). The location of regulatory functions has a great impact on how the regulation happens. In many countries, the port authority regulates private sector terminals and marine services such as towage through concession agreements. There are a few countries where a shareholder ministry plays a role in regulating ports. There are also examples of countries that regulate their ports very lightly or not at all e.g. Australia and the UK.

Regulator	Regulatory Tools	Examples
<b>Sector ministry</b>	Performance contracts Directives Policy statements Informal day-to-day contacts	Italy, France
<b>Shareholder ministry</b>	Statement of corporate intent Shareholder compact Budget approval	New South Wales, Kenya
<b>Competition Commission</b>	Ex-post investigations Ex-ante approvals	EU
<b>National Audit Office</b>	Expenditure reviews One-off investigations	Portugal
<b>Port authority</b>	Concession agreements Lease Operating licences Participation in JVs	Rotterdam, New York, Tema
<b>Port regulator</b>	Tariff regulation Market access requirements Performance standards Compliance rules Adjudication of complaints	India, Brazil
<b>Multi-sectoral regulator</b>	Similar to Port Regulator	Peru, Tanzania, Nigeria, Victoria (Australia)

**Table 3: Tools used by different bodies in regulation**

Note: (a) some of the countries cited use more than one form of regulation

The annexure to this report gives specific examples of Port Regulation in two different contexts (India and Australia).

## 6. The South African regulatory framework

The White Paper on the National Transport Policy (1996) looked at an overhaul of the approach to transport and transport regulation in South Africa. The White Paper stated that the *“broad goal of transport is the smooth and efficient interaction that allows society and the economy to assume their preferred form. To play this role, policies in the transport sector must be outward looking, shaped by the needs of society in general, of the users or customers of transport, and of the economy that transport has to support. Transport can also play a leadership role, for example in acting as a catalyst for development...”*

The White Paper laid the framework for the establishment of the Ports Regulator in order to ensure that these above goals were achieved; it states: **“Regulation of monopolies: Government has a role in controlling tariffs, and in setting service and safety standards. Examples of this category are the state airports, the ports, and road and rail concessions.”**

It then goes on to say, *“A port authority (or authorities) with specific responsibilities for the maintenance and development of port infrastructure will be established. Since it will be a monopoly, the port authority will be regulated by an independent regulator. The port authority will involve key role players in its strategic planning, for example the metropolitan government of a city with a large port.”* (DoT 1996)

The White Paper further outlines the vision and policy framework for the Maritime Transport sector.

This policy framework was then further developed in Department of Transport’s National Commercial Ports Policy Document (which was published as a White Paper in the Government Gazette in August 2002) and the National Ports Act of 2005.

The objectives of the National Commercial Ports Policy include:

- Ensure safe affordable, effective and efficient port services;
- Encourage fair competition based on transparent rules applied consistently across the transport and port system;
- Improve infrastructure and service levels where appropriate, based on user needs;
- Establish appropriate institutional arrangements and legislation to support the governance of ports;
- Promote the development of an integrated regional production and distribution system in support of government industrial policies;
- Facilitate and enhance the expansion of international trade and tourism in general, and export in particular;
- Promote the development of an efficient and productive South African port industry capable of competing in international markets;
- Establish an appropriate regulatory framework that is also flexible and responsive;
- Ensure cost effective and efficient port management and operation;
- Ensure proactive communication and consultation with port stakeholders early on in the port planning stages;

- Ensure that strategic port planning is closely aligned with the integrated development planning process of the associated city; and
- Promote Black Economic Empowerment and Small, Medium, and Micro Enterprises.

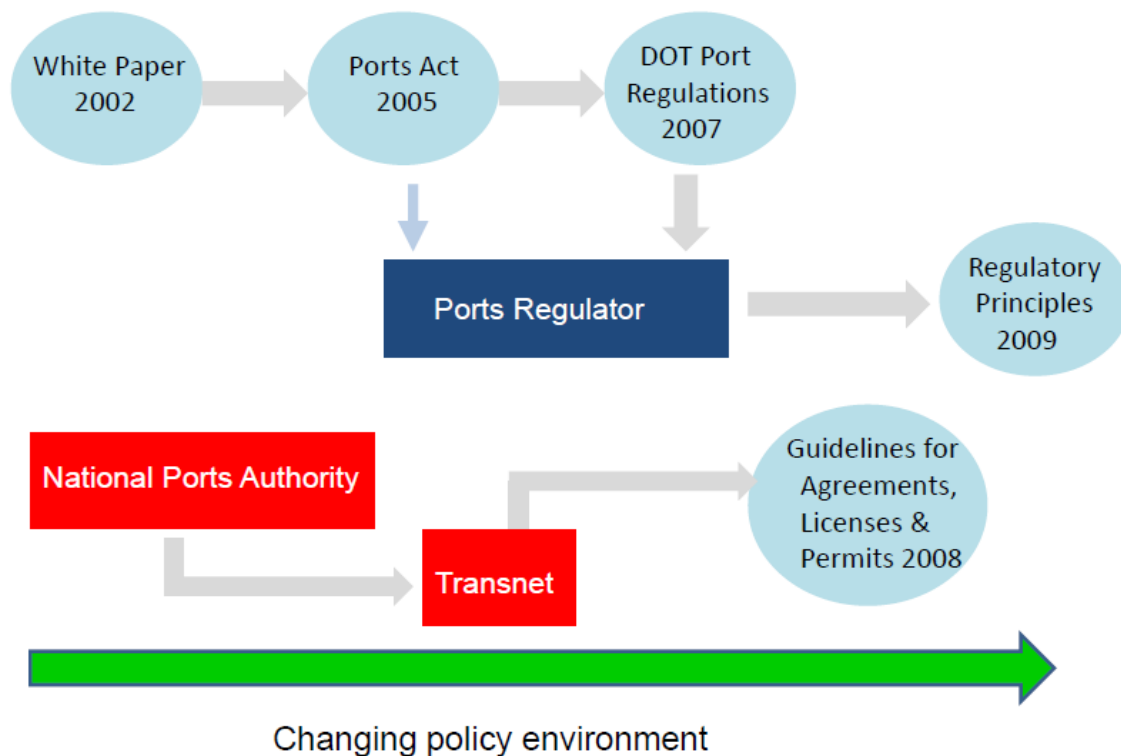
Some of the issues coming out of the National Commercial Ports Policy include that at a policy level there should be the development of a national ports system, which would be done by national government; the ports would need to be more competitive, which would encourage greater user choice; and that the ports should be financially autonomous. Such an approach would have implications for tariff setting, port finances and the cross subsidy between ports and other Transnet operations.

In terms of institutions the policy provides a different institutional framework and proposes the separation of the ports authority from ports operations; the National Ports Authority would then be corporatized and separated out of Transnet. To support the transition process the policy proposes the establishment of a Ports Regulator. The policy also saw a much greater role for the private sector and the participation of the private sector would be managed through a competitive process including competitively tendered leases and concessions.

The National Commercial Ports Policy recognises that the Ports Regulator will need to address these issues by preventing monopoly abuses by the National Ports Authority (prevent rent seeking behaviour); ensure equity in access to port services; and rule on complaints against the NPA, including monopoly pricing. However, it was envisaged that less regulatory oversight would be required by the regulator once the concerns around monopoly pricing have been addressed and once NPA had been separated from Transnet. The separation would mean that NPA would lose the conflicts of interest that currently prevent it from acting as an effective regulator itself and would then become the de factor regulator of the ports sector, doing away with the need for a separate body.

The promulgation of the National Ports Act in 2005 saw the translation of the proposals articulated in the 1996 National Transport Policy and 2002 National Commercial Ports Policy into legislation which required the separation of the functions of the National Ports Authority from those of the cargo handling operations; establishing the National Ports Authority as a separate entity; and creating an independent regulator to oversee the National Ports Authority and to determine tariffs. The National Ports Act puts NPA in charge of regulating terminal operators and other port service providers through the terms and conditions it inserts into its concessions, leases and licensing agreements.





**Figure 5: Evolution of the Ports Regulatory Framework**

### **The establishment and role of an independent Ports Regulator**

Prior to the establishment of the regulator, the monopoly and self-regulated ownership over the ports created an environment where it was possible for Transnet to extract monopoly rents. These monopoly rents did not circulate back into investment into the ports and went into the other needs of Transnet.

The National Freight Logistics Strategy notes these concerns and states that: *“Our infrastructure is inappropriate for the development path of our country, and needs to be revamped... Furthermore, our regulatory regime has not been inadequate to constrain the pricing of monopoly infrastructure entities. The infrastructure monopolies have extracted huge margins from the movement of cargo, without ensuring sustainable levels of re-investment. These profits have tended to be used to subsidise inefficient operations and loss making components in other areas of the transport and logistics sector, rather than raising our capacity over time.”* (DoT 2005:9)

Over and above the high prices, the lack of competition or monopolistic behaviour saw a downside in terms of the slowness in providing additional capacity (under-investment) and TNPA's reluctance to open up the port services market to new private sector providers. Particularly marked has been its failure to use its control over assets to open up the container market to competition.

The policy and regulatory framework responds to those challenges and outlines the need for the establishment of an independent Ports Regulator as well as its mandate. Van Niekerk in her 2002 paper on ports restructuring notes that *"...it is accepted that a regulator is needed to ensure fair competition and it is also important that a net benefit to the community of South Africa is sought. The required expertise and objectivity could not be entrusted to the NPA and ports policy alone, hence the need for an independent regulator."* (Van Niekerk 2002:2)

The National Ports Act formally establishes the regulator and goes into detail on the functions of the regulator which are to exercise economic regulation in line with government's objectives; promote equality of access; and monitor the National Ports Authority. The Act also specifies that the regulator should hear and investigate complaints, work with the Competition Authorities on relevant issues, consider the tariffs of the National Ports Authority and *"regulate the provision of adequate, affordable, efficient port services and facilities"* (National Ports Act, 2005:34).

The Act is clear on the need for the regulator to manage more than the pricing and to look at other factors such as service, quality, responsiveness and access. The role of the regulator would be to either ensure that if the monopoly remains it does not behave in a way that negatively impacts on industry and South Africa's broader economic development objectives. The establishment of an effective regulator would also provide the scope for the introduction of competition into the ports system. Gausch (2004) notes that regulators are often established as a precursor to privatisation of a sector, and that *"Regulations serve both to protect investors from arbitrary and politically motivated intervention from the government and to protect users from the abuse of the monopoly or dominant position of the new private operators."* (Gautch 2004:Page ix). The Act requires that the Regulator support the work of other regulatory authorities to support the improvement of competition in the ports sector.

Reports on the state of the South African Ports note the poor efficiency and cost ineffectiveness of the ports as well as the problems of congestion at the port and the old equipment: *"...observers have similarly concluded that the South African ports have productivity levels for containers and higher value cargo about 50 to 70 per cent of comparable ports elsewhere, while the bulk ports are relatively efficient. Moreover, productivity at non-bulk ports appears to have been declining over time in some of the more important ports. In addition, water side congestion is generally rated as serious"* (Thompson, 2009).

In 2007, the Department of Transport issued regulations which addressed economic participation, Broad-Based Black Economic Empowerment, the structuring of the Ports Consultative Committees, access to confidential information and port limits. As part of encouraging economic participation, the regulations envisioned that the Regulator would review public and private sector participation and come with recommendations in 12 months; and that the interim measures of regulation would be by means of NPA tariff approval, hearing of complaints and regulation of prices of other service providers other than the NPA.

In 2008 the National Ports Authority issued its guidelines for the award of Section 56 agreements (concessions), licenses, permits and operating leases. The conditions contained in these instruments provide the basic framework which allows the National Ports Authority to regulate port services.

Procedure	Application	Characteristics
Section 56 agreements	<ul style="list-style-type: none"> <li>• New passenger &amp; cargo terminals</li> <li>• New ship repair facilities</li> <li>• Offshore cargo handling</li> </ul>	<ul style="list-style-type: none"> <li>• Competitively tendered concessions</li> </ul>
Section 57 licenses	<ul style="list-style-type: none"> <li>• Stevedoring</li> <li>• Cargo storage</li> <li>• Waste disposal</li> <li>• Private floating cranes</li> </ul>	<ul style="list-style-type: none"> <li>• Quality licensing</li> <li>• Quantity licensing when faced with capacity constraints</li> </ul>
Section 57 registration	<ul style="list-style-type: none"> <li>• Bunkering</li> <li>• Diving</li> <li>• Pest control</li> </ul>	<ul style="list-style-type: none"> <li>• Only requirement is compliance with port rules</li> </ul>
Section 65 operating leases	<ul style="list-style-type: none"> <li>• Existing terminal operators</li> <li>• Existing ship repairers</li> <li>• Existing rail operators</li> <li>• Existing waste disposal</li> </ul>	<ul style="list-style-type: none"> <li>• Lease renegotiation linked to semi-automatic issue of Section 57 licenses</li> <li>• Commercial leases not covered by Act</li> </ul>

**Table 4: Key regulations and the 2008 Transnet Guidelines**

The policy is clear in stating that the National Ports Authority will not be engaged in port operations and that as owner of the land, it should ensure that licensees and concessionaires provide adequate, efficient and affordable terminal operations and port services to all port users. Both the policy and legislation unequivocally state that the National Ports Authority should be established outside of Transnet as a separate state owned enterprise. Regulation needs to cover port services as well as infrastructure, and because Transnet owns both the ports authority (TNPA) and major provider of port services (TPT) there is a major conflict of interest in allowing TNPA to regulate TPT, and to restrict access to TPT's competitors.

By 2013 that separation had not taken place and there have been calls in some quarters for that aspect of the policy to be revisited – arguing that the contribution of TNPA to the balance sheet of Transnet is critical for the financial stability of the group, and that the cross subsidy between the ports and other sections of Transnet operations should be allowed to continue. Reversal of the decision to separate the National Ports Authority from Transnet would have implications for the institutional framework that has been envisaged for the port sector, including the introduction of private sector competition and the ongoing conflict of interest; should this transpire the role of the regulator would therefore need to change - and it would in all likelihood need to be strengthened to provide greater oversight over TNPA.

If the policy were to change then another approach could be to rather corporatize TPT and separate it from Transnet, which would also remove the conflict of interest and could equally stimulate competition from the private sector or other ports operators. Such a separation would allow for TNPA to meet its Ports Act objectives; most notably that set out in Clause 2(e) iii “to facilitate the development of technology, information systems and managerial expertise through private sector involvement and participation” (National Ports Act 2005).

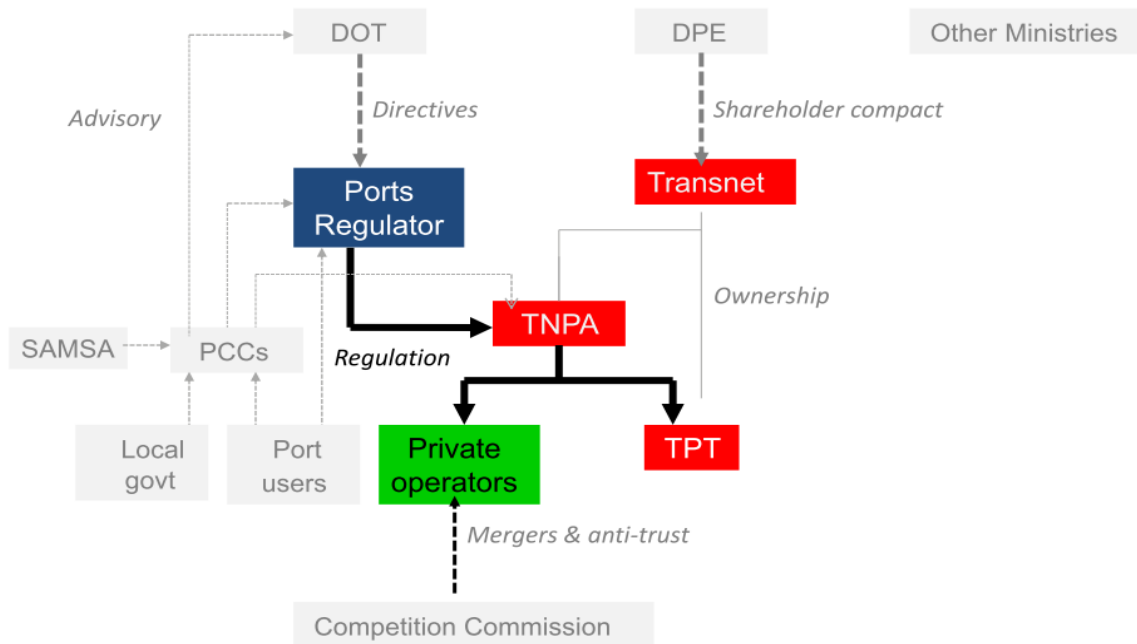
The demand for competition from port users seems to be highest in the container sector,

where there is a ready -made project with which to kick it off: the Ngqura container terminal. TNPA came very close to going out to tender with a Public Private Partnership in September 2013, the tender documents had been drawn up and seemed to have been approved by TNPA; however the process was cancelled with a notice being issued in November 2013.

The scope for competition to TPT dry bulks varies by commodity – private sector competition is already quite high for coal, but low for iron ore because of indivisibilities in investments. It is not clear how much competition there would be for general cargo if TPT was separate from Transnet. The main problem is the difficulty private operators have gaining access to waterfront land. All of the best sites are already concessioned to TPT on terms which have never been made public.

## 7. Regulation of South African Ports

The regulatory performance of the ports sector needs to consider the different players involved in the ports sector, and not just the Ports Regulator: these other players include, the Department of Transport, the Department of Public Enterprises, the National Ports Authority, and the South African Maritime Safety Authority (SAMSA).



**Figure 6: The structure of ports regulation in South Africa**

Figure 6 shows the relationship between the entities, with the Department of Transport being the line Ministry for the Port Regulator and the Department of Public Enterprises the line Ministry for the National Ports Authority (via Transnet). The figure shows that TNPA has oversight over the operations of TPT and any private operators that may compete with TPT; and that TNPA and TPT are both part of the Transnet Group.

SAMSA is included in the regulatory framework, but while it is a critical player in the maritime sector, it is not an economic regulator and focuses on issues of safety and responsibility for the National Ship Register; it does however have a mandate to develop the maritime sector, which has seen it engage with some of the economic development issues. There is also an interface between economic and technical regulations, for example in environmental management, as most environment protection measures have economic consequences which SAMSA needs to evaluate e.g. bunker fuel taxes will affect the competitiveness of South African coal versus Australian coal in Japan.

Steyn (2012) has identified some of the key challenges related to effective economic regulation of State Owned Enterprises in South Africa, including the ports sector. He has identified ten principles to define good regulation:

1. Independence: infrastructure regulators should be adequately insulated from short term political pressure and able to make decisions without having to obtain prior approval.
2. Accountability: Regulators need to be held accountable for their actions.
3. Transparency and public participation: The regulatory process must be fair and impartial and open to extensive and meaningful opportunity for public participation.
4. Predictability: The regulatory system should provide reasonable certainty as to the principles and rules that will be followed within the overall regulatory framework.
5. Clarity of roles: The role of the regulatory agency should be carefully defined in law. Similarly, the roles of other sector agencies (including line Ministries) should be carefully defined to avoid duplication, interagency conflicts, mixed signals to stakeholders, and policy confusion.
6. Completeness and clarity in rules: The regulatory system, through laws and agency rules should provide all stakeholders with clear and timely advanced notice of the objectives that will be pursued in carrying out regulatory activities.
7. Proportionality: The intervention should be the minimum necessary to remedy the problem being addressed and undertaken only if the likely benefits outweigh the expected economic and social costs.
8. Requisite powers: Regulatory agencies should possess all powers required to perform their mission. Including: setting tariffs, monitor service quality, address market power, investigate and adjudicate on consumer complaints, provide dispute resolution facilities, obtain information, and monitor and enforce its decisions.
9. Appropriate regulatory capacity: Regulatory agencies should be resourced to be able to do its job competently and thoroughly.
10. Integrity: It should do its job with integrity and have rules governing behaviour to preclude improprieties or any conduct appearing to be improper.

The establishment of independent economic regulators has taken place since 1994 as a means to regulate key sectors including Ports, Telecommunication and Energy. Some of the issues identified to improve regulatory performance include talent management, financial independence of the regulators, ensuring transparency in the economic assessment of SOE infrastructure and investment plans, and empowering economic regulators in respect of their decision making. Citing research undertaken by TIPS (van Basten 2007), Steyn notes that: *“Current role confusion (between the shareholder and the regulator) potentially limits the effectiveness of this governance system. A Regulator needs to have a clear and unambiguous mandate in order to fulfil it effectively. The regulator also needs to be provided with the tools to fulfil its mandate.”* (Steyn 2012)

Steyn<sup>22</sup> notes the importance of the regulator having regulatory independence as well as the separation of roles and responsibilities for policy making and regulation: “A division of roles that still supports independence is one where the policy-maker is responsible for the framework within which the decision is made but the regulator is responsible for (and independently determines) the decision itself. Conflict may arise in this situation if the framework is vague and non-specific. In such a scenario the regulator is forced to use far greater discretion in order to determine what policy makers intended.” (Steyn 2012)

## **i. Department of Public Enterprises**

The Department of Public Enterprises (DPE) originally emerged out of the former Department of Finance (now National Treasury) in 1999 as the caretaker department that was overseeing the reform of state assets in key sectors of the economy either through privatisation (or partial privatisation) of State Owned Entities or through the introduction of private competition into markets where SoEs held a dominant position. DPE was allocated considerable state assets in the transport / logistics sector, electricity and broadband / telecommunication, amongst others. While DPE became the shareholder department of SoEs such as Transnet, Eskom and SAA, it was not (nor envisaged to be) the department with sector expertise.

The change in the position of the ruling party in the mid-2000s saw a different view emerging in the government on the benefits of disposing of State Owned Entities; a view that has been strengthened over time to see the SoEs as key instruments that a developmental state could utilise in order to better drive economic development. So while in the late 1990s Telkom as well as SAA were partially privatised (although the latter then bought back) there has not been a formally articulately shift in policy to stop the introduction of private sector players into the core activities of SoEs.

These changes have had an impact on the roles and responsibilities of DPE, which has now taken on a more permanent role in SoE management. The implication for DPE is that it needs to expand its capacity and adapt its processes to allow it to do this effectively. A critical part of that process has started with the improvement in the Shareholder Compacts that DPE signs with the SoEs.

Furthermore, the policy imperatives given by the government have shifted over time, in the early to mid-2000s there was a strong focus on addressing the financial stability of Transnet and other SOEs; at the time Eskom required significant guarantees to be issued for its new build programme and SAA required a massive bailout due to hedging losses, there was a need for Transnet to be financially autonomous from the fiscus. With the global financial crisis and resulting economic slowdown, job creation and economic development have become critical areas of focus - with SoEs and their infrastructure programmes being seen as important drivers for the state.

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<sup>22</sup> Citing research undertaken by Genesis Analytics (2008),

Going forward national policy generally views Transnet and TNPA as playing an important role in the national job creation effort, as well as supporting the drive to improving economic development and investment in infrastructure.

DPE, as the line Ministry responsible for Transnet and TNPA, would (in collaboration with DoT, the dti, DEA and National Treasury) need to build consensus within government and Cabinet on how to achieve these objectives; and how to better utilise (or if necessary amend) the regulatory process in that regard, rather than going directly and individually to the Regulator on individual policy issues. DOT is a key player because the Ports Act instructs it to give guidelines to the Port Regulator, and the Port Regulator's remit is wide. The discussion with DoT (see below) highlights that DoT has not given high priority to ports compared with other modes of transport; a significant amount of responsibility for Ports issues therefore falls to DPE. DPE potentially has a lot of influence but has chosen not to use it.

The framework for achieving these objectives would need to be at a sufficiently high level to avoid the DPE concern of micro-managing the TNPA business. However, DPE would still need to build up sufficient sector level skills in order to better manage the oversight over TNPA and the economic development opportunities that can be unlocked. One of the key tools that DPE has to effect these changes is through the shareholder compact that it signs with the Transnet Board of Directors. The shareholder compact can introduce specific Key Performance Indicators (KPIs) that TNPA would need to report on, and would give both policy and strategic direction to the institution. It would also require that DPE obtain better and less aggregated information from Transnet and TNPA on the developments in the ports sector.

The argument presented by Steyn (2012) and cited above is that there needs to be clear delineation of responsibilities between the regulator and policy department as well as the need for policy clarity. By DPE strengthening its role, giving clear policy direction to TNPA and giving guidance to the regulator on the policy imperatives of government, these principles of effective regulation would be addressed and contribute to an improved regulatory environment. The danger of not doing so would allow State Owned Enterprises to abuse their dominant position.

## **ii. National Ports Authority**

The National Ports Authority remains a subsidiary of the Transnet group, and as noted earlier in the report has not transitioned to being an autonomous National Ports Authority. The decision making in TNPA is therefore subordinated within the Transnet group, which is able to over-ride TNPA decisions and possibly its policy objectives. The key issue is that the profits from the ports sector are used to cross subsidize the railways; with Transnet arguing strongly in favour of this cross subsidy continuing and the balance sheet (including the strong asset base) of TNPA significantly strengthening Transnet. Should TNPA be separated out of the Transnet group there is a risk that Transnet will require support from the fiscus (i.e. issuing of guarantees to finance its infrastructure programme and the road to rail strategy).

The conflict of interest of having Transnet owning TNPA, which sets the terms for the port service operator (TPT) which is another Transnet subsidiary, is an outcome of the lack of separation of TNPA out of the Transnet group. There are both pricing and competitiveness issues which arise from this conflict of interest. Furthermore, the Ports Regulator has no



mandate to regulate port services operators, as the legislative framework envisaged that an independent NPA would fulfil that role.

The implication of the above is that to a large extent ports policy, including investment and pricing levels, are being largely determined by Transnet rather than DoT or DPE. Both Transnet and TNPA have more capacity and knowledge in the port sector than these departments, which enables them to play this role. Similarly, NPA is also able to drive the tariff setting process, although the Regulator has the final say through its powers to approve or reject NPA's proposed tariff changes, and to suggest and enforce alternative changes.

NPA has significant expertise and is South Africa's main pool of expertise on port planning / policy making and port operations, and has a lot of very competent staff who would benefit from capacity building programmes. Transnet or NPA have been a pool of resources for other institutions and several staff in SAMSA as well as DPE have previously worked there. There is potential to build on this expertise to further grow and develop the sector.

A review of the comments made during the tariff application process by Gumede and Chasomeris (2013) as well as interviews with port users found that TNPA have not always made sufficient investment into the ports infrastructure and equipment. There have also been significant delays in decision making on key investments. In discussions with TNPA the view emerging is that there is a clear understanding of the investment required in the ports but those investments are held back by capex budget cuts made by Transnet. This issue points to another dynamic that results from Transnet having a broader view of the sector and therefore would have differing priorities to a dedicated Ports entity.

### **iii. Department of Transport**

The Department of Transport is the custodian of the National Ports Act and the strategic direction of the maritime and ports sector. The policy direction and regulatory issues have already been covered in detail in Chapter 3.

A meeting with the Department highlighted the following:

- The importance that they give to the Port Consultative Committees, which the department is responsible for chairing. They see the PCCs as a means to bring together relevant players in the sector to discuss and negotiate key issues.
- The cross subsidy between rail and ports is a concern; however it is clear that the ports are significantly more profitable than rail.
- There is lack of clarity on the corporatisation decision of TNPA. There is a clear understanding that having TNPA and TPT both owned by Transnet generates a conflict of interest.
- There is difficulty in getting access to Transnet and information from Transnet, as they are not the line Ministry.
- There is a good relationship with the Ports Regulator; they submit their corporate plan and annual performance plan to the department, and there is good engagement on the content.

- They have a working relationship with SAMSA but the oversight role of the department could be strengthened.
- There are new officials in the department responsible for the Ports Regulator and they recognise that there are some gaps in the department on knowledge of the Ports Sector.

The department would be in a position to give strategic direction to the board of the Ports Regulator in line with the policy objectives of the department. While there is a good working relationship between the two entities, it is clear that on the policy front – particularly on recent developments – that the department could strengthen its role.

There is no formal port sector oversight structure in place between DoT and DPE; however there is some engagement between the two departments; and between DPE and other regulatory entities such as SAMSA. A more structured engagement between the regulatory structures in the ports sector would be invaluable in improving governance over the sector and alignment with broader policy direction.

#### **iv. South African Maritime Safety Authority**

SAMSA is funded through a levy on ships calling at South African ports, based on their Gross Tonnage. In general, the demand for SAMSA's services (and therefore costs) rises in line with traffic, keeping revenues and costs broadly in equilibrium.

The SAMSA levy accounts for 87-90% of its revenues. The rest comes from Government coverage of the costs of the Search & Rescue centres operated by SAMSA, and from charges for minor services such as examinations, certifications, ship inspections etc.

The Sea Watch Centre continuously monitors vessel traffic around the Cape. SAMSA uses satellite, AIS and a long range vessel identification system to track these vessel movements.

As part of the study a meeting with SAMSA revealed that following are SAMSA's main areas of interest:

- SAMSA sees itself as having an economic facilitation/promotion role in relation to the exploitation of any maritime resources. It sees itself as the natural authority for the regulation of offshore oil rigs;
- Mapping of the topography and resources of the South African seabed. This work has not yet started, and requires approval from the various Ministries involved. SAMSA sees itself as bringing together a consortium of all interested parties including:- the Council for Geosciences; Departments of Environment, Agriculture & Fisheries, and Energy; and the Navy;
- Port development. SAMSA supplies the secretariat for the Port Consultative Committees (PCCs), can influence port planning, and reports the PCCs findings to DOT;
- Fleet development. SAMSA would like to be able to develop an enabling legal and fiscal environment which would attract many more ships to the South African registry. Petro SA uses three tankers to bring oil ashore from South African offshore fields, but although

this is classed as cabotage trade, two of the ships are registered in the Marshall Islands and one in Singapore.

- SAMSA is also engaging with major South African cargo owners to persuade them to use South African flagged ships, and is trying to get more Government cargo moving on South African ships.
- It would also like to see Pilotage Exemption Certificates granted to South African flagged cabotage vessels, and priority berthing in South African ports for South African flagged vessels.

The engagement with SAMSA also revealed concerns with the staff turnover at the Department of Transport, which has resulted in some loss of institutional memory in the maritime sector.

**Port Consultative Committees (PCCs):** The importance of PCCs are outlined in the National Ports Act as a means to ensure engagement between the different players in the ports sector. The PCCs are chaired by DOT, with SAMSA providing the secretariat. Each port has a PCC, with a national PCC established to amongst other things consolidate the issues raised in each port.

The membership of PCCs includes representatives of National, Provincial and Local government, private sector, unions and TNPA. The Ports Regulator attends as an observer. The composition of the PCCs have been changed recently so that there are now three rather than two private sector representatives. There is now one private sector member from each of three categories:

- Cargo owners, freight forwarders, road hauliers, container depots, other logistics services;
- Terminal operators, lessees, stevedores, bunkering firms;
- Shipping lines, agents, O&G, ship repair, fishing, other

SAMSA advertises for nominations in national newspapers and via trade associations, and holds roadshows about the work of the PCCs in each port where people can also be nominated. On average 50-70 people turn up at the road shows. There are then elections for PCC membership. Feedback on the PCCs have shown that the private sector has contributed senior level staff to the PCCs, which has not always been matched by the quality of the government representatives.

There are no terms of reference for the PCCs beyond the generic function of advising TNPA on stakeholder views. However they have evolved to take on certain functions: the PCCs (1) approve the proposed capex plan for each port; the representatives include users whom the process allows to have an input into the capex; (2) discuss port performance; the representation of Labour in the PCC means that there is a process of engagement between port users and trade unions; (3) alignment with provincial and local development plans; the participation of other spheres of government means that there is potential for more effective alignment.

Whilst the representation of port users in the PCCs is commendable, they are a very diverse group, sometimes with conflicting interests. At present there is no mechanism to ensure that the three “user members” represent port users as a whole, rather than their own private interests. Increased resourcing and strengthening of the PCC Secretariats to allow them to conduct independent opinion surveys in respect of critical decisions, would strengthen the legitimacy of the PCCs and give them a more powerful voice at government level.

#### **v. The Ports Regulator**

As part of the study a meeting was held with the Ports Regulator. The engagement highlighted that while the organisation was relatively new it has still been able to make an impact on some of its key areas of work; there is however recognition that much more than that needs to be done.

The following issues came through in the engagement:

- The organisation started hiring permanent staff in 2011/12 (prior to then staff were hired on contract). There are currently 18 full time staff and three interns, with a total establishment of 25 shown on the organogram. The Ports Regulator indicated that they are still putting in the basics with regard to HR, and for example, only recently implemented the medical scheme, pension fund, and group life policy.
- In terms of their capacity building priorities: as the Ports Regulator is a new institution they have identified that there are several areas required for capacity building. For example, the complexity of the legal issues related to regulation requires them to improve their capacity in that area; furthermore there is a need to strengthen the economic and finance capacity – the assessment of a tariff application requires a highly skilled multidisciplinary team. The Regulator notes that as there are few people in South Africa with experience of regulatory economics and regulatory accounting, the hiring of staff in that area has been difficult. They also noted that the training that the staff received on the economic and financial issues has been through the London School of Economics, as there is little available locally.
- The Regulator raised concerns that the current port tariff book is unbalanced, with different types of cargo having different cost-revenue relationships. An important priority area for them to address is the rebalancing of the tariff book to take into account both cost recovery requirements and industrial policy objectives. The Ports Regulator indicated that they are assisting TNPA in consultations with port users about tariff restructuring, but it is a long term project.
- The Regulator noted that TNPA’s Port Pricing Strategy should be informed by government policy, including the trade and industrial policy objectives expressed in IPAP and the National Development Plan. The Regulator indicated they have a role to play in supporting the outcomes of IPAP including through the setting of tariffs.
- The first intervention by the regulator in terms of rebalancing the tariff book took place via its decision on the tariff book for 2013/14, which lowered cargo dues by 43.2%, for containerised exports, 14.3% for containerised imports, and 21.1% for motor vehicle exports. This supported industrial policy and brought South African pricing closer to global norms.

- The regulator is aware of the need for a more multidisciplinary approach, as there is a link between the legal, economic, financial, infrastructure and development issues. They have found that approving the tariffs should involve proper economic and market analysis, which requires a broad range of skills – data auditing, pricing benchmarking, and research on market risk provisions.
- There has been a focus on pricing by the Regulator through road shows and a consultative process, the Regulator indicate that they are now also looking at port efficiency and trying to put efficiency measures into the pricing system although that is a complex process (not limited to the fact that TPT is responsible for many of the efficiency issues).
- The budget and the capacity of the regulator are linked, and the Regulator has been engaging with National Treasury for additional financial support. They have argued that they now have a track record of good performance on which to base their requests for additional resources.
- Regulatory Asset Base was raised as a key issue by the Regulatory. They noted that initially there was no capacity to unpack and critically examine the regulatory asset base, but the regulator is now planning to employ consultants to do this exercise. However, due to their limited resources only a portion of the regulatory asset base will be reviewed within the next financial year. The value of the assets is key for the Regulator, as asset management is one of the NPA's main functions. Furthermore, in 2008 TNPA moved to the Depreciated Optimised Replacement Cost (DORC) method of asset valuation. This resulted in a large increase in the size of the regulatory asset base, and asset values which some observers believe are well in excess of fair market values, leading to tariff proposals from TNPA based on inflated revenue requirements
- The Regulator indicated that over time they have been able to improve the quality of information received from TNPA.
- The relationship between the Regulator and DoT has been very supportive. DoT are supporting with the broader maritime strategy and are supporting the regulator with the PCC process. They have regular meetings on research and data collection. The Regulator notes that DoT does not get involved in the detail of the tariff decisions, which allows the regulator to remain independent. The collaboration that they have is around intellectual capacity i.e. work between institutions that have the same objectives.
- The Regulator has a collegiate relationship with SAMSA, who from time to time provide assistance. There is also the common objective of both institutions to have broader development of the maritime sector.
- The Regulator indicated that they attend the PCC as an observer and have found this process to be useful. For example on the Capex budget: while the regulator would still comment on the size of the regulatory asset base when arriving at tariff decisions, the input of the PCC informs their decision as it has user input
- There are a number of issues that the Regulator is not getting to in terms of the National Ports Act, specific concerns are: the need to improve monitoring, provision of ports infrastructure; services; changing the profile of the sector (i.e. through Broad Based BEE) and increasing competition.

The National Ports Act (2005) provides the South African Ports Regulator with a number of responsibilities, these responsibilities have been further developed in the 2007 DoT directives

and then the Regulator followed this up with the 2009 regulatory principles on which to base its decisions. The table below lists these responsibilities; a distinction can be drawn in the responsibilities between policy principles and good governance principles. As evidenced during discussions with the Ports Regulator as well as in its own documentation it has by its own admission a number of challenges, including its own existence not being secure. A further challenge is the regulator being given the responsibility to regulate in the context of a changing policy environment and lack of direction on key policy issues where in some cases there has been contestation of the policy direction; in particular the role of the private sector in port operations. The regulator must then achieve policy objectives which should be tackled by government but is not given the resources to do so. The strategy of the regulator has therefore been to deal with the most pressing concerns whilst postponing other parts of the mandate.

### **Box 1: 2009 Regulatory Principles**

1. Benefits of regulation should exceed costs.
2. Competitive neutrality between public and private sectors
3. Equity (BBEEE)
4. Tariff approval based on Price Cap & Rate of Return approaches
5. Promotion of competition via quality of service regulation
6. Light touch regulation, with more prescriptive approach if this doesn't work
7. Use of either incentive-based, market oriented instruments or command-and-control approach
8. Use of other approaches (voluntary agreements, moral persuasion, joint regulation etc)
9. Ex-ante Regulatory Impact Statements for significant regulatory interventions
10. Promotion of competition where appropriate
11. Engagement with other regulators
12. Consultation with Government on policy trade-offs.
13. Consultation with other regulators
14. Management of unintended consequences
15. Neutrality in respect of different stakeholders' interests
16. Protection of sensitive information
17. Assessment of accuracy and appropriateness of all information
18. Relationships between connected parties to be assessed in terms of public interest
19. Active monitoring of the ports industry
20. Public engagement of stakeholders when nationally significant issues are under consideration.
21. Consideration of impacts of actions on foreign investors
22. Periodic regulatory reviews – public submissions every five years on the quality and relevance of the Regulator's policies and methods

The Ports Regulator has recognised that it has not been able to take forward all of these areas of work, and the 2012 Port Regulators Strategic Plan identified a number of challenges, including:

- Failure to separate TNPA from Transnet
- Establishment of a Single Economic Regulator

- Ambiguous policy environment: the level of port capacity required to support the South African economy; whether to increase capacity through squeezing assets or building new ones
- Inert stakeholders: tariffs (unstructured, self interested responses); complaints that are never formalised for fear of victimisation
- Global financial crisis: increased risks of industrial restructuring; lack of expansionary space for regulatory intervention
- Lack of resources; regulator operating at 45% of full strength.

## **8. A review of the tariff determinations and pricing formula by the regulator as well as issues of service provision.**

### **A review of ports pricing strategies**

Ports pricing is often a complex and opaque matter that results in debates about cross-subsidies, captive markets and abuse of monopoly power. Pricing of port infrastructure and services should be proportional to the costs incurred, including the cost of cargo handling and marine services and the time for which the infrastructure is used. The time ships spend in ports is an opportunity cost, which is not normally included in tariff calculations, but affects the ship operator's choice of port (Meersman, Van de Voorde & Vanelslander, 2004).

An important issue in port pricing is how the recovery of costs is split between ships and cargo; Jansson & Ryden (1979) developed a model of optimal port pricing which proposed an occupancy charge as one of its components. Input pricing advocates prices based on the amount of resources used (*charge per hour*) while output pricing entails charges based on tonnage handled (*charge per tonne*). Their model divides port tariffs into a charge per tonne of cargo that would be differentiated with respect to the elasticity of demand (Ramsey pricing), and a charge levied on the user to reflect the opportunity cost of using the facility. One problem arising from this model is that port infrastructure normally operates at less than full capacity, with an opportunity cost at the margin which is theoretically close to zero.

According to Pettersen-Strandenes & Marlow (2000) ports are like other multi-product industries offering a variety of services, operating under different environments and organisational structures. Therefore port pricing is an economic problem which can be considered through economic techniques and principles. One perspective, based on maximising the welfare obtained from public goods, is that the price should be based on the marginal cost and that marginal cost pricing should be adhered to even in instance where authorities have made serious mistakes in their policies or where ports are confronted with unexpected changes. However this approach treats past investments as a sunk cost, and generates insufficient revenue to allow them to be replaced; it is therefore dependent on a continued inflow of investment from Government.

Gumede & Chasomeris (2013) take a different view and argue that pricing strategies of ports should depend on the manner in which ports are financed and on the ownership status of the port. They argue that it is paramount to take into consideration the vision, economic and political context that the maritime port is operating under before applying a particular port strategy.

Bennathan & Walters (1979) theorised that although ports may be operated under different conditions there are two distinctive doctrines or approaches: the European doctrine and the Anglo-Saxon doctrine. Since then a third "Asian" doctrine has also appeared in the literature. The different doctrines reflect how governments utilise the port system as an instrument of their approach to industrial policy, and defines the relationship of ports, port tariffs and port developments / investments to the broader economy.



The European (*continental*) doctrine views ports as part of the social infrastructure hence assesses their value in terms of contribution to the development of the region and not necessarily in terms of profitability. Under the European doctrine, ports pursue the objective of developing the national or regional economy. Such ports are usually constructed with the support of public funds. The expected benefits of this doctrine include cheaper transportation costs, job creation in the course of port construction, and also multiple impacts for social welfare (Lee & Flynn, 2011). The European doctrine may be further classified as either the Latin model which entails centralised control of ports or the municipal Hanseatic model which involves autonomous port authorities as featured in Belgium, Germany and the Netherlands.

The Anglo-Saxon doctrine consider ports to be financially self-sufficient, making profits or at least covering their costs. The doctrine requires ports developers to evaluate port developments on the basis of commercial cost accounting, so that ports' costs are borne entirely by port users. As port operators utilise business principles, port charges can be expected to be higher than those under the European doctrine. Higher port charges under the Anglo-Saxon doctrine may however lead to less competitiveness as compared to ports under the European doctrine; (in the UK for example this has not been the case as there are high levels of competition between private sector ports which has resulted in port tariffs tending to be lower in the UK than Continental Europe). Furthermore, cross subsidisation is more likely under the European doctrine than under Anglo-Saxon model.

Lee & Flynn (2011) identified elements of a proposed Asian doctrine which are slightly different from the European doctrine and the Anglo-Saxon. In many Asian ports the Government continues to exert a strong influence over policy decisions, either directly through its role as an investor, price setter or regulator, or indirectly through persuasion, negotiation and deal-making. "The function of eminent Asian ports is interconnected to the national economic development plans" (Lee & Flynn, 2011).

These different models and approaches to management and governance over ports would have an implication on ownership, the role of the government vis-à-vis the private sector, the linkages between the ports and the rest of the economy (for example hands off transaction based or supportive of Industrial Policy strategies), and consequently the tariffs that are charged.

According to a report on Strategic Port Pricing by the United Nations Conference on Trade and Development (UNCTAD) in 1995<sup>23</sup>, ports tariffs/pricing methods can be divided into three groups; costs based tariffs, performance based tariffs and value based tariffs. This Cost, Performance, Value (CPV) can be seen as an approach where all three issues converge on a tariff structure which best satisfies the port's multiple objectives within the constraints imposed by its financing requirements and the external competitive environment.

Cost-based tariffs (C) are used to achieve the marketing objective of maximising the use of port services and the financial objective of covering the variable costs of these services. Cost based pricing has been the traditional approach to pricing. A price is fixed on the basis of the

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<sup>23</sup> Strategic Port Pricing; UNCTAD Secretariat, Feb 1995.

costs incurred in providing the services/facilities. This approach is frequently used by governments in regulating the port sector. This pricing strategy is not fixed, as it incorporates different costs (*direct and indirect costs*) that can be taken into consideration, plus an additional amount to generate profit. Those advocating cost based pricing argue that the basis for efficient pricing should be marginal rather than the traditional average cost pricing.

**Marginal** cost pricing achieves the marketing objective of maximising the use of port services subject to the financial requirement of covering the variable costs of these services; whilst **Average** cost pricing achieves full cost recovery from port users, allowing the port to continue in operation indefinitely at its current level of throughput without external cash injections. A distinction exists between short-run marginal cost pricing (SRMC), which treats all past investments as sunk costs, and long-run marginal cost pricing (LRMC) which makes provision for the costs of replacing those assets which are essential for the continued operation of the port at either its existing or forecast future level of throughput. Because of the existence of fixed and variable costs, there are economies of scale in port operations. This type of model would have an impact where there is a competitive market as setting tariffs at below current unit costs may significantly increase throughput, causing unit costs to fall towards a new equilibrium where tariffs are lower than the level originally required to cover costs, and throughput is higher.

Performance-based tariffs (P) are used to achieve the operational objective of maximising the potential throughput of port facilities while limiting the level of congestion experienced by users. Performance based pricing can be divided into congestion pricing and strategic port pricing.

Congestion pricing is advocated to obtain efficient exploitation of ports capacity, as ports are congested at times. Congestion cost is related to the opportunity cost of vessel time, which reflects the alternative income that the vessel forgoes and the inventory costs of the cargo which it is carrying. How the latter is valued depends on whether port congestion merely results in storage time on board replacing storage time on land. Congestion pricing poses practical problems since prices will have to vary with time of week and season of year.

Strategic port pricing reflects the relative demand for port services, the cost of such services and competition between ports. The demand-based strategy is associated with profit maximisation. Prices are based on direct comparisons with other competitive ports or on comparison of the quality of services and the generalised costs of alternative supply chains involving distance, time and inventory costs.

An advantage of tariff comparisons is that it allows ports to evaluate their competitiveness. It can show whether or not tariffs are “reasonable” and more importantly, whether ports are perceived by their users as being expensive when compared with competitors. Furthermore, tariff comparisons provide useful marketing information. However tariff comparisons have serious shortcomings because they ignore important elements such differences in traffic characteristics (commodity mix, ship size etc), differences in the quality of facilities and services provided, and differences in the national policy context for price setting (UNCTAD, 1995).

Value-based tariffs (V) are used to meet the financial objective of generating sufficient revenues to cover the ports costs (*method of cost recovery*) and the marketing objective of limiting the loss of traffic as a result of generating these revenues. Value added pricing aims to generate enough revenues to cover all costs incurred in providing services and facilities, including those not covered at the time of setting a variable cost-based tariff for services.

### **BOX 2: Limitations of Tariff Benchmarking**

Tariff benchmarking is quite widely used within the ports industry, but has several serious limitations. These include:

**The difficulty of finding good comparator ports.** TNPA's seven ports have quite different physical and operational characteristics, and have been designed to handle different sizes and types of ship. It is therefore not relevant to compare TNPA's tariffs as a whole with those of other port authorities. Instead it is preferable to compare charges at individual South African ports with those of their main competitors or nearest comparators. However even this comparison is difficult to make, as TNPA's main most important tariff – cargo dues – is set nationally rather than on a port-by-port basis, resulting in a system of non-transparent cross-subsidies between different South African ports.

**Differences in financial objectives.** Some of the best comparator port authorities have quite different financial objectives to TNPA, either because they are operated on the basis of commercial objectives and expected to make the same returns as a private operator, or because they are operated as a public service and either subsidized or expected to do no more than break even.

**Differences in competition/regulation.** Most port authorities operate in more competitive environments than TNPA, and are not subject to regulation. Those which are regulated have different rate of return requirements, and may use different approaches to asset valuation.

**Differences in date of construction.** The main function of port authorities (as opposed to port service providers like TPT) is infrastructure management. As a result, their main costs are depreciation and finance charges, which depend on when the infrastructure was built, how it was funded, and whether or not the port authority uses historic cost or replacement cost accounting conventions.

**Incompatibility of tariff structures,** and differences between ports in the way in which they allocate costs between different tariff headings. The variability of charging structures and the lack of clear correspondence between specific costs and specific charges means that comparing individual elements in a port tariff is often impossible or meaningless.

**Factors outside of the ports' control** which influence port costs, and hence tariffs, These include location, scale, cargo mix, and the size of ship to be accommodated.

**Differences in size and type of traffic base.** Most ports have cost-based tariffs, and cost structures with a high proportion of indivisible fixed costs. Break-even tariffs therefore depend on the amount of traffic which the port is handling, which is more closely related to the external market environment – competition from other ports – than the efficiency of the port authority. Ports also differ in the way in which they choose to allocate their costs between different sizes and types of ship. This reflects their exposure to competition in different markets, the bargaining power of major customers, and their past history. Many ports' tariff structures are determined more by historic traffic patterns than by those existing today.

**Impact of variations in foreign exchange rates.** Although many ports' tariffs are in US\$ an increasing number (including TNPA's) are not. As a result, comparisons of different ports' tariffs are affected by the exchange rate at the date the comparison is made. This is a particular problem for South Africa, where the Rand/US\$ exchange rate is particularly volatile.

### **An alternative pricing strategy**

An alternative pricing strategy put forward by the European Commission is motivated by the idea of fair pricing, increased efficiency and transparency in port tariffs. Total port costs to the ship and cargo consist of:

$$C = d + f(t + p)$$

Where  $d$  =total port charges<sup>24</sup>,  $t$  = duration of stay at the berth,  $p$  = waiting time and  $f$  = cost of ship and cargo per unit of time.

The duration of the port stay and ship waiting time are seen as quality factors. The duration depends on the time spent on handling cargo, while waiting time is a measure of the quality of service offered by the port. Total time spent in port reflects the opportunity cost to ship-owners of fewer fixtures and to shippers of having to wait for the goods to be delivered. These opportunity costs vary depending on the size and type of the ship and the value of the goods (Pettersen-Strandenes & Marlow, 2000).

The port pricing formula should be designed to be consistent with the objectives of the ports, which may be economic development, financial, marketing or operational. However existing port pricing formulas suffer from trying to satisfy different conflicting objectives. Economists, governments, port users and port authorities all have different views on what constitutes an efficient port tariff (see table 5). The consequences (from a pricing point of view) are market imperfections, which are further increased by information asymmetry, contestability asymmetry, scale effects in upstream port-oriented industries, regional economic considerations, national economic efficiency and environmental issues (Meersman, Van de Voorde & Vanellander, 2004).

Port Player	Possible objective
<b>Government</b>	Efficient management of assets
<b>Economists</b>	Minimising welfare losses
<b>Ports Authorities</b>	Maximising throughput Maximising value added Maximising employment
<b>Users</b>	Transparency of charges Prices reflecting the cost of the services

**Table 5: Port Player and their possible objectives**

Source: Meersman, Van de Voorde & Vanellander, 2004; Pettersen-Strandenes & Marlow, 2000

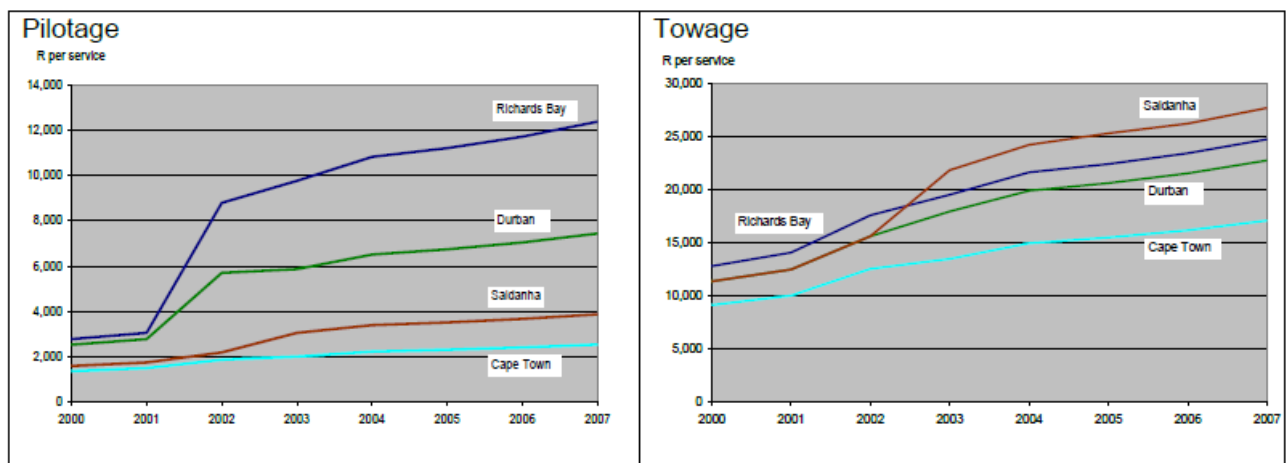
<sup>24</sup> This would include cargo handling and marine services costs as well as payments for the use of port infrastructure such as cargo dues

On the basis of these potential conflicts, it may be concluded that “there is no single solution to the problem which is port pricing. A best practice formula for pricing in the real world does not exist, not even in ports pursuing full cost recovery as a primary objective” (Pettersen-Strandenes & Marlow, 2000).

## 9. South Africa's port pricing

### Past Increases in Tariffs

Past increases in the main tariff items since 2000 are described in the FRIDGE study (Fund for Research into Industrial Development, Growth & Equity (FRIDGE) Administered Prices Study on Economic Inputs: Ports Sector March 2008). For marine services there has been quite a lot of differentiation between ports in the scale of tariff increases, as shown below. The increase for Durban – the mid-point port - has been around 16.5% p.a. for pilotage, and 10.5% p.a. for towage. This reflects the need to improve the financial performance of both services, and above average increases in the costs of labour (pilotage) and equipment (towage).



Source: Fund for Research into Industrial Development, Growth & Equity (FRIDGE) Administered Prices Study on Economic Inputs : Ports Sector March 2008

**Figure 7: Past Tariff Increases for Pilotage and Towage**

Port dues<sup>25</sup> increased over the period even faster than marine services charges, at around 26% p.a., partly as a result of efforts to restructure the tariff to increase the proportion of revenue coming from ships. Cargo dues<sup>26</sup>, in contrast, have increased relatively slowly, for containers for example the average rate of increase between 2001-7 was 3.2% p.a for imports and 3.9% p.a for exports, well below the rate of inflation.

### Current Tariff Considerations

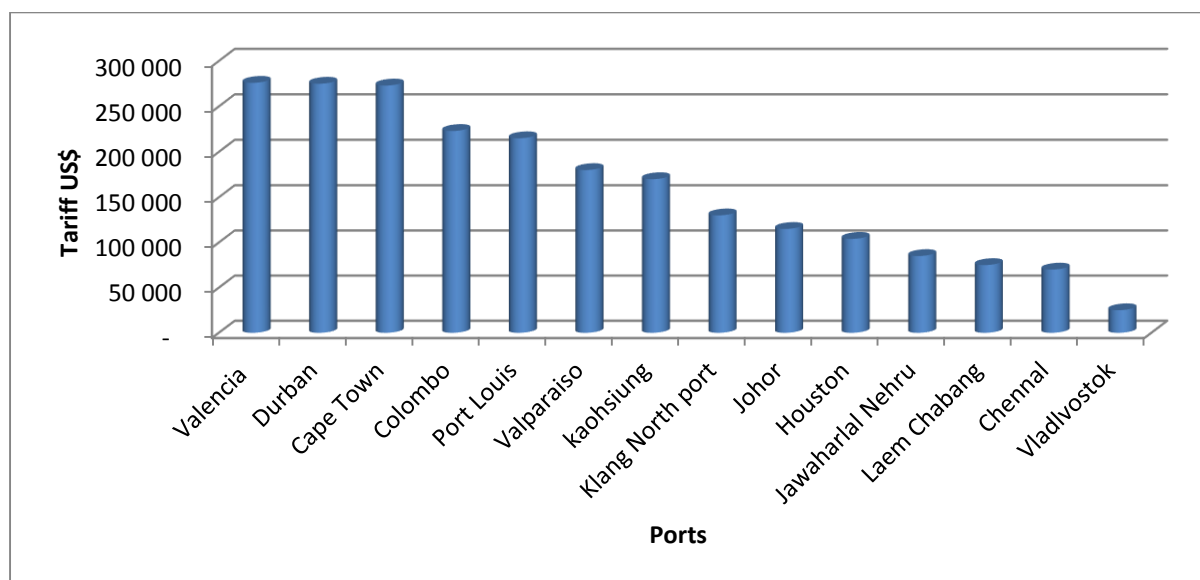
Like most other ports, South African ports pricing strategy is historically determined. "South African ports are nationally owned and governed, having a vision to promote public interests and, at the same time, to exploit its comparative advantage in the pursuit of its objectives" (Gumede & Chasomeris, 2013). On the other hand, section two of the National Port Authority (NPA) Act of 2005 highlights the first objective of the act as "to promote the development of an effective and productive South African ports industry that is capable of contributing to the economic growth and development of our country" (DoT 2005).

<sup>25</sup> **Port Dues** : This is a charge levied by the port to all ships entering the port until the ship leaves the port

<sup>26</sup> Cargo Dues are a fee levied by TNPA to port users (exporters, importers or shipping lines) for using the port facilities for movement of the cargo through it.

South Africa’s port charges have been said to be among the most expensive in the world, and if correct this would undermine the government’s strategy to promote growth of the manufacturing sector and the export of manufactured goods. Because of this widely held view on the high tariff structure of the South African Ports, the Ports Regulator under took a tariff benchmarking exercise. Despite the limitations of tariff benchmarking noted in Box 2 above, the Pricing Comparator Study is still important to us as: evidence for the need for across-the-board tariff reductions; and a starting point for the next stage of the Regulator’s work, which is tackling the structure as well as the level of tariffs; and a means of identifying capacity building requirements in the Ports Regulator, both through analysis of what is wrong with the document and what needs to be added to it to make it more useful for tariff setting purposes

According to the *Global Port Pricing Comparator Study* undertaken by the Ports Regulator of South Africa (2012), TNPA charges US\$275,000 for an average vessel, a price significantly more than the global average of US\$150,000. The average cost<sup>27</sup> per vessel call in Durban and Cape Town were higher than US\$450,000 compared to less than US\$200,000 for Singapore (see figure 8).



**Figure 8: Terminal handling charges (US\$), 2012**

Source: *Ports Regulator of South Africa, 2012*

Note: The definition of handling charges in this study includes all costs from vessel to stack, from stack to vessel, from stack to truck or railcar as the case may be. No provision was made for overstay or other penalties related to the duration that the container remained in the terminal.

Despite limitations in the approach<sup>28</sup> this is an important study in confirming the widespread view that South African ports are expensive. High port prices coupled with inefficiency are

<sup>27</sup> The report methodology notes that “The most appropriate comparator base for port pricing comparisons, in our opinion, is a standardised vessel call. This vessel call has a standard vessel, standard port stay duration and a standard cargo profile.” (Port Regulator 2012:1)

<sup>28</sup> The report states that “No single port charge can be accurately compared across the world purely by its name. Port pricing structures differ in the various jurisdictions and even sometimes within the same port or port system.” (Port Regulator 2012:1)

seen as factors that are contributing to rising cost of doing business in South Africa; and the study coupled with the subsequent tariff decision represented a concerted effort to reduce South African tariffs in order to stimulate economic development by bringing South African tariffs more into line with those at other ports. Transnet have however critiqued the study, and according to Transnet CEO, South Africa's ports are less competitive because of distortions that are being caused elsewhere by particular institutional arrangements. The CEO argued that the prices reflected the costs of doing business in South Africa, as local ports do not receive subsidies from the government.

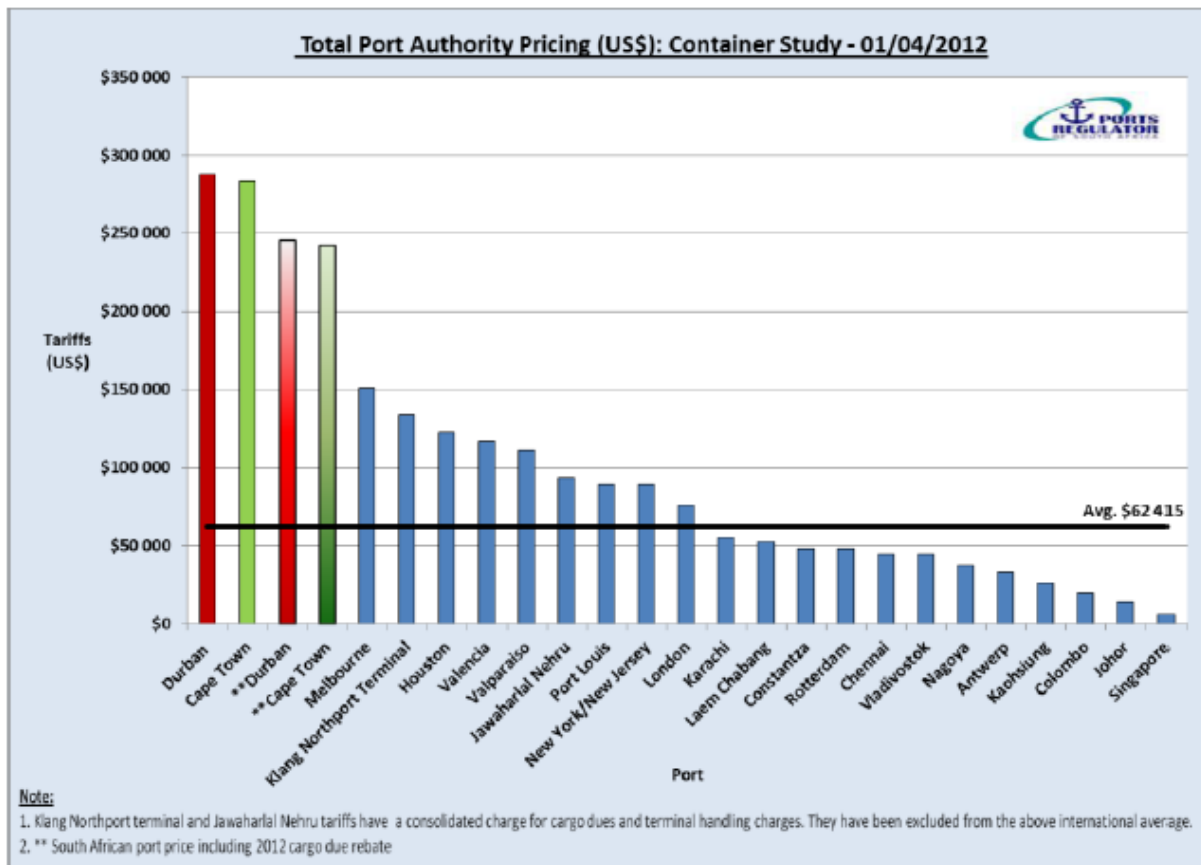
The table and figure below summarises the deviation of South African ports prices from the global average (based on the benchmark sample in the Global Port Pricing Comparator Study).

<b>Sector</b>	<b>Deviation from the global average</b>
<b>Containers (Total Ports Authority pricing including cargo dues with rebates)</b>	294%
<b>Containers (cargo dues with rebates)</b>	721%
<b>Automotive sector (ports authority tariffs with rebates)</b>	212.4%
<b>Automotive sector (cargo dues with rebates)</b>	710%
<b>Coal (TNPA costs faced by cargo owners)</b>	-50%
<b>Iron ore (TNPA costs faced by cargo owners)</b>	-10%

**Table 6: Summary of South Africa's ports tariffs deviation from the global average, 2012: from Port Regulators Global Port Pricing Comparator study**

*Source: Ports Regulator of South Africa, 2012:6*





**Figure 9: Total port pricing for containers, comparison of Durban and Cape Town with global average**

Source: Port Regulator 2012:10

The tariff for export of primary commodities mainly coal and iron ore were below the global average, while the tariff on containers and automotive are significantly higher than the average. This difference arises because wharfage charges (subsequently replaced by cargo dues) were originally a percentage of cargo value, whilst cargo dues (which are still to a large extent based on cargo value) form a much higher proportion of “all-in” port charges in South Africa than elsewhere.

According to the Port Regulator, “It is clear from the data that South African cargo owners and logistics operators face significantly higher infrastructure costs than the rest of the sample when using containers to move cargo. With the bulk of South Africa’s manufactured goods arguably exported through containers this is clearly contradictory to current industrial policy aiming to incentivise value addition, broadening of the manufacturing base and increasing manufactured exports.” (Port Regulator 2012:9).

Besides the favourable terms for the coal and iron ore exports, the other area where South African port tariffs compare favourably with international ports is in the area of transshipment – i.e. the movement of containers through a port (rather than the containers arriving at their final port of destination). The figure below sees South Africa below the global average with its comparatively low tariffs in this area; it is also one of the few areas in which South African ports face competition.

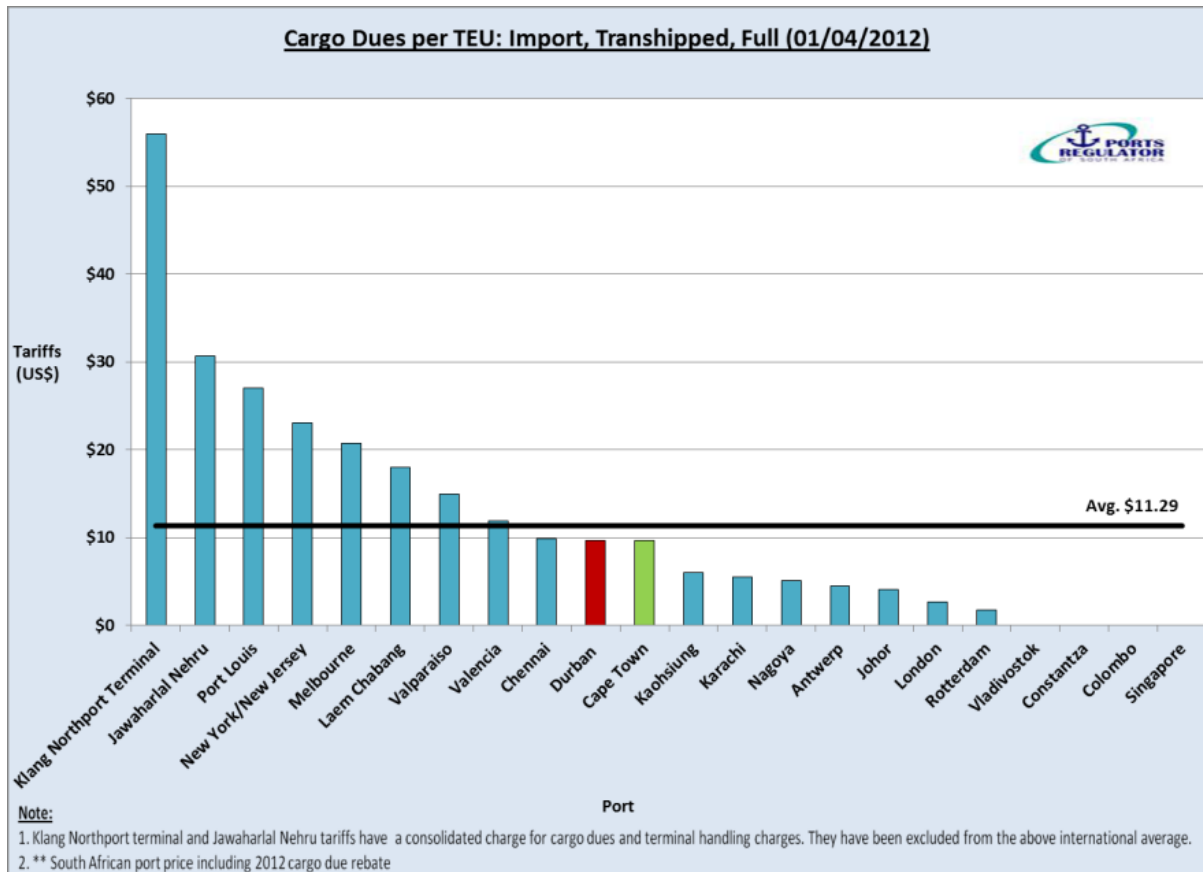


Figure 10: Comparison of Cargo Dues for transhipment  
 Source: National Ports Regulator 2012:7

The Port Regulator raises concerns with the price competitiveness of transhipment cargo versus the excessive high prices of general cargo. It however would like to undertake research to get a better understanding of this area and “*assess whether the network benefits that are gained from transhipment are translated into lower system costs for South Africa, where and to whom that value accrues and what would be an appropriate articulation of pricing to better manage system behaviour and tariff incidence.*” (National Ports Regulator 2012:7)

In interpreting the findings of their Global Port Pricing Comparator study, the Port Regulator notes that it is aware of the limitation of such a study and they are clear on the value of the study, which is to give an indication of the direction that the pricing should be moving in: “*The process and outcomes of benchmarking port pricing is not an exact science. The global averages that we have defined in our studies do not represent what we should be charging in RSA ports. Rather, it gives us some indication of the direction that our pricing should be moving in, not the exact absolute level of pricing. It also provides us with a reasonable indication that would allow assessment of the alignment between port policy, port pricing and economic policy. The identification of pricing differentials that exist does not automatically suggest that certain industries should be charged at a globally comparable rate.*” (National Ports Regulator 2012:11)

The Regulator also notes that the findings of the study “provides a reason to assess and shift port pricing in a direction that better reflects the global reality and actually aligns with South African economic structure, economic policy, industrial policy and economic development policy.” (IBID)

These findings confirm the experiences of Port Users who in their submission to the Port Regulator on the tariff application state that TNPA is “charging price increases which are higher than inflation; hindering global competitiveness; lowering productivity and efficiency; not applying cost pass through pricing principles; not having a justifiable pricing methodology; poor service delivery and port security; being inconsistent and non-compliant with the national policies” (Gumede & Chasomeris, 2013).

Strengthened by the findings of the study as well as the ongoing critique by port users of the TNPA monopolist high pricing, the Port Regulator has started to address the tariff structure in key areas. The table below shows that during the period of 2005-2008, TNPA maintained port charges adjustment below the inflation rate, with 2009 seeing an increased rate. It can be noted from the table that since the establishment of the Ports Regulator there has been a large differences between the tariff increases applied for and those approved. In 2010 the Ports Regulator approved tariff increase was 4.42 %, slightly above the country’s inflation rate of 4.30%. In 2011, TNPA applied for an 11.91% tariff increase, the Regulator approved 4.49%, also slightly below the country’s inflation rate of 5.0%. In 2012, TNPA applied for an increase of 18.06%, which was above the country’s inflation rate of 5.50% and the Regulator approved an increase of 2.76%.

	2005	2006	2007	2008	2009	2010 applied	2010 approved	2011 applied	2011 approved	2012 applied	2012 approved
<b>Marine Services</b>	3.6	4.5	5.6	7.5	8.14	10.6	4.42	11.91	4.49	18.06	2.76
<b>Lights, Ports &amp; Berth dues</b>	3.6	4.5	5.6	7.5	8.14	10.6	4.42	11.91	4.49	18.06	2.76
<b>Cargo dues</b>	1	3.5	4.5	6.75	8.14	10.6	4.42	11.91	4.49	18.06	2.76
<b>CPIX to CPI<sup>1</sup></b>	3.9	4.6	6.5	11.3	7.1 <sup>1</sup>		4.3 <sup>1</sup>		5.0 <sup>1</sup>		5.5 <sup>1+2</sup>

**Table 7: Percentage Change in South Africa’s charges, 2005-2012**

Source: Gumede & Chasomeris, 2013

Note:

1. South Africa changed from using CPIX to using CPI in 2009
2. Estimated CPI in 2012 is 5.5 as at 24 October 2012
3. Shaded area is the period when the Port Regulator determined the tariff increases

However the largest challenge to the tariff structure was in 2013, where the TNPA applied for a 5.40% increase for the period of April 2013 to March 2014, the Regulator declined the proposed tariff increase. The Regulator concluded the following as the appropriate tariff book adjustments for the tariff year 2013/14:

- a) Cargo due tariffs
  - i. Container full export cargo dues to be reduced by 43.2%
  - ii. Container full imported cargo dues to be reduced by 14.3%
  - iii. Motor vehicles exported on own wheel (Ro-Ro) cargo dues to be reduced by 21.1%
- b) The remainder of the tariffs in the tariff book are to be retained at the same level as were over the 2012/13 tariff year.

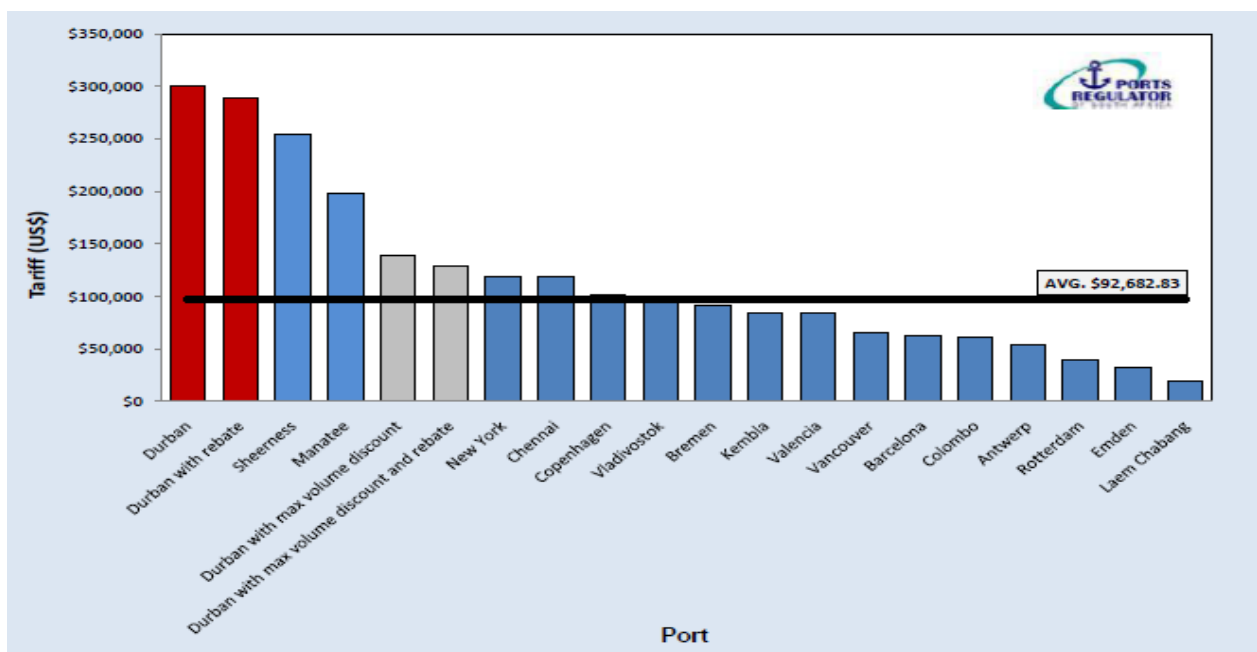
## 9.1 Port Tariffs and the Automotive Sector

The competitive pricing of South Africa's port tariffs have an impact on export competitiveness of manufacturing export sectors, including the automotive sector.

The National Ports Regulator, as part of its tariff comparator study (1/4/2012), undertook a specific study on the automotive sector. The study notes the different tariff categories and compares the Port of Durban (as one of the main automotive export ports) with 16 other ports. The findings, which are summarized in the table below, put Durban on the upper end of the cost spectrum (before rebates and discounts); however even after taking those factors into consideration it remains significantly above the average.

Tariff categories	Average Tariffs in US\$	RSA tariff in US\$	RSA port tariff Discount/Premium to global average
Cargo Dues	\$31,724.64	\$267,678.93	743.76
Cargo Dues with rebate	\$31,724.64	\$256,986.03	710.05
Cargo Dues with maximum volume discount	\$31,724.64	\$107,071.57	237.50
Cargo dues with maximum volume discount and rebate	\$31,724.64	\$96,378.67	203.80
Total Port Authority Tariffs	\$92,682.83	\$300,253.57	223.96
Total Port Authority Tariffs with rebate	\$92,682.83	\$289,560.68	212.42
Total Port Authority Tariffs with maximum volume discount	\$92,682.83	\$139,646.22	50.67
Total Port Authority Tariffs with maximum volume discount and rebate	\$92,682.83	\$128,953.32	39.13
Total Port Authority Tariffs (excluding cargo dues)	\$61,211.41	\$32,574.65	-46.78

**Table 8: NPA (Durban) port tariff deviation from the global average: Port Regulator Automotive Study - 01/04/2012**



**Figure 11: Total Port Authority Pricing (US\$): Port Regulator Automotive Study**

The above table highlight that if the cargo dues are excluded the tariff on vessels at Durban is lower than the average. Therefore the study shows that it is the exceptionally high cargo dues that push the total port costs above the sample average. The Port Regular states that

“automotives face significant premiums to the global average. Cargo dues are significantly higher than the global average with total cargo dues on vehicles at a 744% premium to the global average.” although the Regulator indicates that “Vessels face a 47% discount to the global average.” (Ports Regulator 2012:10).

Until 2002 the main charge for the use of port infrastructure levied by TNPA and its predecessors was wharfage, which was calculated as a percentage of the value of the goods. This was difficult to calculate, as there were often long disputes about the true value of the goods (caused by deliberate under-invoicing etc.) so like most other countries South Africa moved from an ad valorem tariff to a per ton tariff.

However the per ton tariffs were designed to yield the same revenue per ton for each commodity (in 2002) as the ad valorem tariffs had, just to avoid rocking the boat. Since then, the tariff structure has remained fossilised and increases each year have been applied across the board.

South Africa has not moved on – as most other countries have – to changing the calculation of cargo dues to either a cost recovery or an ability to pay basis. A cost recovery mechanism would be a bit more difficult to apply in South Africa than elsewhere, as the Transnet structure means that there are a lot of shared overhead costs which can be split between cargo types. As a result, direct costs are a lower proportion of total costs than in other ports with leaner management and lower profit targets.

Willingness to pay is also more difficult to apply because the South African ports system operates as a monopoly. In a more competitive situation different types of cargo will have different alternatives available for the routing of their supply chains, resulting in different elasticity of demand and ability to use Ramsey pricing. In South Africa cargo has to use TNPA ports whether it likes it or not. Income elasticity is fairly small because port charges are a fairly small proportion of the delivered cost of goods, whilst price elasticity is almost non-existent.

Due to the system of discounts in place, the Regulator calculates these net figures and comes to the conclusion that:

*“Large automotive companies therefore face cargo dues at 3 times the global average with the smaller automotive companies facing cargo dues at 8.43 times the global average. On the total Port Authority tariff comparison, large automotive companies pay 1.4 times the global average while small automotive companies face tariffs at 3 times the global average.”* (Ports Regulator 2012:10).

The high port tariffs have been raised as a concern by the National Association of Automobile Manufacturers of South Africa (NAAMSA)<sup>29</sup>. The Port Regulator and NAAMSA have been engaging with each other as part of the Regulator’s industry engagement process, and submissions were made to the regulator by NAAMSA on the need to lower the port tariffs to support the long term sustainability of this key manufacturing sector. The automotive sector

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<sup>29</sup> NAAMSA is an industry association that represents 22 Automotive Manufacturing Companies

contributes between 12% - 15% to South Africa's manufacturing industry output and 6% to the country's GDP.<sup>30</sup>

In a formal submission from NAAMSA to the Port Regular it points out that as inbound and outbound logistics costs contribute to approximately 20% of the vehicle value when exporting, the competitive pricing of port tariffs has a significant influence on the cost competitiveness of the industry (NAAMSA 2012:3). NAAMSA also note the need for the industry to keep exporting (and therefore be internationally competitive) if it is to remain viable.

In their submission NAAMSA prepare an estimate of the breakdown of the costs to produce and export a vehicle (assuming 50% localisation on a locally manufactured vehicle). This breakdown is presented in table 9 and shows that South Africa ports charges contribute to about four percent of the vehicle's total delivered cost.

<b>Cost Element</b>	<b>Contribution to total delivering cost</b>	<b>Port cost as % of cost element</b>	<b>Port cost as % of total vehicle. Total delivering cost</b>
Inbound logistics	9%	15%	1.35%
Parts cost	65%	2.6%	1.7%
Manufacturing cost	8%	0%	0%
Outbound logistics	10%	0%	1%
Warranty and recall	3%	10%	0%
R & D cost	5%	0%	0%
<b>Total</b>	<b>100%</b>		<b>4%</b>

**Table 9: Port Costs as a percentage of total vehicle delivered cost**

Source: NAAMSA, 2013

The industry considers the 4% cost of ports tariffs to total delivered cost to be very high; and indicate that their members have benchmarked this against their operations in other countries and these port costs are not competitive.

NAAMSA's argument is therefore that a reduction in automotive manufacturing sector's port charges would directly improve the export competitiveness of the automotive industry. Improved competitiveness would result in increased exports as well as the opportunity to secure contracts from within the global operations of their members. Ultimately they argue that the improved port tariffs would contribute to the economic development objectives of the country to create jobs and increase investment.

NAAMSA further argue in their submission that part of the reasons for the decline of South Africa's exports (in both volume and value) and the decline of the contribution of the manufacturing sector to GDP can be traced to the decline in South Africa's international competitiveness; and the very high port tariffs have an impact on the international competitiveness of the country.

As a response measure NAAMSA indicate that some of their members have diverted some of their cargo to the port of Maputo (Mozambique) due to the lower cost offered by Maputo.

<sup>30</sup> South African Yearbook 2012



NAAMSA say in their submission that they are not in favour of SA ports losing business however the Port of Maputo “is more cost competitive than the South Africa ports. Maputo can therefore deemed to be a local benchmark should the NPA deem ports in Europe, Asia and the US to be structured differently from Southern African Ports” (NAAMSA 2013:8).

Individual automotive companies have stated that while they are working with Transnet to lower costs, they are increasingly looking at Maputo as alternative to Durban. A news report notes that “*BMW South Africa has introduced a dual port export model involving the ports of Durban and Maputo in Mozambique because of the substantial increase in its production for the export market*” and quoting BMW SA’s managing director the report goes on to say “*BMW vehicles exported from South Africa will more than double from around 33 000 to almost 70 000 vehicles a year. In line with this increase in volumes, we had to look carefully at our export logistics and using Maputo in conjunction with our existing export supply chain in Durban makes sound business sense.*” (Business Report 2 August 2013).

A report from Rennies Ships Agency indicates the increasing capacity of the car terminal at Maputo and the possible expansion of that facility:

*“The car terminal at Maputo will possibly be increased in capacity. The second phase expansion, which increased capacity from 52 000 units to 121 000 units, was completed in July. The terminal is now running at capacity and is considering a further capacity increase.”* (Rennies October 2013)

NAAMSA in their submission to the Ports Regulator make specific comments on the NPA tariff application; raising concerns with (1) the volumes projected by NPA as understated; (2) with the Regulatory Asset Base arguing that NPA “seems to try and maximise the valuation of the asset” (NAAMSA 2012:9); and (3) the approach does not incentivize improved port efficiency nor does it provide an incentive to invest capex in productive assets.

The frustration of the industry with the tariff pricing and the approach of NPA is captured in the following statement:

*“Our suggestion to the NPA would be not only to share in the joys of the economy but also to share in the spoils. NAAMSA members employ market pricing methodologies commonly used in competitive environments to price their products. It starts at the level of what the customer is willing to pay rather than what the manufacturer wants as a return or profit. This is the fundamental difference of the RAB methodology used by the NPA versus the methodology used in competitive environments.”* (NAAMSA 2012:10).

NAAMSA also raise concern with the charges of TPT: they note that NPA has the power to cap excessive increases in Terminal Handling Charges but has not done so; nor has NPA brought in competition which they are equally able to do.

While the Ports Regulator has not as yet made an impact on the latter issue of the NPA exercising its responsibility over TPT<sup>31</sup>, it has played a role in significantly reducing the

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<sup>31</sup> The conflict of interest in both NPA and TPT being part of the Transnet group has been noted elsewhere in this report.



automotive tariff charges in the tariff book adjustments for the tariff year 2013/14; with Motor vehicles exported on own wheel (Ro-Ro) cargo dues reduced by 21.1%. The industry however note that there is still scope to reduce these charges further over time to bring the port charges closer to international pricing. While the Ports Regulator also significantly reduced container charges<sup>32</sup>, auto charges were singled out because of government as well as industry pressure to reduce them to improve export competitiveness (IPAP2; 2012). The auto industry is much better organised than container shippers/ consignees, of whom there are thousands, with no representative industry body.

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<sup>32</sup> Key reasons for reducing containers tariffs were that charges were acknowledged by everyone to be extremely high, reflecting the high value of the goods within the containers. In addition to consumer goods, containers also carry manufactured exports and the inputs for manufacturing in South Africa, so high cargo dues were seen as damaging to South Africa's efforts to diversify into higher value added manufacturing activities.

## 10. Analysis of South Africa's tariff determination

TNPA services at the ports can be divided into two streams; provision of basic port infrastructure and marine services for port users. Tariffs related to the various facilities and services are reviewed on an annual basis and published in the Tariff Book. The current tariff structure was developed as part of a tariff reform exercise conducted in 2002. TNPA acknowledges that the tariff structure is now out of date and has therefore embarked on a thorough redesign exercise.

Since 2009, TNPA has been required to apply for approval of tariff adjustment by the Port Regulator. The process is for the Port Regulator to call for stakeholders' submissions and comments on TNPA's proposed port tariff application. The Port Regulator then assesses TNPA's proposal and stakeholders' submissions in line with the National Ports Act 12 of 2005, National Commercial Port Policy (NCP) of 2002 and 2007 Department of Transport Regulations to make a decision on the port tariff application. TNPA uses the Revenue Requirement (RR) method to calculate its proposed tariff increase. This method ultimately entails that port users pay for all port investments and all ports operating costs, whilst allowing TNPA to make an agreed rate of return on its assets. The stakeholders argue that the tariff methodology does not provide any incentive for TNPA to reduce costs or improve efficiency, as it guarantees TNPA full cost recovery and profit, even though some of the cost items may be higher than is necessary due to inefficiencies.

### Methodology used by the Regulator

The RR approach has been used in the past by the Port Regulator for the determination of tariff amendments in response to NPA annual tariff applications. The Regulator has decided to continue with this approach for the year 2014/15. The current formula for RR methodology is as follows:

$$\begin{aligned} & \textit{Revenue Requirement (RR)} \\ & = \textit{Regulatory Asset Base (RAB)} \\ & \times \textit{Weighted Average Cost of Capital (WACC) + Operating Costs} \\ & + \textit{Depreciation + Taxation Expenses} - (+)\textit{Claw back} \\ & + (-)\textit{Excessive Tariff Increase Marginal Credit (ETIMC)} \end{aligned}$$

*Source: Port Regulatory Manual for Tariff Year 2014/15*

The methodology used by TNPA differs from that of the Regulator; the RR formula used by TNPA for the year 2013/14 contains a financial requirement component which was not used in the previous calculation of the RR and of the tariff book. It was therefore not dealt with by the Regulator and no determination as to its applicability was made. TNPA's RR formula:

### *Revenue Requirement (RR)*

$$\begin{aligned} &= [\text{Cost of Capital} \times \text{Regulatory Base (RAB)}] + \text{Operation Cost} \\ &+ \text{Taxation Expense} - \text{Claw Back} \\ &- \text{Financial Requirement Costs Previous Year} \times (1 \\ &+ \text{Cost of Capital previous year} \\ &+ (-)\text{Excessive Tariff Increase Marginal Credit (ETIMC)} \end{aligned}$$

Source: Port Regulator Record of Decision Year 2013/14

The revenue requirement is then converted into tariffs, which is presented in the form of a detailed tariff book.

The percentage tariff increase allowed by the Regulator each year has been calculated by:

- Estimating the Revenue Requirement that will enable TNPA to make a specified rate of return on its regulatory asset base, whilst covering its operating, depreciation and finance costs, and nominal tax payments. The formula includes a claw back provision to correct for differences between actual and forecast outcomes in previous tariff periods, and a mechanism for smoothing out future tariff increases caused by spikes in capital expenditure (the Excessive Tariff Increase Margin Credit or ETIMC) ;
- Deducting the revenues obtained from real estate (unregulated) to obtain the revenue requirement for TNPA's marine businesses (regulated);
- Estimating the marine business revenue that would be obtained for the tariff year in question with no tariff increase but allowing for TNPA's forecast increase in traffic;
- Dividing the revenue requirement by the forecast revenues with no increase in tariffs to obtain the required percentage increase in tariffs.

### **Review of the Revenue Requirement Methodology**

Each element of the Revenue Requirement Methodology formula is discussed below:

**Regulatory Asset Base (RAB):** There are three main issues relating to the RAB, relating to:

- The treatment of unregulated assets;
- The inclusion of assets which are now surplus to requirements;
- The appropriateness of the Depreciated Optimised Replacement Cost methodology used to value regulated assets.

*Unregulated assets:* The RAB contains assets which relate to unregulated facilities and services, primarily real estate which is rented to terminal operators, port users and third parties whose premises are located within port boundaries.

The current importance of real estate is shown in Table 10, which compares real estate asset values and revenues with the total value of the RAB and the Revenue Requirement proposed by TNPA for FY 2013-4. This makes the real estate issue appear relatively unimportant. However it is likely to have a higher profile in future as TNPA's new pricing strategy (discussed later) would increase the proportion of total revenue raised from rents from 19% to 33%.

	Net book value	Proposed revenues
Real estate	8,899	1,856
TNPA total	66,318	10,272
Real estate (%)	13.4%	18.1%

**Table 10: Importance of Unregulated Assets in 2013/14 (Rm)**

Source: TNPA *Tariff Application 2013/14*

Although the revenue from real estate is deducted from the Revenue Requirement, the inclusion of real estate in the RAB distorts the tariff calculations in three ways:

- Real estate assets are mainly land, which is extremely difficult to value. It is understood that TNPA currently values unregulated assets mainly at historic cost, whereas regulated assets are valued at replacement cost;
- Rents are determined by a mixture of competitive bidding (new leases) and negotiation (pre-Ports Act leases, some of which still have long periods to run). This makes rental revenues unpredictable, and less than fully transparent when individual leases are treated by TNPA as commercially confidential;
- A high but unknown proportion of TNPA's rental income comes from TPT, another member of the Transnet Group. The value of the assets used by TPT, and the basis for calculating its negotiated rental payment, are both undisclosed. If they are lower than would be achieved in a competitive market, this will have raised current tariffs for other port users.

As TNPA both sets and regulates TPT's rents, regulatory transparency would be improved if TNPA were obliged to disclose TPT's rental payments in a form which would allow direct comparison with rents for equivalent properties which have been determined by competitive tendering. Unfortunately regulatory issues related to TPT are beyond the Port Regulator's immediate mandate.

The best way of handling real estate assets would therefore be to exclude them from the RAB altogether (along with their revenues) and to value them in TNPA's financial accounts at the discounted value of future rental income.

*Surplus assets:* Without a detailed examination of the asset register there is no way of knowing whether the RAB contains any assets which are surplus to requirements.

This is a common concern in many regulated industries. However we believe that it is unlikely to be a major issue in South African ports because of the way in which surplus assets were treated in the asset revaluation carried out for TNPA by ZLH Projects & Naval Architecture (Pty) Ltd in 2008. In this exercise Design Efficiency Factors were included to reflect the extent to which individual assets were fit for purpose. Redundant assets were assigned a factor of 0, effectively removing them from the asset base.

*DORC methodology:* The Regulator has expressed concern about the Depreciated Optimised Replacement Cost (DORC) methodology used by ZLH for the valuation of quay walls & jetties, breakwaters & sea walls, dredged channels & basins, and graving docks. This gave rise to a

steep increase in TNPA's asset values in 2008, when the exercise was first carried out, but was accepted by the Regulator in the absence of any alternative.

In 2013 the Regulator decided to appoint consultants to undertake an independent valuation of the largest assets in the RAB. Because of budgetary constraints, it is understood that this review - which has not yet been completed - will cover approximately one quarter of the RAB by current value.

Amongst the issues likely to be raised by this review are:

- The use of replacement costs rather than historic costs for items such as breakwaters and capital dredging which are unlikely ever to require renewal;
- The assumptions used to derive standard unit costs for each type of facility (per linear metre, square metre or cubic metre), including local adjustment factors for water depth and seabed conditions;
- The utilisation and design efficiency factors used to convert Modern Equivalent Asset values into Optimised Replacement Costs;
- The estimates of remaining useful life used to calculate the accumulated depreciation allowances in the DORC. The proportion of asset value written off as a result of depreciation is believed to have been significantly lower than that previously recorded in TNPA's financial accounts.

TNPA does not keep separate regulatory accounts, which makes it difficult to reconcile RAB asset values with those shown in its audited accounts.

It is unclear whether a substantial reduction in the size of the RAB as a result of changes to the valuation methodology would require capital write-offs in the financial accounts, or whether the high asset values currently recorded in the RAB – combined with the Regulator's refusal to authorise TNPA's requested tariff increases – should have led to impairment charges in the financial accounts in accordance with IAS16.

*Other issues:* There are several other issues relating to the RAB where the Regulator needs to be very careful to ensure consistency in its overall methodology, avoidance of double counting, and prevention of unjustified additions to the value of the RAB. These include:

- Choice of the index used to inflate asset values between major asset revaluations. This is important because at certain times in the recent past construction costs have risen out of line with general increases in the cost of living;
- The impact of foreign exchange variations on the replacement cost of assets which would normally be purchased overseas;
- The inclusion of Work In Progress (WIP), and its relationship to the difference between opening and closing asset values used to calculate the mid-year RAB;
- The adjustment of asset values from their opening value to a point mid-way through the tariff year to allow for short-term inflationary effects;
- The valuation of working capital, including the cash flow effects of VAT payments;
- The treatment of revenue clawbacks (+ve or -ve) which can be regarded as unforeseen changes to working capital.

- The treatment of deferred taxation, which represents a positive cash flow for TNPA on which money can be earned.

**Weighted average cost of capital (WACC).** This represents the costs of equity and debt, weighted according to their relative proportions in TNPA's capital structure.

*Gearing ratio:* The first methodological problem occurs because debt is raised by Transnet Group rather than TNPA. Given TNPA's strong cash flow position, it can be argued that its proportion of debt as an autonomous port authority would be lower than that for the Transnet Group as a whole, where large amounts of debt have been required to fund capital investment in the railways.

In its Regulatory Manual for 2014/15 the Regulator proposed a nominal gearing ratio of 50%, mainly on the basis of precedent and lack of any clear alternative. However, ideally the cost of debt should be related to TNPA's actual borrowings. This would entail:

- Assignment of an appropriate proportion of Transnet's existing corporate debt to TNPA, by analysing the main purposes for which "pooled" loans have been used. This may not be internally documented, but could be estimated by analysing the extent to which Transnet's various operating divisions could have financed their capital expenditures from their own cash flows;
- The creation of a separate account within Transnet for any future borrowings used to finance TNPA's capital expenditure plan;
- The establishment of separate borrowing limits for TNPA.

*Cost of equity:* The cost of equity is estimated by TNPA using a Capital Asset Pricing Model:

$$K = R + (MRP \times \beta)$$

where K is the post-tax cost of equity, R is the risk-free rate of return, MRP is the market risk premium and  $\beta$  is the organisation-specific risk factor.

The risk free rate of return (R) is based on the average return on South Africa Reserve Bank 10 year bonds over the last 25 years, deflated by the increase in the Consumer Price Index. This represents of the cost of government borrowing, and is the minimum cost of equity which TNPA should seek to recover, given the government's position as the owner of Transnet.

The market risk premium (MRP) is the additional return demanded by investors for investing in a market portfolio comprising all of the risky assets in an economy, instead of a riskless asset. At present it is based on an academic study by Dimson, Marsh and Staunton, published annually in the *Credit Suisse Global Investment Returns Sourcebook*.

One contentious issue is whether the MRP should include capital gains in share prices over and above inflation when the MRP is being used for regulatory purposes. Share price increases are an important source of additional returns for investors, but may lead to double counting in the case of TNPA given that some capital gains are already included in the RAB through the DORC method of revaluing assets.

Estimation of the  $\beta$  factor is even more contentious, as there are very few listed companies in the ports sector whose share price movements can be used to assess sector risk; in addition, most of these port companies have quite different business models to TNPA.

TNPA's first tariff application to the Regulator based the  $\beta$  factor on the performance of 14 other port companies worldwide (later increased to 17). Because these were seen by the Regulator as significantly different from TNPA, the basis for the calculation was later changed to JSE Top 40 companies.

However it can be argued that TNPA faces a much lower level of corporate risk than these companies in view of the fact that it is a monopoly whose tariffs are set to ensure that it recovers its costs and always makes its target rate of return on capital. For this reason the Regulator has chosen to apply a  $\beta$  of 0.5 to all assets, which is equivalent to an equity  $\beta$  of 0.86 using the Hamada equation to re-lever the  $\beta$  value.

In view of concerns about the high level of tariffs and their impact on economic growth, a strong case can be made for abandoning the Capital Asset Pricing Model as a way of calculating the cost of equity, and replacing it with a rate of return on equity requirement set by government.

Further research is needed to identify what a reasonable rate of return would be, the likely impact of the change on South Africa's international competitiveness, and the wider financial implications of the change for the Transnet Group. The change would also need to be reflected in the shareholder compact between Transnet and the DPE, and the key performance indicators used to monitor the compact.

Changing the way in which the cost of equity is calculated is one of the most important interventions the government can make to put port tariff regulation on a sounder footing, allowing it to remain transparent whilst ensuring that it becomes more closely aligned with economic policy. The two main risks are that:

- The change will undermine Transnet's financial sustainability, and reduce its ability to raise funds on the international markets at competitive rates;
- Politicians will be tempted to modify the return on equity to meet short-term objectives, thereby increasing rather than reducing regulatory uncertainty.

*Cost of debt:* The *Regulatory Framework for 2014/15* recommends use of the average embedded cost of debt (*pre-tax nominal*) of Transnet Ltd. The suggestion that a nominal interest rate should be applied to the debt component of an RAB which has already been revalued at replacement cost is a cause for concern, as it will result in the double counting of inflation.

As in the case of the gearing ratio, the strong financial position of TNPA means that it might be able to raise debt at a lower rate of interest than Transnet as a whole, although as an autonomous organization separated out from Transnet it would lack economies of scale, experience in raising debt, and a good track record in terms of debt repayments, thereby increasing the cost of debt.

Two of the common challenges in estimating the cost of debt – floating interest rates, and foreign exchange gains or losses on foreign currency loans – are relatively unimportant in the case of TNPA because of the revenue clawback and financial adjustment factors included in the Revenue Requirement formula.

**Operating costs:** Operating costs accounted for 36% of TNPA's proposed Revenue Requirement in its 2013/14 tariff application. There is no way of knowing to what extent these correspond to the costs of an "efficient" organisation, and the Regulator at present has no way of cross-checking them even against TNPA's audited financial statements.

In future the Regulator intends to analyse the operating cost estimates on a line-by-line basis, requiring TNPA to justify each item. So far this has not been possible because of a lack of resources. Without any form of benchmarking, however, it is difficult to see how the regulatory objective of increasing efficiency is going to be achieved.

One area of particular concern is the size of TNPA's contribution to Transnet Group expenses. In its 2011/12 actual expenditures this accounted for 9.7% of TNPA's operating costs, but by the time of its 2013/14 tariff application it had risen to 15.7%.

Transnet Group costs include losses on Transnet Capital projects and social responsibility costs as well as management and administration costs, which are shared across all of the operating divisions. The formula used for calculating TNPA's contribution to Transnet Group costs has not been disclosed in any of its past tariff applications to the Regulator.

In future the Regulator will require Transnet Group expenses to be broken down to a level of granularity that will allow their probity and necessity to be assessed, identifying the actual goods and services received and monitoring the purposes for which they were used.

The Regulator will also require an externally audited financial report on all line items forming part of Transnet Group expenses, and reserves the right to claw back all or any of these expenses in future tariff decisions if it is not satisfied that the expenditure is within TNPA's mandate. This should close off one potential loophole for recycling TNPA net cash flows into other Transnet businesses.

**Depreciation:** Depreciation costs are linked to the assumptions about depreciation used to calculate the size of the regulatory asset base, and should be consistent with them, although not necessarily with the accounting conventions used for depreciation in Transnet's audited accounts. This is because port assets such as breakwaters normally have useful economic lives which extend well beyond the conservative assumptions used in port accounts.

The switch from an accounting to a condition-based assessment of depreciation in 2008 was probably a good thing, as it will result in the recovery of capital costs from users over much more realistic time frames. However the one-off reduction in the percentage of asset values regarded as already depreciated means that current and future port users will be covering some of the depreciation costs already paid for by past port users, generating windfall profits for Transnet.



The over-payment issue may be one of the reasons for the statement in the *Regulatory Manual for 2014/15* that in future depreciation will be calculated on a straight line basis over 40 years on the opening balance of the RAB. There are limitations in this approach, firstly because there is no evidence to suggest that 40 years is a realistic weighted average for the normal economic lives of TNPA's assets, and secondly because it is inconsistent with the methodology used to value the Regulatory Asset Base. It also has implications for the assessment of TNPA's tax liabilities, opening up a gap between the taxation expenses used to calculate future tariff increases and those which Transnet has to fund out of its real-life cash flow.

**Taxation:** TNPA is not a legal tax-paying entity, and any attempt to estimate a pro rata share of the actual tax paid by Transnet may be quite unrepresentative of the tax burden it would have borne as a free-standing corporation. Under these circumstances, the Regulator has chosen to use a notional tax allowance that is as close as possible to the actual tax that an independent company would have paid.

This has been based on the notional net revenue which TNPA would receive after deducting from the Revenue Requirement the cost of debt (included in the WACC), operating expenses, and the amount of depreciation calculated for regulatory purposes. As noted above, this may differ in amount and timing from the tax paid by Transnet on TNPA's behalf, particularly when corporate tax allowances are taken into account.

**Clawback:** The effect of claw-back is to ensure that TNPA does not gain or lose from variances between forecasts made at the time of the tariff application and actual financial outcomes. These can be caused by unforeseen changes in capital expenditure, operating expenses, depreciation, taxation, traffic volume and mix, and tariffs.

It is important that the clawback mechanism is used only to compensate TNPA for changes which are beyond its control, and that it is supported by a proper financial model which will allow the revenue implications of each material change to be estimated correctly. Otherwise there is no incentive for TNPA to manage its business efficiently, and ensure that it is adequately protected against major commercial risks.

The calculation of clawback adjustments in previous tariff approvals has been completely opaque. It is therefore impossible to comment on the appropriateness or otherwise of the methodology used.

**ETIMC:** The Excessive Tariff Increase Margin Credit component of the Revenue Requirement is a mechanism to phase in or delay tariff spikes caused by substantial increases in capital investment. It is a sensible provision given the scale of TNPA's future investment programme but, like clawback, the method used to calculate it is obscure.

Because ETIMC is a revenue collected from port users before TNPA is entitled to it, ETIMC should be shown as a separate reserve in TNPA's regulatory balance sheet and the financial return on it deducted from the TNPA's Revenue Requirement.

If this is not done, it will represent a significant addition to TNPA's free cash flow which is likely to be consolidated within the Transnet Group accounts and pooled with other cash flows for financing investments throughout Transnet.

## 11. Proposed Pricing Strategy and Future Structure of Tariffs

### Key issues related to the current tariff structure

According to the National Port Act of 2005, TNPA has a mandate which includes lowering the cost of doing business in South Africa; however the application for higher tariffs would substantially raise the costs of doing business in South Africa, the cost of exports and ultimately the country's competitiveness. Stakeholders have argued that the current South African port pricing system is characterised by:

- Lack of a clear set of principles and rules for determining individual tariffs for the various services and facilities;
- Lack of clarity and transparency regarding all operating costs, expenses and revenues incurred or generated from a specific service or facility, as well as the value of the capital stock related to such services or facilities;
- Lack of explanation for differential tariffs for different commodities with the same cargo handling classification;
- Lack of detailed information with respect to services or facilities pricing and cost relationships, making it impossible to determine where and in which direction cross-subsidisation takes place;
- Lack of information on how the tariff structure promotes access to ports and efficient and effective management and operation of ports.

*Source: TNPA Proposal for new tariff structure 2012*

Stakeholders have further stated that South African ports tariffs have a number of imbalances which include high level of cargo dues, and large differences in the levels of cargo dues between different cargo types and commodities for which there is no clear justification. Cost-based maritime services tariffs are relatively low resulting in cross-subsidisation of some services and low revenue collection compared to international landlord port authorities. The question facing the Ports Regulator and TNPA is whether a robust methodology, based on a clear set of principles and rules, would result in improved tariffs while still maintaining the sustainability of TNPA – and how to effectively and transparently implement that methodology.

Tariff regulation in the ports sector has been in place for only four years (from FY 2010/11) and is still evolving. One of the first tasks of the Regulator has been to reach agreement with TNPA on a common methodology for determining the overall level of tariffs, as under the 2005 Ports Act there is no requirement for TNPA and the Ports Regulator to use the same methodology for proposing and approving tariffs.

The focus in tariff regulation has so far been on the calculation of TNPA's overall Revenue Requirement. This has been converted into "across the board" tariff increases, with the structure of tariffs remaining largely unchanged until the most recent review, when the Regulator reduced cargo dues for container imports and exports and automotive exports by large and unexplained amounts.

It is recognised by both TNPA and the Regulator that the existing tariff structure does not reflect government economic policy objectives. In addition, there is no correspondence

between costs and revenues at a disaggregated level i.e. for different commodities or types of cargo, or even for individual facilities and services.

### **New pricing strategy**

To overcome this problem, TNPA is in the process of developing a new pricing strategy which will be used to divide up the agreed Revenue Requirement between different categories of user. An outline of the strategy has been published for consultation purposes, but approval of the general principles is not expected until March 2014. Further work will then be undertaken by TNPA to develop detailed proposals for individual tariff items which can be submitted to the Regulator for approval. The target is to have the new tariff structure in place by 2015/16.

The proposed new pricing strategy is aimed at enabling the on-going investments in the maintenance and extension of the South African ports system, and ensuring effective cost recovery across all national ports. TNPA argues that the pricing strategy will address the requirements of the Government's policy direction, as well as concerns communicated to TNPA by stakeholders. The Port Regulator has proposed that an alternative and independent asset valuation be undertaken as the basis of a cost recovery model for the pricing strategy. This would provide a better basis for establishing the overall revenue requirement to be recovered from users, but would make a very limited contribution to the restructuring of tariffs to support the economic development strategies being promoted by the government.

TNPA proposes a revised pricing strategy that would redistribute the revenue requirement between different categories of user, and be implemented in stages through to 2019. The pricing strategy would consolidate national port dues and berth dues into a single tariff heading. The TNPA currently obtains 61% of its revenue from cargo owners, 20% from shipping lines and 19% from its tenants (TNPA, 2012). TNPA's proposed pricing strategy would increase tenant and shipping line contributions and the new distribution of the revenue requirement is expected to be 46% from cargo owners, 21% from shipping lines and 33% from tenants (see table 13 below), with required revenue driven by a new tariff methodology which would be more highly disaggregated.

The strategy further proposes the simplification of cargo dues by unifying them into a single tariff for each cargo handling type (containers, dry bulks etc.).

Port tenants would be responsible for property administration costs and related property maintenance expenditure, as terminal operators derive value primarily from access to the quay wall and the adjacent land (TNPA, 2012). It is not clear how rents will become more closely aligned with other TNPA property costs (primarily depreciation and the return on assets) if they continue to be determined through a competitive bidding process.

The following principles have been proposed for the new pricing strategy;

- Is based on defensible asset allocation principles.
- Applies the user pays and the cost recovery principles to ensure port users contribute to the Required Revenue.

- Allows future tariff adjustments to be based on changes in Required Revenues by port user group.
- Charges shipping lines for the costs of marine services and for maintenance of common wet infrastructure.
- Improves alignment to the financial structure of a landlord port (with higher real estate revenues).
- Results in a considerable drop in cargo dues for manufacturing industry, particularly for containers and the automotive sector.
- Supports the South African economic objective of encouraging the export of beneficiated goods.

Source: TNPA Public hearing – Pricing Strategy 4-7 March 2013.

The proposed TNPA pricing strategy will be aligned with six strategic pillars shown and explained below:

Key Pillars	Description
Comprehensive	<ul style="list-style-type: none"> <li>• Covers all revenue and costs</li> <li>• Addresses all charges</li> <li>• Clarifies all pricing modifiers</li> <li>• Provides sufficient detail for regulation</li> </ul>
Defendable/Compliant	<ul style="list-style-type: none"> <li>• Based on clear principles</li> <li>• Aligned with regulatory directives and regulator expectations</li> <li>• Supported by a robust methodology</li> </ul>
Simple	<ul style="list-style-type: none"> <li>• Easy to understand and administer</li> <li>• Rationalises charges</li> <li>• Simplifies charges for ports users</li> </ul>
Competitive	<ul style="list-style-type: none"> <li>• Comparable to ports world wide</li> <li>• Protect regional market share</li> <li>• Support South Africa economic development</li> <li>• Fair on all ports users</li> <li>• Allow for competition within ports</li> </ul>
Implementable	<ul style="list-style-type: none"> <li>• Full legal and regulatory compliance</li> <li>• Addresses impacts on ports user</li> </ul>
Sustainable	<ul style="list-style-type: none"> <li>• Allows maintenance of existing infrastructure</li> <li>• Allows future expansion of infrastructure</li> </ul>

**Table 11: Key Pillars of the Pricing Strategy**

Source: TNPA, 2010; Gumede & Chasomeris, 2013

## The future structure of tariffs

TNPA's current tariff structure has five main categories of charge, as shown in the table below. Although most of the major cost items can be assigned to tariff categories, the relationship between costs and revenues is far from clear, even at this highly aggregated level. Matching costs and revenues becomes increasingly difficult as the business is split into smaller units.

Category	Major cost items	Tariffs used to recover costs
Wet infrastructure	Lighthouses & navigation aids, port control, entrance channels, breakwaters, turning basins, vessel traffic services, maintenance dredging	Light dues, port dues, and traffic service fees (ship)
Dry infrastructure	Quay walls, roads & railways, buildings, fencing, lighting, security, bulk cargo services, and some terminal infrastructure	Cargo dues (cargo), berth dues (ship)
Marine services	Pilotage, tug assistance, berthing, running of lines, floating cranes	Pilotage & tug charges, berthing fees, running of line fees, floating crane hire (ship)
Ship repair services	Provision & maintenance of ship repair facilities, including associated cranes	Docking & undocking fees, dock occupancy charges, berth dues for vessels at Repair Quays (ships)
Land & terminals	Leased land	Rents (operators)

**Table 12: TNPA Tariff Categories**

Source: TNPA *Tariff Application 2013/14*

TNPA's 2013/14 tariff application identifies the main problems with the tariff structure to be as follows:

- High levels of cargo dues;
- Large and unjustified differences in cargo dues between different commodities and cargo types. These are the legacy of ad valorem wharfage charges, which were converted into cargo dues per ton or per TEU only in 2002;
- Low tariffs for maritime services, which are based on an activity-based costing exercise undertaken in 2002 which has not been updated;
- Low levels of revenue from real estate compared with landlord port authorities elsewhere in the world.

In its Pricing Strategy proposals dated September 2012, which were widely discussed in roadshows in March 2013, TNPA affirmed the basic principle that each tariff item should recover the costs of providing the related infrastructure and services. However the results of this exercise will always be subjective because of the difficulty of assigning assets which are shared by more than one user or service.

In an attempt to reduce cargo dues, TNPA made some very major changes to the current allocation of assets shown in Table 12. In particular, much of the responsibility for dry infrastructure costs (land, buildings and particularly quay walls) was switched from cargo owners to tenants, whilst much of the responsibility for wet infrastructure (breakwaters and

channels) was switched from shipping lines to cargo owners. The net effect of this and other smaller changes is that the sources of future revenues will change as follows:

	<i>Now</i>	<i>Future (proposed)</i>
Shipping lines	20%	21%
Cargo owners	61%	46%
Terminal operators/tenants	<u>19%</u>	<u>33%</u>
Total	100%	100%

**Table 13: Change in the proposed structure of revenue income**

This represents a major switch in the pricing structure from regulated to unregulated charges.

*Maritime services:* These charges will be increased, despite the transfer of some wet infrastructure assets to other port users, because of a past history of under-recovery of costs. In future individual tariffs for pilotage, towage etc will also be more closely related to costs to eliminate cross-subsidisation. Berth dues will be ended in the interests of tariff simplification and because responsibility for the recovery of quay wall costs – their original rationale – will be passed to terminal operators. Changes will also be made to the types of units used for charging purposes (hours, operations, tons etc) in the interests of efficiency, fairness and reduced administration costs.

*Cargo dues:* There will be one basic rate for cargo dues for each different cargo handling type (i.e. containers, dry bulk, break bulk, liquid bulk, RoRo) replacing the current differentiation of cargo dues by commodity. Whilst this is more logical, it will make it more difficult to offer concessionary port charges to particular industries which the South African government wishes to promote.

For the purposes of calculating cargo dues, eligible costs will be split between cargo types pro rata to the number of vessel calls, before dividing the revenue to be obtained from each cargo type by its expected traffic volumes to obtain a tariff per ton or TEU. This approach will ensure that cargoes moving in large shiploads, such as dry bulks, will continue to pay lower cargo dues per ton than cargoes using smaller vessels such as general cargo ships.

Deviations from the base rates for cargo dues will be introduced in line with government priorities for promoting exports and beneficiation industries, but these reductions seem likely to be determined fairly arbitrarily, and will have to be offset by increases in cargo dues for other types of cargo.

The Required Revenue from cargo dues will decrease by 25% as a result of the proposed reallocation of assets, and there will also be a redistribution of cargo dues revenues between different types of cargo, with a large drop in the proportion of revenues taken from containerised cargo, and a substantial increase in the proportion contributed by bulks.

<i>Distribution of revenues from cargo dues</i>		
	<i>Now</i>	<i>Future (proposed)</i>
Containers	64%	39%
Dry bulks	12%	32%
Liquid bulks	11%	9%

RoRo	8%	6%
Break bulk	5%	15%
Total	100%	100%

The proposed changes have prompted a great deal of discussion, but most of the comments have related to the impact of the changes on individual businesses. Independent research has not been published which shows the overall economic impact of TNPA's proposed changes to its tariff structure.

Separate tariffs are envisaged for transshipment containers (low), coastal containers (low) and empty containers (high) which reflect a mixture of policy objectives, international comparisons and market competitiveness rather than direct contributions to cost recovery.

*Beneficiation rebates:* The final important change that is likely to be made to the structure of regulated tariffs is the introduction of lower tariffs for exports produced through the beneficiation of South Africa's natural resources. This is in line with **the dti** policy objective of increasing local value added.

The rebates are directly related to the local value added included in their manufacture. For example TNPA's beneficiation proposals for the metals sector are that iron ore, a raw material, would receive no rebate, whilst pig iron would receive a 10% discount, rolled steel and pipes a 60% discount, and structural steel, machinery and white goods an 80% discount.

It is claimed that the beneficiation concept can easily be transferred to all other industrial sectors, but further research will probably be needed to ensure that this is done in a way which represents value for money, ensures that TNPA remains financially sustainable, and does not price un-beneficiated goods out of their markets.

Ideally such research would be based on national input-output tables, taking into account differences between sectors – and possibly even between major companies - in their use of imported inputs.

TNPA estimates that the average beneficiation rebates applying to different types of exports would be as follows:

<i>Reduction in cargo dues</i>	
Containers	59%
Dry bulks	0.3%
Liquid bulks	10%
RoRo	80%
Break bulk	7%

*Rents:* In respect of rents, which are unregulated, TNPA proposes to gradually replace "historic" rents with market-based rents linked to the value of the value of the land. Some of these "market-based" rents will be determined by competitive tendering, but where rents are negotiated – for example for land leased to TPT or to long-stay tenants who have made



considerable investments in their properties – rents will be based on the value accruing to terminal operators as a result of their access to a waterfront site.

Future rental values are likely to be based on a fixed annual charge plus throughput-related royalty payments, reflecting the amount of investment in the property already made by the terminal operator. Lease agreements will also, where possible, incorporate minimum guaranteed throughputs and maximum tariffs that terminal operators can charge to their customers.

Although higher rental charges will be financially beneficial to TNPA, they will increase the costs of TPT and other tenants, and may well be passed straight through to shipping lines and cargo owners in the form of higher cargo handling charges. If this happens – and there is no reason to believe it will not – then the benefits to the South African economy of TNPA's tariff restructuring may become relatively small.

## 12. Competition issues

The primary distinctions when analysing port competition are between:

- Inter-port and intra-port competition;
- Common user facilities and captive user facilities;
- Competition in the market and competition for the market.

### Inter-port and intra-port competition

Inter-port competition occurs between ports, whereas intra-port competition is mainly between operators of similar types of terminals or providers of similar types of services within the same port. South Africa has very limited exposure to either type of competition, and this is one of the reasons why port charges have remained so high.

Inter-port competition is very limited in South Africa for several reasons:

- TNPA is the only legally-permitted developer of ports in South Africa. Other countries usually have multiple competing port authorities or - in some cases – allow private investors to build new ports at any suitable location, subject to government approval and/or the outcome of pre-determined technical investigations, investment appraisal and public consultation procedures;
- TNPA manages the South African ports system as a single entity, and has a tariff structure which – for equity reasons – is broadly similar at all ports. It can be argued that economic efficiency would be improved – and investment needs minimised – if there were more differentiation of prices between ports to encourage traffic to move to those ports which have short-term spare capacity;
- The ports are evenly-spaced around the coastline and quite distant from one another. Although the inland location of South Africa's main urban and industrial complex (Gauteng) should in theory increase competition, this has occurred to only a small extent because of the transport cost advantage of Durban (particularly for cargoes to/from Asia) and the fact that some liner services to/from Europe terminate at Cape Town;
- Even where the ports are reasonably close together, for example Cape Town and Saldanha or Durban and Richards Bay, they have historically handled different types of cargo – and as a result are provided with different types of infrastructure - which considerably reduces the scope for competition;
- The distribution of bulk cargoes between ports is strongly influenced by the geography of the rail network, which is expensive to change. Feasibility studies relating to the transfer of iron ore exports to Asia from Saldanha to Ngqura, for example, have shown that the savings in sea transport costs would be outweighed by the capital and operating costs of the additional rail links required;
- More recently, TNPA has begun to move towards a policy of managing certain potentially competing port pairs in order to achieve a better balance of traffic between them from the perspective of investment requirements, quality of service, industrialisation opportunities or environmental benefits. The best example of this is the planned transfer of oil and manganese traffic from Port Elizabeth to Ngqura to reduce

pollution and safety risks, and open up the seafront at Port Elizabeth for recreation and higher value commercial uses;

- Transnet has been reluctant to use differential rail tariffs as a policy tool for re-balancing traffic between ports, and thereby increasing competition between them on the waterfront. The option of equalising rail tariffs to Gauteng from Durban and Ngqura has been widely discussed, but no action has yet been taken;
- Although TNPA has decentralised the day-to-day management of its ports, these are not encouraged to compete with each other, and all of the important long-term decisions relating to investment, quality of service and pricing are taken centrally;
- TNPA HQ, which takes these decisions, usually bases them on academic studies, in-house research, or administrative judgements, rather than market research, contacts with customers, or proposals from potential private investors.

Unlike many other countries, South Africa has not yet liberalised its ports sector, and this is a serious impediment to inter-port competition. At the same time, it does not achieve the full benefits of centralised planning because of weak policy guidance from DOT/DPE on the government's economic strategy and its requirement for supporting port facilities.

Although TNPA's corridor-based approach to port planning is an attempt to rationalise its investments and bring them closer into line with the economic needs, it is largely a trend-following approach (predict and provide) into which it is difficult to incorporate trend-setting projects designed deliberately to change South Africa's development path.

Intra-port competition is equally limited, but for different reasons:

- TNPA's sister company TPT still has a dominance over certain sub-sectors of the cargo handling market (automotive, containers and – to a less extent break bulks). These are generally the most profitable sub-sectors, where the high prices charged by TPT are almost as damaging to the economy as the high prices charged by TNPA;
- It has been impossible to break-up and/or transfer key TPT business units to the private sector, for example Durban container terminal, because of trade union resistance. At the same time, Transnet has lobbied strongly (and successfully) for new facilities such as Ngqura container terminal to be assigned to TPT rather than private sector competitors, even though trade union power is much weaker;
- TPT is unregulated, and its accounts are unpublished and opaque. As a result, it is impossible to judge the extent to which it cross-subsidises its activities, using the revenues from areas over which it has a monopoly to cut prices in areas where it faces private sector competition;
- TNPA determines the land rents and concession fees charged to TPT and its competitors, an important item in their cost structures. These rents and fees have never been published, and the methods used to determine them have never been revealed, giving rise to concerns that even where competition does exist, it may be badly distorted by Transnet's own financial interests;
- Most terminals are highly specialised. Except in a few areas such as dry bulks, traffic volumes at individual ports are insufficient to support more than one terminal of any particular type, creating a string of natural monopolies. The existence of multiple

terminals in one port will only create competition if they have the capacity to handle cargo for the same markets;

- Competition between terminal operators generally increases investment needs. For example two berths operating at 40% of capacity require more investment than one berth operating at 80% of capacity. Investment finance in South Africa is in short supply, so it is rational in economic welfare terms to restrict competition if this postpones the need for new investment providing that a regulatory framework is in place to prevent abuses of market power by sole operators;
- This argument is enhanced by the existence of economies of scale in terminal operations, which make the costs of operating one two-berth terminal less than the costs of operating two one-berth terminals. Queuing theory also suggests that in addition to lower unit operating costs, a two-berth terminal will result in savings in ships' waiting time costs, particularly when the terminals are operating at close to capacity;
- In practice, some South African ports (East London, Port Elizabeth, Cape Town) do not have enough space to support multiple competing terminals, particularly in sectors like containers which require deep water and large areas of land;
- The number of private companies interested in providing port services is relatively small, and strongly focused on container terminals. Most of the large terminal operators are from outside of South Africa, and have high rate-of-return requirements, giving rise to concerns about whether their participation in South African ports would be in the national interest;
- With one or two exceptions, South African companies have little experience of port operations, giving rise to concerns about the quality of service that would be provided (compared with a large and experienced operator like TPT). It may also be difficult for them to raise the necessary capital, particularly if they are required to enter the market on the basis of BOT contracts rather than leasing the basic infrastructure from TNPA

Marine services (tugs, pilotage, mooring/unmooring) are provided on a monopoly basis by TNPA. Here the scope for competition is limited by the small size of the market, whilst the need for competition (or regulation) is less than in the case of terminals because of the closer relationship of tariffs to costs, and lower profit margins.

### **Common-user and captive-user facilities**

Common-user facilities are those which are available to all port customers on equal terms, whilst captive user terminals are those which are dedicated to handling the cargo of one or more users, with vertical integration into other parts of their supply chains.

Common user facilities are most common for containers, break-bulk cargoes and low volume dry bulks, particularly where traffic volumes for individual commodities/cargo types are insufficient to fill a terminal on their own. The solution in this case is normally a multi-purpose terminal.

**Containers.** Worldwide, most container terminals are operated on a common user basis, even when they are controlled by individual shipping lines. Although the number of shipping

lines is small (usually in the range 3-15 for large terminals), the number of cargo owners runs into the thousands, making common user terminals the preferred model.

Common user container terminals are normally operated by either independent terminal operators (ITOs) or shipping lines. In the past, many countries avoided ceding control of their container terminals to shipping lines for fear of deterring competing lines from using the port. There were also concerns about discriminatory treatment of competitors and confidentiality of information about the cargo (and customers) of competing lines.

In countries like South Africa, where around 70% of containers are handled by either Maersk/Safmarine or MSC, there were additional fears that ceding control of terminals to dominant lines would result in further shipping industry concentration, with the risk of abuse of monopoly power and limitation of choice in the provision of shipping services.

In practice, the last 20 years have shown major shipping lines to be responsible terminal operators, allaying many of these fears. If anything the pendulum has swung the other way and shipping lines are now much sought after as terminal operators because of their ability to bring in additional transshipment traffic. There has also been further concentration in the shipping industry itself, through merger & acquisition activity and the formation of mega-consortia such as P3, G6 and CKYH, which result in shipping lines automatically using each others' terminals wherever available.

Competition issues such as discriminatory treatment are normally dealt with in the concession agreement, with the fall-back of an appeal to the Competition Commission if there is evidence of abuse of dominant position.

The main regulatory issue is providing access to the basic infrastructure needed to create competition, as the most common minimum capacity for a new container terminal (0.5m TEU p.a.) is quite large in relation to total South African demand (3.8m TEU p.a.), which is dispersed between ports. There is strong evidence of the private sector's willingness to build as well as operate new common user container terminals, but so far potential investors have been discouraged from applying for permission to do this by Transnet's negative attitude towards competition in the container sector.

**Automotive.** Although there is a high degree of vertical integration in the automotive industry, third party-operated common user terminals are more common worldwide than captive user terminals, particularly for imports. It is relatively rare for car manufacturers to operate common user facilities.

Many car manufacturers regard the loading and unloading of ships as a non-core business which benefits from outsourcing to a third party. In addition, there are economies of scale which make it more effective to use a single third-party contractor rather than competing ones, even though the barriers to entry at first sight appear low.

The speed at which cars can be moved on and off ships gives a single terminal a very high capacity in relation to demand, making it cost-efficient to share. Shortages of space for car storage at the terminal can be overcome by building multi-storey car parks, whilst quality of service (particularly lack of damage to the cars) is more important than price. The trains which

bring cars to the ports, and the ships which take them away, often carry cars for more than one manufacturer, making it practical to have a single loading point in the port. The case for competing port facilities in the automotive sector is therefore rather weak.

**Break-bulk.** Competition issues in the break-bulk sector are significantly different at Durban and Cape Town. At Durban most of the companies handling break bulk cargoes such as forest products and steel have their own waterfront facilities at Maydon Wharf, some of them on very long leases. The key issue in respect of competition is therefore how best to enable new companies to enter the market, given that Maydon Wharf is fully built up and waterfront leases rarely change hands.

There are two ways in which this can be done:

- By building, or allowing private companies to build, new captive user break bulk terminals wherever suitable land is available in the port. However break bulk cargo has not been growing as quickly as containers or dry bulks, so it is unclear whether there is actually any concealed demand for this type of new facility;
- By encouraging a third party operator – possibly TPT – to build a new common user berth for break-bulk cargoes, which would be able to handle demand from smaller traders. This appears to be TNPA's current policy;

At Cape Town there is more non-dedicated waterfront available for break bulk cargo, most of it assigned to TPT. Here there are two ways of increasing competition:

- Split up the general cargo area of the port (Berths E-L) into 2-3 terminals, to be leased by competitive tendering. If necessary, a restriction could be imposed to prevent any operator (including TPT) from controlling more than one terminal;
- Liberalise stevedoring and shore handling, so that any company can handle cargo at these berths on a short-term, non-exclusive basis, renting mechanical equipment and storage space from TNPA for very short periods of time (the ship's time in port plus say a maximum of 30 days). This would result in a tool port type of arrangement for break-bulk cargo.

Both of these proposals would require substantial changes to be made to current (unpublished) operating agreements between TNPA and TPT.

**Dry bulks.** The majority of dry bulks at South African ports use dedicated facilities which are operated either by captive users, or by Transnet on behalf of what are effectively captive users. The economics of captive user versus common user terminals varies by product, and the sector's structure has also been influenced by historical accident and decisions taken many years ago when South Africa's two main bulk ports – Saldanha Bay and Richards Bay – were first designed.

At Saldanha Bay the iron ore berths continue to be operated by Transnet on a common user basis, although the number of South African suppliers is relatively small.

At Richards Bay coal terminal, which is operated by a consortium of mining companies, one significant competition issue has been the ability of new BBEEE mining companies to buy into

the terminal. Another has been the design of a quota system to allocate the available capacity between shareholders taking into account the size of their shareholdings and changes in their demand pattern (year-by-year growth in demand, and day-by-day ship arrival patterns).

Both ports have ample space for expansion. The decision on whether to build captive user or common user facilities in future can therefore be left to the market. The main role of the Ports Regulator is to ensure that the voice of the market is heard, particularly in the case of small bulk traders wishing to set up captive user facilities which require some public investment.

**Liquid bulks.** Here a distinction needs to be made between hydrocarbons and other liquid bulks. The former are high volume products which move through high capacity terminals, where it is often difficult to justify the existence of more than one terminal. The latter are specialist products which bear a closer resemblance to dry bulks, with separate terminals for each commodity, at least for storage purposes.

**Ship repairing.** TNPA operates the ship repairing infrastructure at each port (dry docks, ship lifts, slipways) on a common user basis, mainly to promote competition within the ship repair industry and avoid Transnet having to become involved in ship repairing itself.

This is a quite different model to other countries, where the normal arrangement is for ship repair companies to own their own infrastructure and operate it on an exclusive use basis.

There may not be enough space for this model to be introduced at South Africa's older ports, but it should be possible at Saldanha Bay and – if there demand is there – Richards Bay. Vertical integration would increase competition between South Africa's two largest ship repair companies and help them to compete more effectively against ship repair companies outside of South Africa. However it would disadvantage the smaller ship repair companies which lack the resources to build their own infrastructure, and would make it more difficult for new BBEEE companies to enter the industry.

### **Competition in the market and for the market**

Competition in the market refers to competition between established companies which already have the right to operate specific facilities, whilst competition for the market refers to competition for the right to provide services through access to the necessary resources i.e. licenses, leases and concessions.

As noted earlier, the South African port services market is still too small and fragmented to allow much competition *in* the market. However there is scope for much more competition *for* the market. This can be achieved in two ways:

- Breaking down the existing infrastructure controlled by Transnet into a larger number of terminals, and introducing competitive tendering for each terminal. TPT should be allowed to bid, but only on the same terms as private sector operators;
- Reducing the duration of leases and concessions which do not require substantial amounts of investment, so that competition for them occurs more frequently. However this needs to be done carefully, as short-term contracts and the need to rebid competitively at the end of each contract period can discourage private investment.

There may also be a case for providing some temporary support for new entrants, to enable them to compete on equal terms with Transnet, if diversification of suppliers and an increase in competition are regarded as important government policy objectives.

## **Conclusions**

The South African ports market is never going to be as competitive as NW Europe or SE Asia, but there is scope for an increase in competition in some areas, of which container handling is probably the most important.

As noted earlier in the paper it is still not clear whether the government wishes to increase competition in the ports sector, and whether the benefits would be large enough to justify the potential disruption from strikes and the financial weakening of Transnet.

Some countries, of which Singapore and Dubai are the most obvious examples, have chosen not to introduce competition, and aim to achieve similar outcomes through a mixture of shareholder pressure and regulation. This option is also available for South Africa.

Whether or not to pursue an increase in competition is an important government policy decision which will have a major impact on the future role of the Ports Regulator. It is a decision which needs to be taken very soon, to allow the Ports Regulator to move on quickly to the next stage in its development.



### 13. Conclusion

One of the features of the ports regulation system in South Africa is that there is no visible structured relationship between the two line Ministries (DOT and DPE) that are involved in the ports sector. While the two departments would most certainly have regular interaction at a broad policy level, it is not clear how they ensure effective outcomes to drive the growth and development of the ports sector.

There is therefore scope to strengthen the oversight role of both Ministries and for them to give stronger guidance to the policy environment. It is clear to all that the Ports Regulator also requires strengthening at a number of different levels and that it needs to be given the resources and mandate to carry out its functions properly.

Despite the challenges facing the regulatory bodies and within the policy environment, the Port Regulator has taken a relatively short period of time to develop its methodology and effectively challenge the tariffs of TNPA. The Ports Regulator has recently been effective in bringing down selected tariffs however the implication of less profitability of the National Ports Authority will result in less income for the Transnet Group, and because of the cross subsidy in place may have implications on their capital expansion programme, most notably in the area of railroads. Transnet has argued that there is a clear link between the success of the railroads and the well-being of the ports (i.e. in transporting the goods and commodities that go through the ports) but there are also other rail users enjoying the benefits of cross-subsidies.

TNPA has been supportive of the Ports Regulator and their requirements to access information. However, while it appears that the relationship between TNPA and the Ports Regulator is good, the most recent decisions made by the Regulator have had budgetary consequences for TNPA. There is also scope to improve the working relationship particularly in the tariff setting process.

The lack of separation of TNPA out of Transnet has been raised several times in this paper. The challenge from a regulatory perspective is that an autonomous National Ports Authority would be better able to manage the pricing and service levels of ports operators – including TPT. The current regime allows for a situation where the Regulator can lower the tariffs that TNPA can charge, however, TPT (which remains out of the regulatory reach of the Ports Regulator) can then increase its charges to overcome the shortfall that Transnet group may experience. Alternatively, TNPA may find other ways to maintain its levels of profitability by for example increasing its rental income, which could have negative consequences for economic development policies; for example ship repair companies that use the port and are a potential area where significant jobs can be created would face higher rents and would not necessarily be able to pass through those increases to customers; however, terminal operators (including TPT) that face higher rents from TNPA would also pass through those increases to their customers - raising the cost of using the port.

The large differences between the tariff increases applied for and the tariff increases approved have arisen in part because of differences of opinion as to how individual items in the formula should be valued. However the Regulator's Record of Decision (RODs) statements do not set

out these differences in a manner which would allow the two sets of calculations to be reconciled.

It is likely that the Regulator's decisions have been influenced by three other factors:

- The tariff benchmarking study carried out by the Regulator which compares South African tariffs with those at other ports (*Global Port Pricing Comparator Study*);
- Extensive consultations held by the Regulator with key stakeholders as part of the tariff review process;
- Informal discussions with Government Departments – principally DOT, DTI and DPE – about the impact of port charges on economic development in South Africa.

If these factors are correct, the *de facto* process being used for tariff regulation differs substantially from the *de jure* process set out in the Port Regulator's *Regulatory Manual for 2014/15*, and less explicitly in the RODs related to past tariff approvals.

This situation has probably occurred because the numbers presented by TNPA for each component of the Revenue Requirement formula are generating a Revenue Requirement which is high in relation to that which would occur in a more competitive market, and which is damaging South Africa's international competitiveness.

The Ports Regulator has been under-resourced and unable to tackle this problem at source i.e. by challenging individual components of the formula. There is no evidence to suggest that any of the necessary information has been deliberately withheld by TNPA, although it is likely that TNPA's management accounting systems are set up in a way which makes it difficult to obtain the relevant cost data in the required format.

There is therefore a need for the valuation methodologies and input information used in the Revenue Requirement formula to be substantially modified, or for the Regulator to adopt a different tariff regulation methodology which gives more weight to factors such as international tariff comparisons, the impact of port tariffs on South Africa's international competitiveness, and government economic policies.

**Research requirements:** The report has noted a number of short-comings in the current approach to the regulation of port tariffs. Many of these can be corrected by the Regulator itself, with more resources and better access to information. However there are two areas in which further academic research would be useful in establishing an appropriate overall level for tariffs:

- The calculation of an appropriate rate of return on equity, taking into account the government's economic development objectives;
- The development of regulatory accounts, and their reconciliation with TNPA's financial accounts.

The present approach does not take into account the impact of the Regulator's decisions on TNPA's ability to operate as a self-sustaining financial entity, with the ability not only to cover its current costs but also to raise money for future investment. For example the cost of capital

does not take into account the need for TNPA to achieve debt service cover ratios which are acceptable to its bankers.

The cash flow implications of regulatory decisions therefore need to be spelled out in more detail, along with their effect on the key performance indicators for TNPA included in Transnet's shareholder compact with DPE.

The annexure to this report contains international comparison studies on different approaches to port regulation. However, given the specificities of South Africa these experiences are not directly relevant but do provide insights on the options that confront South Africa if the country were to choose a different path to regulation.

## Annexure A: Case Study of India

In India, the main ports regulator is the Tariff Authority for Major Ports (TAMP). There is also a Competition Commission of India, but this has not played any significant role in ports regulation.

Like Australia, India has a quasi-Federal structure of Government, with a Union government and nine States<sup>33</sup>. The Union government is responsible for India's twelve largest ports, known as the Major Port Trusts (MPTs)<sup>34</sup>, whilst the States license (and in some cases financially support) 200 smaller ports.

TAMP was set up as an independent regulator in April 1997 by an amendment to the Major Port Trusts Act 1963 to regulate the tariffs charged by the public sector Major Port Trusts and private terminal concessions within the MPTs. Its remit covers lease rentals as well as all vessel and cargo-related charges, and the conditions associated with the charges as well as the charges themselves.

This latter provision has given TAMP some opportunities for enlarging its scope of work, although non tariff-related economic regulation – for example market access, mergers & acquisitions, and non-competitive behaviour – remain outside of its mandate.

TAMP does not regulate tariffs at the 200 State-controlled ports, whose share of Indian port traffic tripled from 13% in 1997-8 to 39% in 2011-2. The success of the unregulated State ports in attracting investment away from the Major Port Trusts has generated a lively debate in India about how to make the economic regulation of ports more effective, and whether it is needed at all.

When it started, TAMP had three main objectives:

- To reduce and rationalise charges at the MPTs, which were high by international standards;
- To create tariff incentives for the regulated entities to become more efficient. Low levels of productivity were believed to be one of the underlying causes of high tariffs;
- To create a level playing field for private investment in ports, whilst preventing abuses of market power. The creation of TAMP coincided with the first private concessions in Indian ports, and concerns about the creation of private monopolies.

As with the Australian regulatory agencies, the role of TAMP has changed significantly in the 15 years since it was established, as it and the market have evolved.

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<sup>33</sup> Some of the larger States are currently being sub-divided

<sup>34</sup> Kandla, JNPT, Mumbai, Mormurgao, New Mangalore, Cochin, Tuticorin, Chennai, Vizakhapatnam, Paradip, Kolkata. The twelfth major port, Ennore, was corporatised in 2001 shortly after being commissioned, whilst Port Blair (a very small port on the Andaman Islands) was designated a Major Trust Port in 2010).

It has achieved some notable successes in bringing down prices and improving efficiency, but has singularly failed to achieve a level playing field. This is because it would have to equalise competitive conditions between too many different entities:

- Different Major Port Trusts;
- MPT terminals and private terminals within the same port;
- Private terminals created at different dates under different tariff regulations;
- Major Trust Ports and State ports.

TAMP does not have enough regulatory tools, or enough degrees of freedom in the use of these tools, to create a level playing field between all of these different entities at the same time. As a result, the focus of the current debate is on whether TAMP should be enlarged or abolished.

## **1. TAMP Workload**

TAMP responds to a very wide range of different tariff applications, of varying levels of importance. These include:

- Applications for overall increases to port or terminal tariffs, or major tariff headings such as wharfage or storage;
- Applications for modifications to individual tariff items (tariff tweaking);
- Establishment of tariffs for new facilities and services (or old facilities and services whose operation has changed in some way);
- Requests from individual port users for tariff reductions.

The tariff applications are adjudicated on a case-by-case basis. As a result, TAMP has a large case load which requires a lot of human resources if it is to be handled promptly. TAMP's web site lists over 990 Tariff Orders, which is roughly equivalent to 70 Tariff Orders p.a. over the whole of its life. Some of these orders are no more than minor modifications to previous orders, but even allowing for these (say 15%) it is still undertaking around 60 tariff enquiries p.a.

There is therefore a significant difference in administrative costs between TAMP's "bottom up" approach, and the "top down" approach applied by South Africa's Ports Regulator, which:

- Deals only with tariff issues relating to port infrastructure, marine services and leases (TNPA) and not cargo handling services (TPT and private operators);

- Sets only the overall revenue requirement for TNPA, without determining how that revenue is to be raised;
- Does not deal with tariff issues relating to individual customers.

TAMP's approach is less systematic and has a smaller effect on the overall level of tariffs. It is also more responsive to those who shout loudest, but in spite of this it is probably more effective than the Ports Regulator in tackling those tariff anomalies which are causing serious economic damage.

## 2. Tariff Guidelines

TAMP has issued three sets of guidelines on how tariffs are to be determined, in 2005, 2008 and 2013, and these allow its operations to be sub-divided into three main phases.

1997-2005

In the period 1997-2005, TAMP's approach to tariff regulation focused on reaching practical and consensual decisions on proposals for tariff changes submitted to it by regulated entities, based on:

- Examination of the regulated entity's accounts to estimate equivalent cost-plus tariffs;
- Circulars from its parent ministry (the Ministry of Shipping) about government policy on tariffs;
- Interactive hearings at port level to give port users the opportunity to express their views on each proposal.

The aim was to introduce a standardised approach to tariff setting in all ports, and then roll that out to the private terminal operators.

The three main issues faced by TAMP during this period were:

- Large variations between ports in tariffs for similar facilities and services.;
- Large variations in ports' costs due to differing levels of inefficiency;
- Political opposition from the Major Port Trusts and (later) the private terminal operators.

**Variations in tariffs.** TAMP's work was focused initially on the tariff increases requested by the operators, rather than on whether the original level of tariffs was too high. It had the power to intervene on its own initiative or at the request of port users if it felt that particular tariffs were too high, and could reduce them. But a lack of resources, information and experience made it reluctant to do so.

Differences in tariffs were often the result of differences in the way in which shared costs were allocated between the many services provided by multi-product ports. Some were simply the result of historical accident.

There were also large differences in overall profitability between the Major Port Trusts. These did not matter very much in the 1990s because – as in the case of South Africa – the major ports were operated as a system rather than as competing autonomous units. Profits from the best performing ports were returned to the Union Government and recycled into investments in all ports on the basis of perceived needs. Like South Africa, India has always favoured strongly centralised port planning.

**Variations in costs.** Indian ports are notoriously inefficient, due to overmanning, restrictive labour practices, obsolete layouts, lack of investment and poor management. TAMP's initial cost-plus approach to tariff setting allowed the higher costs of such inefficiencies to be passed straight on to port users, and provided no incentives for efficiency improvements.

TAMP made some attempt to address this issue through the conditions it was able to attach to tariff increase approvals, and had some (informal) influence on the wider debate about labour reform in Indian ports, including the merger of Dock Labour Boards with Major Port Trusts. But it did not have any power to enforce the conditions it attached to tariffs and insufficient resources to monitor compliance.

In the period 1997-2005 TAMP sought to standardise the “allowable costs” used to determine cost-plus tariffs largely on a case by case basis. The only formal industry-wide change which it announced was in the treatment of royalty/revenue-sharing payments (concession fees). These can be treated as a cost for BOT schemes that were finalised prior to 29 July 2003, but not thereafter.

**Political opposition.** For most of its life TAMP has been fighting a continuous battle to avoid extinction.

To begin with, opposition came mainly from the Major Port Trusts, concerned about the erosion of their tariff-setting powers and the impact of TAMP on their profitability. More recently come from large international terminal operators like APMT, DP World, and PSA Corp who have banded together in the Indian Private Ports and Terminals Association (IPPTA). There has been very little overt support for TAMP from its major beneficiaries: the shipping lines and cargo owners.

TAMP has tackled the problem of information asymmetry between it and the regulated entities in two ways:

- By developing detailed, standardised information request forms for tariff applications, with separate spreadsheets for MPTs, private operators, equipment hire and land leases;
- By enlisting port users in the consultation process. There are standard lists of around 30 organisations at each port which are automatically circulated with tariff applications

and invited to respond through written or verbal submissions. Public hearings are also well publicised, with participation open to other interested parties.

As it gained experience, TAMP became very open to discussion about what it believed were the deficiencies in its regulatory processes, and this led to the development of a system of normative tariffs in 2005 designed to ensure that users did not have to pay for port inefficiencies.

2005-8

TAMP's 2005 guidelines mark a distinct switch from approving individual tariff changes to setting normative tariffs for all port facilities and services. The TAMP tariffs are maximum tariffs, with Port Trusts and terminal operators free to charge lower tariffs if they so wish.

To protect private investments agreed before 2005, tariffs for these terminals would continue in force, using escalation clauses set out in the relevant concession agreement, with Port Trusts and new private investments governed by the new guidelines.

Tariffs determined under the new guidelines were intended to last for three years (the tariff validity period, after which they would be re-calculated for another three years using actual cost data from the three year period just ending.

The 2005 Guidelines begin with a statement of the principles guiding TAMP's tariff determinations:

- Safeguarding the interest of shippers/consignees and other port users;
- Ensuring just and fair return to ports;
- Encouraging competition, economical use of resources, efficiency in performance and optimum investment;
- Using established costing methodologies and pricing principles;
- Observing Central Government policy directives;
- Ensuring a transparent and participative approach;
- Using tariff leverage will be used to improve operational efficiency of ports;
- Moving in the longer-term towards pricing based on market competition.

There are clearly a lot of contradictions between these different goals. Rather than tackle them individually, TAMP decided to continue with the cost plus approach it was already using, but to apply this more systematically to all port facilities and services, and to set out more clearly how exactly it would calculate costs.



TAMP's cost plus approach is very similar to the Port Regulator's revenue requirement approach, but operates at a greater level of disaggregation. It has three main components - operating costs, an agreed rate of return on capital employed, and rules for calculating subsequent increases in tariffs.

**Operating costs.** The treatment of operating expenses is fairly straightforward, except in relation to labour, management fees and concession fees:

- Manning scales for ports should be based on the levels agreed in settlements with the trade unions, and the costs of any surplus labour should be recovered (if possible) from non-traffic sources like lease income and reserves; otherwise surplus labour costs should be spread over all types of traffic in a transparent manner.

For private terminals they should be based on the manning scales in the concession agreement, even if manning levels subsequently change.

One-off labour costs like redundancy payments and making good Pension Fund deficits are not allowable costs unless there is no other way of funding them. In this case a special tariff can be prescribed for a limited period.

- Management or technical services fees paid to the ultimate sponsor of a private terminal will only be allowed if reasonable and consistent with a arm's length relationship with the terminal SPV;
- Royalties/revenue shares payable to the landlord port by the private operator will not be allowed as an admissible cost for tariff computation for BOTs finalised after 29 July 2003.

For projects agreed earlier, they are subject to a ceiling set by the value of the second best bid, and are applicable only when not taking them into account would result in a loss to the operator.

**Return on capital employed (ROCE).** Capital Employed is defined as net fixed assets plus working capital. It excludes work in progress, and sets well-defined limits on what can be included in spares inventories.

Business-related assets like housing for port workers will be included only at the risk free rate of return, but operating expenses related to such assets will be allowed. Social obligations such as medical facilities and schools will only be included if 75% of the beneficiaries are port employees.

TAMP is entitled to assess the reasonableness of the capital base and adjust it accordingly, and to request operators to justify new investments on the basis of:

- A reduction in unit operating costs;
- Additional traffic/business generated;
- Improvement in operational efficiency.

The main complaint in relation to the regulatory asset base has been the use of depreciated asset values, which result in a steady decline over time in the amounts required to cover the ROCE. Perhaps surprisingly, the 2005 guidelines provide no information on the treatment of asset revaluations.

They are also unclear about how a Port Trust's asset base is to be re-adjusted when elderly assets with a very low book value are replaced by more expensive new ones, other than to say that the alternative of incurring annual hire costs may also be taken into account in the tariff adjudication.

Private terminals which replace assets in accordance with the concession agreement are allowed to include the entire capital costs and depreciate it over the remaining life of the concession providing they would have a residual value at the end of concession and no compensation is payable for their transfer-back to the landlord port.

The allowable return is derived from a Capital Asset Pricing Model and was originally set at 15% based on:

- Risk Free Rate of Return based on 10 year Government of India bonds (6.35% in 2005);
- Market Risk Premium for India (7.15%);
- Equity Beta for ports sector and comparable domestic companies (0.84);
- Debt Risk Premium based on the risk profile of the ports sector (5.55%) with a debt:equity ratio of 1:1;
- The prevailing corporate tax rate.

The allowable return is reviewed each year in the light of changes in the key parameters. If the resultant variance is less than 1%, the existing rate continues unchanged. It was increased to 16% in 2007 and has remained there ever since.

For Port Trusts, the maximum allowable rate of return only applies if the utilisation rate for the asset in question exceeds 60%, with a sliding scale for returns down to an asset utilisation rate of 50%. Private operators investing in line with their concession agreements are allowed the maximum rate of return even if they fall short of the required capacity utilisation rate. This addresses the problem caused by traffic "ramp up" i.e. the failure of large new investments to fill up with traffic immediately, although this is less of a problem in India than in many other parts of the world.

**Tariff escalation.** New tariffs are determined by calculating the expected revenue requirement for the next three years (operating costs + ROCE) and dividing this by the expected traffic.

Traffic projections should be in line with government projections or the operator's own expected (justifiable) growth rates, and the revenue requirements should also take into account the effect of foreign exchange fluctuations on US\$ denominated tariff items.

Expenditure estimates are adjusted for expected price fluctuations based on Wholesale Price Index for All Commodities (WPI) prepared by the Ministry of Finance. TAMP

announces each year the cost escalation factor that will be considered “reasonable” for the tariff cases to be decided during that year., and the permitted ROCE. This was increased from 15% to 16% in 2007 following a review by CRISIL Advisory Service, and has remained at this level ever since.

At the three year review, organisations whose unit costs have gone down as a result of efficiency gains – thereby triggering an automatic reduction in the cost plus tariff - will have their tariffs adjusted to allow them to keep 50% of the cost reduction that is directly related to efficiency improvements, unless this would result in the maximum permitted ROCE being exceeded.

Tariffs will only be adjusted for efficiency gains (losses) the performance in the previous tariff period was  $\pm$  20% better than expected at the time of the previous tariff review.

**Other issues.** The 2005 guidelines also address four other issues:

- How to slice up a large port into separate business units for tariff setting purposes;
- How to set tariffs for new facilities with no track record;
- Policy for specific tariffs;
- The transition path for tariff reform.

TAMP has always tried to group together tariff changes relating to the same port. Initially this was for administrative reasons – to minimise the cost of local hearings – but it now tries to ensure that the financial position of the port as a whole and sub-activity are considered at the same time so that the total cost to port users can be taken into account.

When a new facility is commissioned or existing facilities privatised, the initial tariff will not be allowed to exceed the existing tariff level for comparable facilities at the same port. If this is not possible, the tariff at a comparable nearby port will be taken as the reference level. The initial tariff will then be reviewed after the first year of operation on the basis of the actual cost structure.

Cross-subsidisation will only continue where it reflects specific government policies. For example tariffs for coastal traffic will not exceed 60% of international tariffs. Tariffs for container handling will eventually be linked to productivity benchmarks for both vessel and shore operations, taking into account local factors where necessary.

The guidelines recognise that changes on the scale proposed cannot be introduced overnight, and envisage them being phased in gradually. Ad-valorem wharfage rates are to be phased out over a maximum period of 5 years, once equivalent cost-based tariffs have been fixed. And tariffs based on the principle of ‘what traffic can bear’ shall also be phased out over a fixed time period for each port

2008-13

The 2008 guidelines cover up-front tariff setting for new PPP projects, with the 2005 guidelines continuing to apply to the Major Trust Ports and private terminals which were already in operation or bid before the new guidelines were gazetted.

The idea is to establish normative tariff ceilings on a similar cost plus basis to that used in the 2005 guidelines. But instead of being based on actual costs, the tariffs are based on hypothetical costs for different types of terminal, pre-supposing efficient operations.

In theory the difference between these hypothetical costs and the operator's real life costs should not matter, as the amount which is bid for the concession can be adjusted to take any differences into account. If the up-front tariffs under-estimate what the operator believes will be his actual costs, then the loser will be the landlord port granting the concession, which will receive lower concession fees<sup>35</sup>.

Once tariff caps are set for different commodities or services in a port, they apply for the next five years, including other comparable projects in the same port. They will then be reviewed to adjust for any extraordinary events that could not have been foreseen at the start of the tariff period, with the revised caps applying to other subsequent projects. In order to take into account technological developments, the reviews will adopt progressively higher performance standards

The assumptions used to set the up-front tariffs are very detailed and prescriptive, and could diverge significantly from operators' actual cost structures. They are described in more detail in Annexe A. However the main problem with the 2008 guidelines has not been the absolute levels set for the start-up tariffs; rather it has been the differences in permitted tariffs for comparable competing projects which have come into existence at different dates, and the way in which up-front tariffs are to be increased over time.

Tariff caps will be indexed to inflation annually, but only by 60% of the variation in Wholesale Price Index (WPI) occurring between 1 January 2008 and 1 January of the relevant year. This means that private investors will be faced with declining real tariffs, and with real tariff declines over 20-30 year periods which cannot be predicted in advance.

Since the 2008 guidelines were gazetted there has been a sharp decline in private sector interest in PPP projects in Major Trust Ports. Some of this has undoubtedly been due to the global recession, but continuing interest in the State ports suggests that a lot of it has been due to regulatory changes.

**Events in 2012.** Well after the 2010 deadline for reviewing the 2005 guidelines had passed, the Ministry of Shipping, TAMP's parent ministry, asked The Energy and Resources Institute (Teri) to advise on how the 2005 guidelines should be changed. Terminals operating under the 2008 guidelines would continue without any change to their regulatory framework.

The Teri report, submitted in March 2012, asked the general question of whether ports should be freed from tariff regulation, but then made a number of specific recommendations about tariff regulation which led it being rejected by the industry and disappearing from view. In particular, it failed to identify a normative approach to tariff regulation that could be applied fairly to all port businesses (if there is one!), whilst re-affirming the decision to base the

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<sup>35</sup> In India there is a Model Concession Agreement which sets out how port concessions are to be structured. Contracts are normally awarded on the basis of the percentage of gross revenues to be returned to the concessioning authority.

ROCE calculations on net book value and to exclude royalty/revenue sharing payments from pass through costs.

At around the same time TAMP made three large and very important tariff decisions which the private terminal operators refused to accept:

- On 8 February 2012, TAMP notified a rate reduction of 44.28% at the JNPT container terminal run by Gateway Terminals after the operator sought a rate increase of 8.72%. This facility is majority owned by Denmark's APM Terminals Management BV, a sister company of Maersk Line;
- On 14 February 2012, TAMP notified a rate reduction of 12.23% at Chennai International Terminals Pvt. Ltd after the operator had asked for an increase of 15%. This facility is fully owned by PSA International Pte. Ltd. of Singapore;
- On 1 March, 2012 TAMP notified a rate cut of 27.85% at Nhava Sheva International Container Terminal Pvt Ltd (NSICT) at JNPT after the operator had asked for an increase of 30% This facility is operated by DP World Ltd.

This was the first time since 1997 that TAMP's rulings had been ignored, although several previous orders had been temporarily stayed by the courts after the private terminal operators filed petitions against them.

It brought home the fact that TAMP had no independent powers of enforcement. In India only the courts have the powers to enforce or stay the orders of TAMP, although concession agreements normally state that terminal operators are bound to implement TAMP decisions, and that non-compliance can be construed as a default, potentially leading to contract termination. The three cases also raised the issue of whether the Ministry of Shipping can enforce TAMP rulings once the Government of India has officially gazetted them.

The terminal operators' petitions to the Delhi High Court failed on procedural grounds, but eventually the Bombay High Court issued staying orders which have allowed the terminals to continue operating with their original private investors still in place. Although court proceedings in India can drag on for years – another cause for concern for investors – this high profile case was resolved quite quickly, possibly because of pressure from the Indian Government. Nevertheless since then PSA International has withdrawn from negotiations to build the fourth US\$1.2bn container terminal at JNPT.

At issue in this dispute was the gap between TAMP's estimate of "reasonable" tariffs based on a standard (and rather old-fashioned) assumptions about how different types of terminal operate, and the private operators' desire to invest in new technology which would substantially increase terminal throughput. Doing so under the present tariff regulations would – the operators claim – increase costs and reduce tariffs to such an extent as to push them into a loss-making situation.

Since the 2008 tariff guidelines investor interest in PPP projects in the Major Port Trusts has been muted. By January 2013 only 17 of the 42 PPP contracts which the Ministry of Shipping had hoped to negotiate in 2012-3 had reached financial close, causing attention to switch from pricing issues to missed investment targets.

## 2013 tariff guidelines

During 2013 several different sets of draft tariff guidelines were prepared, with policy veering between complete deregulation and the abolition of TAMP to the conversion of TAMP into a competition regulator for the ports sector. Regulatory uncertainty was increased by a very public spat between the Ministry of Shipping and the powerful Planning Commission, fanned by strong lobbying from Indian Private Ports and Terminals Association (IPPTA).

Two high-level panels were set up to advise the government on what to do, one headed by B.K. Chaturvedi, a member of the Planning Commission, and the other by D.Parekh, chairman of Housing Development Finance Corp. Ltd. Both recommended the deregulation of port tariffs, on the grounds that there was now sufficient competition for prices to be set by the market, and that port charges (on average 4% of door-to-door transport costs) had little or no impact on logistics costs in India.

In March 2013 the Shipping Ministry issued draft guidelines intended to move gradually away from tariff regulation towards a free market. These were to apply only to new projects, and not to the MPTs or the 16 private terminals already operating under previous guidelines.

The draft guidelines were based on the idea of Reference Tariffs for each port - the highest prevailing rate each commodity at that port . Terminal operators would be free to charge whatever they wanted, but any charges above the reference tariff would have to be referred back to TAMP which would have the power to reduce them after consultation with port users.

In July 2013 a fourth draft of the guidelines was issued following criticism from the Planning Commission. This was quite different, in that:

- Private terminal operators would only be allowed to charge up to 15% more than Reference Tariff, which would be determined on the basis of the 2008 guidelines;
- The 15% premium would depend on meeting performance standards prescribed by TAMP in the previous year and embodied in the concession agreement as an enforceable condition;
- Royalties (revenue sharing) would be based on the Reference Tariff or the Performance-Linked Tariff, whichever was highest, irrespective of the tariff actually charged, which could be lower than either;
- The reference and ceiling tariffs would be applicable for five years and indexed to inflation to the extent of 60% of WPI.

In September 2013 the Planning Commission intervened again, saying that linking the maximum tariff to the TAMP-determined performance standards rather than the performance standards set out by the MPT's in the concession agreements would lead to ambiguity and disputes, and undermine the role of the MPT's in maximising the efficiency with which port assets are used.

It also objected to the actual tariff ceilings themselves, and the indexing of tariffs to only 60% of the WPI, saying that these would either make future projects unviable or significantly reduce the concession fees accruing to the MPTs.

Rumbling along in the background has also been a draft Port Regulatory Bill, which is proposing a national Major Ports Regulatory Authority plus a set of regulatory authorities for coastal states. The aim of this Bill is to switch from tariff regulation to competition regulation, radically redefining the role of TAMP.

### 3. Scale of Private Investment in Indian Major Trust Ports

By September 2013 there were 86 PPP projects in various stages on development in the Major Trust Ports, involving a total investment of Rs 48.2bn crore (approx US\$ 8.5bn)<sup>36</sup>. The capacity that will be provided by these projects (605m tons p.a.) is equivalent to 87% of the estimated capacity of all of the MPTs combined in 2012.

No equivalent figures are available for public sector investment in the MPTs or public or private investment in the State ports. It is also difficult to assess the proportion of the MPT's capital base which is now being contributed by the private sector because their accounts are compiled on a non-IFRS basis. The use of historic cost accounting and the high proportion of assets which are already fully depreciated means that incoming private investment already exceeds the net book value of the MPT's own assets.

There is a large amount of information available about port traffic, and some operational data for the MPTs, but insufficient good quality financial data to provide a firm basis for policy making.

The current status of the 86 PPP projects is as follows:

**Table 1 Status of Major Port Trust PPP Projects**

Project status	Number of projects	Capacity (m tpa)	% of investment	Cost (Crore)
In operation	30	208	22%	9,456
Under construction	26	156	32%	13,651
At tender stage	11	143	30%	12,835
At EOI stage	15	63	11%	4,447
In pipeline	4	35	4%	1,830
<b>Total</b>	<b>86</b>	<b>605</b>	<b>100%</b>	<b>42,218</b>

Source: Ministry of Shipping web site

<sup>36</sup> Converted at US\$ 1.00 = Rs 50, to reflect the average exchange rate over the period 1997-2013, roughly weighted according to the number, size and timing of projects

In terms of their timing, just over a quarter of the projects were initiated before the 2005 tariff guidelines, accounting for 17% of capacity and 11% of investment, although the investment proportion is distorted downwards by inflation and currency depreciation.

Around 14% of projects (20% of capacity) were finalised between the 2005 and 2008 guidelines, and 24% (28%) of capacity between the 2008 guidelines and 2012. There is still a large number of projects outstanding whose final outcome will depend on the successful conclusion of discussions about the 2013 guidelines, and the creation of a more stable and supportive regulatory framework for private investment.

**Table 2**                      **Timing of Major Trust Port PPP Projects**

Scheduled	Number of projects	Capacity (m tpa)	% of investment	Cost (Crore)
Before 2005 guidelines	24	105	11%	4,565
2005-2008	12	119	24%	10,125
2008-12	21	172	33%	13,980
2012-13	29	208	32%	13,548
Total	86	604	100%	42,218

Source: Ministry of Shipping web site

#### 4. Conclusions

The experience of TAMP illustrates the difficulty of trying to apply a “bottom-up” approach to tariff regulation, dealing with individual cases rather than general principles, and trying to set standardised maximum tariffs for *all* facilities and services rather than just those which are above the rates that would result from market competition.

It also highlights the difficulty of using standardised normative tariffs as an incentive for efficiency improvements, particularly when these tariffs are calculated by an independent regulator far away from the port on the basis of hypothetical costs which do not take into account the opportunities and constraints facing individual operators.

The third problem experienced by TAMP has been the difficulty of deciding on future escalation rates for tariffs in a world where technology, costs and capacities are continuously changing. As traffic grows and unit costs fall, it is reasonable to expect some of these benefits to be passed on to port users, but TAMP has ignored the fact that some of these changes have already been built into the financial models which operators use to determine their proposed concession fees. It may also have given insufficient weight to the need to generate funds for further investment to keep the terminals up to date.

A more dynamic approach tariff regulation which allowed TAMP to respond to ever-changing circumstances – including the continuous, but very patchy, increase in competition in Indian ports – would probably be more acceptable to investors, but only if there were more trust in TAMP’s ability to fairly balance the interests of investors and port users. Otherwise the outcome is likely to be a further increase in regulatory uncertainty.

On a more positive note, the decision to have an independent regulator rather than leaving the regulation of private operators to the landlord port authority - as happens so often



elsewhere in the world – appears to have been a good one. There has been no real evidence of regulatory capture, which is a particularly serious risk in India because the Model Concession Agreement requires projects to be bid on the basis of the share of gross revenues to be passed on to the port authority. This would have provided an automatic incentive for the MPTs to take a more relaxed view of applications for tariff increases than TAMP has done.

It has also been sensible to allow TAMP to regulate the MPT's as well as the private operators, as these are the main source of inefficient work practices and high tariffs. However regulating the MPTs in the rather piecemeal way that TAMP has chosen may prolong the time needed to introduce meaningful reforms into the public sector ports.

One of TAMP's main successes has been in increasing the transparency with which port pricing decisions are made, and in involving port users in these decisions. However there is a risk that it will exhaust itself by trying to fight too many battles on too many fronts, losing sight of the bigger picture whilst immersed in the details of individual cases.

The most important conclusion of all, however, is that port regulation is not static, and that there is not a single best approach. Rather there is a range of regulatory tools available whose appropriateness changes over time. This will continue to be the case as Indian port regulation evolves.

## ANNEXE B: PROCEDURES FOR DETERMINING NORMATIVE TARIFFS UNDER THE 2008 GUIDELINES (TAMP)

The 2008 guidelines set out the methodology and assumptions for determining “up front” tariffs for five different types of terminal: containers, iron ore, coal, liquid bulks and multi-purpose berths.

**Containers.** The calculation uses two key parameters to calculate the capacity of the terminal: quay length and stack area. The capacity of the terminal is taken as the lower of the two, and allowable operating costs are based on the assumption that the terminal operates at 70% of this capacity.

The other assumptions used to calculate quay and yard capacity are all pre-determined by TAMP.

Quay capacity = No. of cranes x hours p.a. x moves per hour x TEU/box

(berth length/100) (365 x 24) (25) (1.3)

Yard capacity = Ground slots x average stack height x days p.a./ (dwell time x peak factor)

(720 x no of ha) (2.5) (365) ( 3 days) (1.3)

The capital cost of the terminal is based on the MPT’s estimate for civil works cost, and a fixed cost for each major item of equipment which – along with the equipment mix – is pre-determined by TAMP. IT costs are taken as 2% of civil + equipment costs and other costs (including interest during construction) as 10% of civil + equipment cost.

The return on capital employed is the standard rate used by TAMP for all projects (16%).

The operating costs are determined either as a unit cost x throughput equivalent to 70% of capacity (fuel & power), as a %age of capital costs (repair & maintenance, insurance, depreciation other expenses), or as a standard rate determined by the MPT (land rent). Perhaps surprisingly, there is no separate mention of labour costs, which are wrapped up into other expenses as a percentage of capital costs.

The revenue requirement (operating costs + ROCE) is then divided by the target throughput (70% x capacity) to produce a standard tariff per TEU.

**Other cargoes.** The approach taken for other types of cargo is very similar. In the case of iron ore, quay capacity is based on a terminal-specific split of the traffic (to be agreed with TAMP) between Capesize, Panamax and Handymax ships, with handling rates of 60,000 tpd, 55,000 tpd and 25,000 tons per day respectively. Yard capacity based on 70% x area available x 15 tons per m<sup>2</sup> x 12 stock turnovers p.a.

As in the case of containers, the capital costs are to be based on the MPT civil works estimate plus the costs of a .list of equipment prescribed by TAMP. Operating costs are to be calculated in the same way as for the container terminal, but with different parameters.

The revenue requirements for coal, liquid bulks and multi-purpose berths are calculated in a similar way, with the cost model adopted to the needs of different cargoes by varying the parameters.

**Conclusion.** This is an extremely standardised method of calculating tariffs which is bound to create winners and losers. The fact that any investors bid for projects under this type of regulation is testimony to the fact that any potential losses arising from miscalculation of the tariff – or its inappropriateness for particular terminals - could be passed on to the MPT in the form of lower concession fees.

## **ANNEXURE C: Case study of Australia**

Australia is one of the best comparators for South Africa. It has a landlord port structure in which the majority of port infrastructure and services is still provided by public-sector port authorities. It has a small number of widely-spaced multi-purpose ports with a quasi-monopoly over local trade, and several large minerals ports for the export of iron ore and coal. And it has a transparent business environment in which port regulation has been the subject of fierce debate.

Australia differs from South Africa in its government structure, a collection of independent States which act together in areas of common concern. The general principles governing port regulation have been centrally determined by the Council of Australian Governments. The Australian Competition and Consumer Commission - the main regulator of anti-competitive behaviour - is authorised to act within all of the States. And the Bureau of Infrastructure, Transport and Regional Economics monitors certain port activities on an Australia-wide basis which can be used for benchmarking purposes.

Responsibility for implementing port regulation rests with the seven individual States. These have adopted quite different approaches to regulation and put in place a number of different institutional arrangements.

Port regulation in Australia is nevertheless fairly light-handed, and has become more so in recent years after addressing initial concerns about high prices. It is focused mainly on achieving fair and transparent prices and avoiding abuse of monopoly power. The main tool is monitoring, and the requirement for ports to explain questionable behaviour, with the automatic threat of stricter regulation in future if they are seen to be acting against the public interest.

### **Overview**

Australia-wide port regulation has two main sources:

- The Trade Practices Act 1974, which provides a general prohibition on anti-competitive behaviour, enforced by the Australian Competition and Consumer Commission (ACCC). It also establishes the access rights of third parties to strategic port infrastructure;
- The Competition and Infrastructure Reform Agreement (CIRA) of 2006, which is intended to achieve a simple and consistent national approach to the economic regulation of significant infrastructure. This sets out a framework for ensuring that State-owned ports are operated on a competitively neutral basis. However it is left up to individual States to determine how they regulate their ports, and the States' annual reports on infrastructure regulation are prepared on a self-assessment basis, without any auditing or enforcement at Commonwealth level.

CIRA states that wherever possible, third-party access to port services should be on the basis of terms and conditions negotiated with the operator, which could be a State-owned

port authority, a private sector lessee or a private owner. Commercial outcomes should be promoted by establishing competitive market frameworks in preference to economic regulation, and commercial negotiations should allow facility providers to obtain a commercial risk-adjusted rate of return on their assets, equivalent to the rate of return that would apply in a competitive market.

If commercial negotiations fail and economic regulation is required, light-handed regulation such as price-monitoring should be considered in the first instance, with the option to move to full regulation if this fails to prevent misuse of market power. The implicit threat of regulation is believed to be sufficient to prevent abuse of monopoly power, and avoids the need to set up costly regulatory institutions.

In the event that the two parties cannot reach agreement, regulatory oversight of prices should be undertaken by an independent body, which should determine tariffs so as to:

- Generate revenue for the regulated service that is at least sufficient to meet the efficient costs of providing it, including a return on investment commensurate with the regulatory and commercial risks involved:
- Allow multi-part pricing and price discrimination when this aids efficiency:
- Prevent a vertically integrated access provider from setting terms and conditions that discriminate in favour of its own downstream operations, except when the cost of providing access to other operators is higher:
- Provide incentives to reduce costs or otherwise improve productivity.

The State of Victoria has generated the most interesting and thorough debates about port regulation, which is implemented by a multi-sectoral regulator (the Essential Services Commission) responsible for water and sewerage, port and rail infrastructure, energy distribution and grain handling. ESC's approach to regulation has been steadily evolving in the twelve years since it was established. It is open about sharing its experience and has responded well to the lessons learnt.

South Australia adopted a similar approach to Victoria at around the same time, and has moved in broadly the same direction by gradually reducing the amount of regulation it deems necessary. Victoria and South Australia both define regulatory requirements through consultation with port users.

Queensland also appears to have an effective independent regulator, although this is an economy-wide competition authority rather than a multi-sectoral regulatory agency. It has not intervened very much in the ports sector but when it has – for example at Dalrymple Bay coal terminal – it has generated some very innovative and useful thinking about the nature of regulation.

New South Wales is of interest because it regulates its ports through the Portfolio Ministry (equivalent in South Africa to DOT) and the Shareholder Ministry (equivalent to DPE). This is done through annual Statements of Corporate Intent which require Ministry approval.

Like New South Wales, Western Australia uses annual Statements of Corporate Intent as its main regulatory tool, but the level of control appears weaker.

The Northern Territory has only one port (Darwin) which has been judged to small to justify formal regulation.

**Table 1 Australian Port Regulatory Authorities**

<b>State</b>	<b>Main regulatory body</b>
Victoria	Essential Services Commission
South Australia	Essential Services Commission
Queensland	Queensland Competition Authority
New South Wales	Portfolio and Shareholder Ministries
Western Australia	Department of Planning & Infrastructure
Northern Territory	Chief Minister

The Competition and Infrastructure Reform Agreement (CIRA) has led to comprehensive reviews of port regulation in each of the Australian States apart from Tasmania. The sections which follow are based on the outcomes of the most recent reviews.

### **Victoria**

The State of Victoria has four main ports: Melbourne, Geelong, Portland and Hastings, with the first two sharing a common access channel. Melbourne is owned and administered by the Port of Melbourne Corporation, a public sector landlord port authority, whilst the other three regional ports – which are very much smaller - were privatised in the early 1990s and operate largely as vertically integrated enterprises.

The framework for port regulation was established by the Port Services Act 1995. This identified “prescribed services” such as the provision of shipping channels, berths, cargo marshalling areas and short-term storage areas adjacent to berths, whose prices were to be regulated by the Office of the Regulator General (later superseded by the Essential Services Commission). The mechanism adopted was that of the five year price determination, with major investigations into port tariffs taking place in 1999, 2004 and 2009.

Over time the number of port infrastructure services subject to tariff regulation has fallen, whilst the form of tariff regulation has become more light-handed. This has been due to

- The success of the early price cap mechanism in driving down port charges.
- Concern that “heavy handed” regulation aimed at achieving further reductions in price could slow down future investment.
- Increasing competition between ports, including inter-state competition from Sydney and Adelaide as inter-modal rail services between the States have improved.
- Gradual erosion of barriers to entry.

- The countervailing power of large port users.

There has also been a move towards light-handed tariff regulation in general, not only in other Australian ports but also in other regulated industries.

From 1996 to June 2000 the prices of prescribed services were regulated under Pricing Orders established by the Victorian Government. These imposed substantial reductions in port charges, particularly at the port of Melbourne.

**The 1999 port tariff review** carried out by the Office of the Regulator General (ORG) found that the Port of Melbourne Corporation (PoMC) had retained substantial market power and that the Victoria Channel Authority (VCA) which administered the shared channel, also constituted a natural monopoly. Tariff regulation in the form of a CPI-X price cap was applied to their services for the five years from 1 July 2000 to 30 June 2005.

The price caps set an upper limit to tariffs, leaving the ports and channel authority free to charge less if they wished. The price cap applied to a “tariff basket”, representing the weighted average of its tariffs for the prescribed services, rather than individual tariff items. Leases and service contracts were excluded from the “tariff basket”.

The smaller ports were allowed to restructure their charges, as long as the weighted average price at each port did not increase, then a CPI price cap was applied to each individual tariff item, allowing the “legacy prices” to rise no faster than inflation.

In respect of towage, the ORG did not consider tariff regulation to be justified, but recommended some form of independent monitoring of prices and service standards.

**The 2004 port tariff review** was conducted by the Essential Services Commission (ESC). This is an independent regulator set up in 2001 to regulate water utilities, energy retailers, port and rail infrastructure and grain handling services in Victoria. It covers prices, service standards, market conduct, and in some cases consumer protection.

ESC found that the price cap regulation of the previous five years had resulted in price levels at Melbourne that were lower than at other major container ports in Australia. Profits had declined, mainly because of large cost increases, and the price capping arrangements were thought to be inhibiting investment. This led to a switch from price capping to price monitoring.

The main elements of the price monitoring regime introduced in 2005 were:

- A requirement for ports to publish a set of reference tariffs which would generate enough revenue to cover the efficient long-run costs of providing the prescribed services, including a return on assets commensurate with the risks involved. Prices should not be structured to advantage the operations of PoMC over those of competitors.  
The prices for particular services should be no lower than the forward-looking avoidable costs of providing those services, and no higher than the costs of providing them on a

stand-alone basis. Price discrimination is permitted only when it can be shown to be efficient;

- Provision of information to the Commission including audited financial accounts and statistics, and a cost allocation statement, based principles acceptable to the Commission;
- Threat of more prescriptive regulation if market power was misused.

**The 2009 port tariff review** by the ESC deregulated port services even further by limiting “prescribed services” to

- Container and motor vehicle berths at Melbourne;
- Shipping channel services provided to all ships using the port of Melbourne, and the “shared channel” infrastructure used by ships visiting the ports of Melbourne and Geelong.

This effectively de-regulated the regional ports, the dry and liquid bulk berths at Melbourne, and PoMC tariffs for breakbulk cargoes other than motor vehicles.

**ESC’s approach** to assessing the need for, and form of, economic regulation has been based on examining the market power of the ports, and the costs and benefits of imposing economic regulation where market power is present. The degree of market power is also a determinant of the appropriate form of regulation.

The heavier forms of regulation include price controls such as rate of return regulation, price or revenue caps, and negotiated price regulation, whilst the lighter forms include price monitoring and the application of agreed pricing principles.

The choice of light-handed regulation for Victoria was based on six main considerations:

- Preference for market solutions;
- Proportionality;
- Promotion of competition;
- Consistency;
- Balancing short and long term benefits to consumers;
- The past conduct of the ports

To reinforce its light-handed approach ESC can initiate an inquiry at any time into any matter relating to the supply of prescribed services. but intends to use these powers sparingly. If an inquiry finds significant abuse of market power, or the price monitoring framework is not effectively meeting the Commission’s statutory objectives, it may reintroduce price controls.

**Monitoring.** The three main objectives of monitoring are:

- To help port users to negotiate;
- To monitor port performance against the objectives set out in section 48 of the Port Management Act 1995 and section 8 of the Essential Services Commission Act;
- To resolve disputes

ESC's monitoring work relies on the submission by the regulated bodies of a set of quantitative Key Performance Indicators (KPIs) dealing with:

- Port activities;
- Service quality performance indicators;
- Revenues & charges;
- Financial performance;
- Customer satisfaction;
- Complaints.

The way in which each indicator is to be calculated is set out in detail in the Victoria Ports Monitoring Report March 2011.

**Complaints.** ESC is not **required** to investigate complaints or to take action in relation to complaints. Because it does not wish to intervene in matters that would normally be subject to commercial negotiation or dispute resolution processes, it leaves the resolution of complaints to the relevant port operator in the first instance.

ESC will only investigate a complaint if:

- It is of sufficient substance;
- The parties have exhausted normal avenues of commercial dispute resolution;
- It is likely that a regulated port or channel operator has significantly abused its market power.

Statistical information about complaints is included in ESC's annual reports. Between 2005-9 it received only five complaints.

### **South Australia**

South Australia has seven regulated ports : Port Adelaide, Port Giles, Wallaroo, Port Pirie, Port Lincoln, Thevenard and Ardrossan. All have been privatised on a "whole port" basis through long-term leases. The first six are operated by Flinders Ports Pty Ltd, and the last by Ausbulk Ltd (a subsidiary of ABB Grain Ltd).

Port regulation is the responsibility of the Essential Services Commission of South Australia (ESCOSA), a multi-sector regulator whose responsibilities within the ports sector are defined by the Maritime Services (Access) Act 2000 and the Essential Services Commission Act 2002.

The regulated services are:



- Port access;
- Pilotage;
- Use of selected berths
  - Port Adelaide Berths 1 to 4, 16 to 20 and 29
  - Wallaroo Berths 1 & 2 South
  - Port Pirie Berths 5 and 7
  - Port Lincoln Berths 6 and 7;
  - Berths adjacent to the bulk shiploaders listed below;
- Loading of cargo at the bulk shiploaders at Port Adelaide, Port Giles, Wallaroo, Port Pirie, Port Lincoln and Thevenard;
- Land access to the above services.

In 2002 ESCOSA developed a price capping methodology for use in the ports sector. However this did not include any allowance for productivity gains, and evolved into a simple form of price indexing before being abandoned in 2004 in favour of price monitoring.

**Price monitoring.** Within the price monitoring regime, Navigation Services, Harbour Services & Mooring, and Cargo Services (provision of berth and loading/unloading infrastructure, but not stevedoring) are subject to regular reviews, with the threat of full regulation in cases where misuse of market power can be demonstrated.

Pilotage is subject to a lighter form of regulation - price notification – which requires the publication of a tariff schedule and the notification of any changes to ESCOSA as they occur, together with an explanation of the cause.

ESCOSA publishes an annual report on port prices, and has reviewed prices in more detail every three years (now changed to five years), resulting in a Ports Price Determination. This can regulate prices in any manner ESCOSA considers appropriate, including:

- Fixing a price or the rate of increase/ decrease for a price;
- Fixing a maximum price or the maximum rate of increase/ minimum rate of decrease in a maximum price;
- Fixing an average price for specified goods or services or an average rate of increase or decrease in an average price;
- Specifying pricing policies or principles;
- Specifying an amount determined by reference to quantity, location, period or other specified factor relevant to the supply of goods or services:

- Fixing a maximum average revenue, or maximum rate of increase/ minimum rate of decrease in maximum average revenue, in relation to specified goods or services;
- Monitoring the price levels of specified goods or services.

Until 2007 ESCOSA benchmarked port performance and prices against other Australian ports on the basis of published information. In 2007 it commissioned a more detailed benchmarking study from consultants Meyrick & Associates which caused it to drop inter-port benchmarking in 2008 in favour of a simpler system which compared price changes at South Australian ports with movements in the Consumer Price Index (CPI). ESCOSA is entitled to request detailed explanations for any annual price changes that are higher than the CPI.

Meyrick Associates' main criticisms of the benchmarking approach to port monitoring were:

- The difficulty of finding good comparator ports;
- Differences in ports' financial objectives;
- The use of different accounting conventions;
- Incompatibility of tariff structures, and differences between ports in the way in which they allocate costs between different tariff headings;.
- Factors outside of the ports' control which influence port costs, and hence tariffs, These include location, scale, cargo mix, and ship size.

**The 2012 Port Pricing and Access Review** distinguishes between two sets of regulated services: Essential Maritime Services and Regulated Services.

Essential Maritime Services comprise:

- Vessel access;
- Berths;
- Facilities for loading or unloading vessels.

Where price monitoring reveals that an Essential Maritime Services charge has increased by more than the change in CPI, the Commission will request the ports operator to provide it with the justification for such a change.

Regulated Services comprise:

- Channels;
- Common user berths;
- Bulk handling facilities (excluding storage areas);
- Berths adjacent to bulk handling facilities;

- Land providing access to maritime services;
- Port Adelaide Outer Harbour bulk loader.

ESCOSA's primary objective in respect of Regulated Services is to protect South Australian consumers' long-term interests with respect to the price, quality and reliability of these services. The criteria for determining whether regulation is necessary are:

- Is there the potential for port operators to exercise market power?
- Is there any evidence of misuse of market power by port operators?
- Is there a net benefit from regulation?

The South Australian ports regulatory regime now works on a five-yearly cycle. In 2012 ESCOSA found no evidence to suggest that market power had been misused in the previous regulatory period, and had not activated the formal dispute resolution process provided for under the MSA Act.

**Regulatory accounts.** In 2005 ESCOSA issued guidelines for the preparation of regulatory accounts, although these were intended to assist with the arbitration of port access disputes rather than tariff regulation.

The guidelines focused on the way in which financial accounts were to be disaggregated, and required the regulatory accounts to:

- Allow financial data to be related to non-financial performance indicators;
- Focus on services with the highest risk of disputes;
- Make maximum use of existing information, to avoid additional data collection costs.

Under the ESCOSA guidelines separate accounts must be kept for regulated and unregulated services and for different ports, and the regulatory accounts must be audited. They must include information on capacity, utilisation and availability of the regulated services, and their volatility over time.

Accounting principles and policies can be selected by the port operator, but must have a recognisable and rational economic basis, and must be disclosed so that ESCOSA can understand the Regulatory Accounting Statements and make comparisons between them over time. Although they can be based on different conventions, the regulatory accounts must be derived from the financial accounts by a traceable process.

Accounting principles and policies must conform to Australian Accounting Standards where applicable, unless a specific regulatory requirement requires deviation from these standards. Replacement cost accounting (for example, the use of Depreciated Optimised Replacement Costs) is acceptable.

**Essential Services Commission Act.** ESCOSA has as its main aim protection of the long term interests of South Australian consumers with respect to the price, quality and reliability of essential services. At the same time, it must have regard to the need to:

- Promote competitive and fair market conduct;
- Prevent misuse of monopoly or market power;
- Facilitate entry into relevant markets;
- Promote economic efficiency;
- Ensure consumers benefit from competition and efficiency;
- Maintain the financial viability of regulated industries and incentives for long term investment;
- Promote consistency in regulation with other jurisdictions.

ESCOSA must also take into account::

- The particular circumstances of the regulated industry and the goods and services for which the determination is being made;
- The costs of making, producing or supplying the goods or services;
- The costs of complying with laws or regulatory requirements;
- The return on assets in the regulated industry;
- Any relevant interstate and international benchmarks for prices, costs and return on assets in comparable industries;
- The financial implications of the determination;
- The benefits and costs of regulation;
- The trade-off between costs and service standards.

**Marine Services Act.** The objectives of the MSA Act are:

- To provide access to maritime services on fair commercial terms;
- To facilitate competitive markets;
- To promote the interests of users of Essential Maritime Services by ensuring that regulated prices are fair and reasonable having regard to the level of competition and efficiency in the regulated industry;
- To ensure that disputes about access are subject to an appropriate dispute resolution process.

## Queensland

Queensland has seven ports which are subject to regulation. Brisbane, Gladstone, Hay Point, Mackay, Abbot Point, Townsville and Weipa

Economic regulation is carried out by the Queensland Competition Authority (QCA). So far, the QCA has not questioned the pricing policies of any of the State ports, and has subjected only one terminal – Dalrymple Bay Coal Terminal in the port of Hay Point – to economic regulation in respect of third party access.

To improve transparency, the Queensland Government has recently amended the QCA Act to allow the QCA to collect price information in cases where ports have the opportunity to exercise monopoly power but more intrusive regulation is not considered justified.

Stakeholders consulted during the last CIRA Review (2007) wanted the pricing of port infrastructure to be based on a wide range of principles, including:

- Efficient cost structures, to be achieved through international benchmarking and mandatory auditing of costs and service quality;
- Restrictions on cross-subsidies;
- Fair and transparent decision-making processes;
- Certainty and predictability of tariffs, with protection against sudden and unexpected increases in price. Where possible, tariff changes should be timed to coincide with changes in port users' own contractual arrangements.

One stakeholder (National Bulk Commodities Group) argued strongly in favour of rates of return being determined independently, and based on the risks and characteristics of each individual port business. It also suggested that the Productivity Commission (an independent Federal body) should review the cost basis for charges at all of the major ports every five years.

Other stakeholders, particularly the coal exporters, were more concerned with the timely provision of additional capacity than with price, arguing that regulated prices needed to be high enough to support future investment needs, but low enough to provide an incentive for continual improvements in operating performance.

## New South Wales

New South Wales has three ports which are subject to regulation: Sydney/Port Botany, Newcastle and Port Kembla.

The majority of port infrastructure and services is still provided by the government-owned Port Corporations, whose statutory objectives are set out in the *Ports and Maritime Administration Act 1995* (PMAA). These have only recently been extended to include the development of a more competitive commercial environment.

Regulation of the Port Corporations in New South Wales is carried out by two ministries (the Portfolio Minister and the Shareholder Minister, equivalent to DOT and DPE in South Africa).

Changes to public sector port prices are proposed by the individual Port Corporations, for approval by the Portfolio Minister in consultation with the Shareholding Ministers. Changes have to be justified by reference to the cost of capital, the cost of providing services, the levels and types of infrastructure investment, the competitive environment within which each port corporation operates, and the appropriate commercial rate of return. The target rate of return is included in the annual Statement of Corporate Intent (SCI) prepared by each port, which has to be approved by the Shareholding Minister.

Prices for Port Corporation services are not subject to independent economic regulatory oversight, although this could be undertaken by the Independent Pricing and Review Tribunal (IPART) if the relevant services were declared to be government monopolies for which there were no other suppliers and - in the short term - no contestable market.

When Port Corporations provide services that are also available from private operators they must comply with the Policy Statement on the Application of Competitive Neutrality issued by the NSW Treasury. This is designed to remove any net competitive advantages resulting from public sector ownership.

Tariffs for private terminals and port services are either determined by market competition, or set out in concession agreements.

Although the present arrangements have ensured that price increases are justified, and provide a balance between facilitating market entry and ensuring the sustainability of the Port Corporations, the 2007 CIRA review suggested that Port Corporations' prices should be benchmarked against those in other Australian jurisdictions, using monitoring work carried out at Federal level by the Australian Competition and Consumer Commission (ACCC) and the Bureau of Infrastructure, Transport and Regional Economics.

The review also recommended that in future lease terms for major port facilities such as stevedoring terminals should contain provisions to foster enhanced competition, investment and productivity.

### **Western Australia**

Western Australia has 16 ports, of which eight (generally the largest) are governed by the Port Authorities Act 1999. Their oversight is the responsibility of the Department of Planning and Infrastructure.

The Port Authorities Act requires these ports to negotiate a Statement of Corporate Intent and a Strategic Development Plan annually with the Minister. Statements of Corporate Intent address the port authority's performance objectives for a single financial year, whereas Strategic Development Plans are confidential corporate plans covering a rolling five year period.

Section 37(2) of the Act states that port charges are to be determined by each port authority in accordance with prudent commercial principles. Since July 2000 Government policy has been to require the ports to achieve a return on assets of between 5-8%; a figure within this range is embodied in each port's annual Statement of Corporate Intent.

There is nothing in the Port Authorities Act to prevent port authorities from exploiting their monopoly power, but this would be inconsistent with other port authority responsibilities specified within the Act, such as promoting trade and commerce.

Three of the eight ports – Fremantle, Esperance and Port Hedland – were reviewed for CIRA compliance purposes by the Allen Consulting Group in 2008. Its report found no instances of misuse of market power, and identified a need for increased competition only in respect of the bulk grain export services provided at Fremantle and Esperance by CBH Ltd.

This is partly because in Western Australia the potential for ports to abuse their monopoly positions is severely constrained by the existence of other Acts, such as the Western Australian Bulk Handling Act 1967, the Railway and Port (Pilbara Infrastructure Pty Ltd) Act 2004, and the Commonwealth Wheat Export Marketing Act 2008.

### **Northern Territory**

Darwin is the only significant port in the Northern Territory. Darwin Port Corporation (DPC) is subject to the directions of the Chief Minister who oversees its performance and must approve its tariff structure. Small price changes negotiated with individual customers do not require the Minister's approval.

The CIRA review found that the economic regulation of port infrastructure was not justified given the small size of the port and the cost of regulation. It noted that DPC's revenues had been below operating costs since 2004-05, and stressed the need for pricing reforms to increase rather than lower tariffs. It recommended a revenue requirement approach to tariff setting, allowing for the recovery of efficient operating costs and an appropriate return on capital, the latter to be agreed with the Government

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