



# SELECTED PROCEEDINGS

## TARIFF REGULATION IN PORT SECTOR: EXPERIENCES FROM INDIA

RACHNA GANGWAR (RACHNA015@GMAIL.COM) INSTITUTE OF MANAGEMENT TECHNOLOGY, GHAZIABAD  
(INDIA) 201001

This is an abridged version of the paper presented at the conference. The full version is being submitted elsewhere.  
Details on the full paper can be obtained from the author.

ISBN: 978-85-285-0232-9

13th World Conference  
on Transport Research

[www.wctr2013rio.com](http://www.wctr2013rio.com)

15-18  
JULY  
2013  
Rio de Janeiro, Brazil

unicast

# **TARIFF REGULATION IN PORT SECTOR: EXPERIENCES FROM INDIA**

*Rachna Gangwar (rachna015@gmail.com)*  
*Institute of Management Technology, Ghaziabad (India) 201001*

## **ABSTRACT**

With increasing focus on public private partnerships (PPP) in infrastructure sector, the role of regulatory bodies has become very crucial. Tariff, being vulnerable to market monopolies and monopoly/predatory<sup>1</sup> pricing, is a critical regulatory element. After private participation was allowed in port sector, the Tariff Authority for Major Ports (TAMP) was set up in 1997 to regulate tariff at major<sup>2</sup> ports. TAMP regulated, inter-alia, tariff that port operators could charge from port users. Before TAMP's guidelines were finalised, some of the bids had already been awarded.

This paper studies the evolution of TAMP and its guidelines, its implications on early bids and effectiveness in tariff setting process. It presents two projects to highlight ambiguities in tariff setting process and limitations of TAMP. The paper brings out issues prevailing in the current regulatory environment and suggests some strategies as way forward.

*Keywords: Tariff Regulation, Port Privatization, Public Private Partnerships*

## **1. INTRODUCTION**

India's coastline of approximately 7600 kms has 12 major ports (11 administered by central government through port trusts and 1 corporatized port), and 187 non-major ports, administered by state governments. Most Indian ports traditionally operated under a service port model wherein all operations, services and facilities were provided by the port authorities.

The need for an independent regulator was felt with the entry of private operators, soon after the Department of Shipping announced policy guidelines for private section participation for major ports in 1996. The policy provided for the establishment of 'Tariff Authority for Major Ports' (TAMP) to fix and revise port tariffs in order to ensure that there was no unfair

competition between private sector players and the port trusts (TERI, 2009). TAMP was constituted on March 25, 1997 having purview on major ports and private terminals therein.

TAMP, being the first regulatory authority of this kind, had no prior experience. The private sector participation in India was at a nascent stage in 1990s therefore experiences from other sectors were also not available. TAMP came up with its first set of guidelines in 1998 which were evolved through a consultative process with stakeholders. Many issues emerged over the period of time and guidelines were modified in 2005 and again in 2008 based on the experiences gathered and international best practices.

This paper studies TAMP for its effectiveness in tariff setting process and regulation. It presents two contrary examples to highlight ambiguities in tariff setting process and limitations of TAMP. The paper brings out issues prevailing in the current regulatory environment and suggests some strategies as way forward.

Section 2 gives the bidding details of two terminals, evolution of TAMP guidelines, tariff setting process and impact on viability of terminals. Section 3 brings out the current regulatory issues prevailing in the sector. Section 4 concludes the paper and brings out some recommendations.

## **2. EVOLUTION OF TAMP AND EARLY BIDS**

Even before TAMP came up with its guidelines, two important terminals in the country were already been awarded. These were the Nava Sheva International Container Terminal, and Tuticorin Container Terminal. Figure 1 gives the location of these terminals in India's map.

### **Tuticorin Container Terminal (TCT)**

The Tuticorin Container Terminal at Tuticorin port was awarded to PSA-SICAL through a competitive bidding process in 1998. It was on 'Build Operate Transfer' (BOT) basis for 30 years. The bid for this terminal was submitted in October 1997, well before TAMP had issued any guidelines. The key bid criteria was the royalty per TEU that the port operator would pay to the port trust. The operator had to guarantee a minimum throughput of 300,000 TEUs/year from fifth year onwards i.e. 2003.

PSA-SICAL offered a royalty payment scheme that provided for rapid increase over the years. The royalty started from the second year at a rate of Rs. 102 per TEU. As per the LA, this rate would increase every year. Consequentially, the royalty to be paid to port trust for each year would also increase. In the 30th year of operation, rate of royalty would increase to Rs 5178 per TEU and the royalty would amount to Rs. 1553.4 million. As per Article 7.3.1 of LA, the operator agreed to tariff ceilings to be fixed by TAMP.

TAMP's first guidelines were released in 1998 after a consultative process with stakeholders. It adopted a cost plus approach for tariff determination with an assured 20% rate of return on equity employed (Sundar and Sarkar, 1999). The tariffs so determined were the ceiling tariff i.e. the maximum what the port operator could charge from the port users. Tariff proposals would usually be valid for three years but could be initiated anytime by any of the stakeholders – port trusts, port users, port operators and respective bodies of user groups. Tariffs were communicated through 'Tariff Orders,' a notification published in the Gazette of India.

In December 1999, TAMP passed the first tariff order for TCT valid for a period of three years. The revision of tariff was scheduled in late 2002. The operator submitted a proposal in 2002 to TAMP proposing an increase in tariff by 28%. TAMP, in its Order of September 20, 2002, reduced the then existing tariffs by 15%. This reduction was mainly due to the fact that the royalty amount that the operator paid to the port trust was not considered as a cost item in determining the tariff while the operator had included the royalty as cost item. The immediate implication of this order on TCT was that the terminal would become unviable. Unfortunately, the TAMP guidelines of 1998 failed to mention anything on the treatment of huge royalty amounts that the operators agreed to pay in order to get bids. The guidelines only provided that the basis for fixation of tariff was cost plus 20% return on equity. PSA-SICAL, left with no other option, challenged the TAMP order in the Madras High Court. The Court granted stay on the TAMP order and allowed the operator to charge rates that prevailed earlier.

During the pendency of the writ petition by PSA-SICAL, the Government of India, in exercise of its power under Section 111 of the Act, on July 29, 2003 issued its policy decision that the royalty payment shall not be factored into/taken into account as cost for fixation /revision of tariff by TAMP.

Private operators who started operations prior to July 2003 feared that the new rule would make their terminals commercially unviable. Consequently, the shipping ministry issued an amendment allowing the royalty/annual revenue share paid by them to government-owned port as a cost item for fixing tariffs. However, the extent of pass-through of royalty/revenue share in tariff fixation would be limited to the royalty quoted by the second highest bidder (Livemint, 1999). However, this arrangement will continue only until the affected terminal makes losses.

With these important amendments on treatment of royalty, TAMP issued its revised guidelines in March 2005. These guidelines followed the cost plus approach but with an assured 15% return on capital employed (RoCE) and not on the equity. Capital employed had been defined as the sum of net fixed assets and normative working capital, with norms specified for depreciation and various working capital parameters (ICRA, 1999). The guidelines also factored in some reward for operator's efficiency gain.

The court heard the TCT case in August 2005 and a Memorandum of Compromise (MOC) was signed between the concerned parties. With this, the case was withdrawn. According to MOC, (i) the operator could continue charging the 1999 tariff, (ii) the operator would make a proposal to the Shipping Ministry in the matter of fixation of quantum of royalty that might be permitted to be allowed as a 'pass through' as a revenue expenditure for tariff fixation prior to March 31, 2005 and (iii) any advantage/gains, that the operator had enjoyed by virtue of non-implementation of the 2002 tariff in view of the stay granted by the court would be quantified by TAMP and such advantages/gain will be adjusted/set off in the proposed new tariff and such set off will be spread over a period of three years (TAMP, 2005).

PSA-SICAL submitted a proposal to the central government in September 2005 asking for full royalty to be permitted as a pass-through in tariffs which was done in the case of another terminal 'NSICT' where 100% royalty was included in the cost for determining the tariff rate. The proposal was rejected.

The operator submitted a proposal to TAMP for revising the tariff upward by 30%. This was taking into account the operator's efficiency gains which the 2005 guidelines recognized.

TAMP assessed the benefits by the operator due to non implementation of 2002 tariff at Rs 726 million for the period November 2002 – September 2006. After adjusting the royalty pass through based on the ministry's order of 2003 and the gains enjoyed by the operator, it issued a tariff order in September 2006. This was valid for the period of 2006, 2007 and 2008. The revised rates were lowered by 50% comparing to 1999 rates. The operator challenged this order. In August 2007, the Chennai high court quashed the TAMP order and directed that the matter be decided afresh.

In December 2008, TAMP again issued a tariff order for the period of 2009, 2010 and 2011. This order reduced the tariff by 34% compared to 1999. The operator again challenged this order. In October 2009, Madras High Court set aside the TAMP December 2008 order and asked for passing a new order. (TAMP, 2008; Indian Kanoon, 1999)

In the meantime, the operator lowered down its operations to just minimum guaranteed requirement of 300,000 TEU per annum.

### **Nava Sheva International Container Terminal (NSICT)**

In another example of NSICT, the tariff setting process presents a contradictory situation where the operator could earn profits much beyond the permissible limits set by the TAMP. NSICT was awarded to P&O Australia in July 1997 through a competitive bidding process. NSICT was the second terminal at the port, first being operated by the port trust JNPT itself. The terminal was awarded for 30 years on BOT basis with a minimum throughput guarantee of 600,000 TEUs per annum from sixth year onwards.

NSICT commenced operations in 1999, ahead of schedule, adopting the then existing tariffs of the Jawaharlal Port Container Terminal (JNPCT) – the first terminal, which was an ad hoc arrangement. After 18 months of operations, NSICT applied for an increase of 30% in its tariff. TAMP permitted 16% increase over its existing rates vide its order of November 2000 based on traffic and cost projects provided by NSICT, to bridge the likely deficit for these years. These tariffs were based on two years projection and were valid only for two years, till 2002. 100% royalty paid by the operator was treated as a cost in tariff computation. The actual traffic handled was almost twice than what was projected by the NSICT for tariff computation, returns obtained were significantly higher than permitted 20% as per 1998 TAMP guidelines.

Year	2000-01	2001-02	2002-03
Projected Traffic	493	580	650
Actual Traffic Handled (TEU)	695	943	1201

Source: Salhotra, 2007

The next tariff review took place only in August 2005, after a delay of three years. For the period 2000 - 2005, the 100% royalty paid by the NSICT was treated as a cost. 2005 order of TAMP, recognizing the excess surplus accumulated by the NSICT, reduced its tariff by 12.8%, though it did not change the treatment of royalty. These tariffs were computed after giving 50% reward to operator's efficiency.

Following a representation from other terminal operators, TAMP passed another order in April 2006 where it permitted a pass through of royalty at a reduced level (quoted by the next bidder). This, in turn, reduced tariff further by 12%.

On one hand, NSICT has set new benchmarks in India container history and JNPT's own terminal traffic improved owing to competition posed by NSICT but on the other hand a biased regulatory approach was adopted and if it justified or not is a question. (Salotra, 2007)

### **Further Revisions**

Gaining experiences from these projects, the bid criteria in latter bids was changed to revenue share rather than royalty per TEU. Further amendments were made in the 2005 TAMP guidelines to minimize anomalies. In February 2008, TAMP came up with upfront tariff setting guidelines, which were applicable only for new PPP projects, even while the existing developers operate under the 2005 guidelines. Under these guidelines, TAMP provided an upfront tariff cap for bulk/container terminal using a normative cost based approach based on the capital and operating costs, and a 16% return on capital employed for the optimum terminal capacity.

The tariff caps were linked to the Wholesale Price Index (WPI) and would be adjusted for inflation each year. However, only 60% variation in the WPI would be taken into account.

Based on this tariff, bidders would have to quote royalty/revenue share (to the port trusts), which would form the basis for selection, among other factors (ICRA, 1999). It was explicitly mentioned that revenue share would not be considered as an item of cost for fixing the upfront tariff.

### **3. ISSUES**

The regulatory framework in Indian ports sector lacks a single independent agency that is responsible for regulating all relevant issues in the sector including competition issues; has a jurisdiction over all major and minor ports; and ensures a level playing field to all players in the sector. In the current regulatory framework, following issues still prevail:

#### **Issues Affecting the Private Operators**

##### *High Royalty/Revenue Share*

In order to win projects, private operators bid aggressively and quote revenue share that are often not sustainable as seen in the case of PSA-SICAL at Tuticorin port. Other examples with high revenue share are the third container terminal at JNP won by Maersk-Concor at 36%; second terminal at Chennai port won by PSA-Sical at 46%; Kandla terminal won by ABG at 49% revenue share. Operators later try to manipulate and find alternate ways to minimize it. This leads to various conflicts and litigations. Operators are sometimes forced to cut down the operations; eg PSA-SICAL had to bring down their operations from 377,000 TEUs in 2007-08 to 300,000 TEUs (minimum guaranteed) to keep the royalty low.

This is true for other sectors too. In airports, the GMR, the winning bidder for Delhi airport, was awarded the project at a revenue sharing of 46%. They later created two subsidiaries to minimize the revenue to be shared.

Should there not be a bottom and ceiling cap for the revenue share?

##### *Port Policy*

The port policy did not allow the incumbent player to take part in the subsequent bid at the same port (irrespective of cargo) due to threat of monopoly. Due to this, many potential operators who could have benefited from the economies of scale were barred from bidding for other terminals at the same port. The ministry revised the guidelines and now the same bidder can not bid for the next terminal with same cargo. This kept PSA-SICAL away from bidding for the second container terminal at Tuticorin port. The second terminal would have helped them to recover losses from the first terminal.

### *Level Playing Field*

Private ports and Ennore port do not come under the purview of TAMP and hence have the freedom to fix market-determined port charges. As a result, some private ports have been able to charge higher rates than a nearby major port. This poses a level playing field issue between major and no-major ports and between major ports under port trust and corporatized major ports.

TAMP lacks a uniform common accounting procedures amongst ports. Its principles (including port efficiency) for fixation of tariff are also not uniform. Currently, each port has its own tariff schedule and scales with different accounting procedures. There are issues of level playing field between operators. Royalty pass though allowed for NSICT was 100% while for PSA-SICAL and Chennai container terminal, it was limited to the amount quoted by the next bidder.

The tariff cap figure is arrived at using a cost plus approach. This is the maximum price that the operator could charge, but it is free to charge below this price. This could lead to private monopolies and issues of arbitrary price hike or predatory pricing might arise where TAMP, in its current form, will have control only on price hike but not on predatory pricing. Though not significant right now due to lack of capacity, this might be an issue in future. According a report by TERI (2009), predatory pricing is not only a concern for private players, but also for landlord ports. Landlord ports provide access to basic infrastructure to all terminal operators. In some instances, they are also a terminal operator, competing with the private terminal operators (as in the case of JNPT). In this situation, it can increase the prices for basic infrastructure and use it to cross-subsidize lower tariffs for its terminal operations business.

### **Issues Affecting the Regulator**

#### *Limited Scope*

The role of the TAMP is limited to only tariff. It is not vested with the powers to set and enforce performance standards and other measures for protection of user interests. Its autonomy from the government and ability to enforce regulation is in doubt. Appointment, removal and terms and conditions of employment of officers and members of TAMP are controlled by the government (Mehta, 2009). The TAMP does not have any statutory powers to enforce its orders. Moreover, the orders of TAMP can be superseded by the government.

In the existing scenario, TAMP does not have any statutory powers to call for data from port operators and it cannot compel any party to share information. There have been instances where decisions of TAMP have been challenged in courts by the port operators (TERI, 2009). The case in sight is the TCT where operator challenged the TAMP orders three times in the High Court.

## **Issues Affecting the End Users**

### *Lack of Competition*

Port tariffs in India vary significantly across ports and across terminals within a port. Tariffs for handling containers at different ports range between Rs 971 and Rs 3540 per container. At JNPT, these range between Rs 2550 and Rs 3540 at different terminals (TERI, 2009).

Until new terminals become operational, Indian ports will continue to face capacity constraints. Due to lack of capacity, and inter-port and intra-port competition, terminal operators had been able to charge tariffs at the ceiling level (TERI, 2009).

In fact, as seen in case of Tuticorin, private player has opted for reducing their handling capacity when their tariffs were lowered by TAMP. End users do not have much choice in switching ports due to capacity, hinterland connectivity and other logistics costs. They are forced to pay the price asked by the port operator given these constraints.

## **Other**

### *Penalizing Efficiency*

In spite of provision in the 2005 TAMP guidelines to factor in 50% efficiency of the operator in tariff calculation, it does not encourage operator to perform to its true capacity. In the case of JNP, NSICT's tariff was brought down to below JNPCT's tariff in August 2005 by the TAMP even though NSICT's throughput was much higher than the JNPCT's. This is the implication of cost plus regulation that in a way penalizes efficiency and does not incentivize the operator to bring down its per unit of cost of operation.

### *Upfront Tariff Setting*

Jawahar Lal Port (JNP) had to first set the upfront tariff for its 330m (half the size of a standard terminal) ahead of inviting price quotations from the shortlisted bidders. At JNP, another terminal of 2000m is also lined for development in next 2-3 years. The authorities were in a dilemma. Should they use the parameters and costs of a 330m terminal, estimated to cost Rs 600 crore, to work out the tariffs that will be applicable to similar facilities to be developed at the port in the next five years? Or, should it calculate tariffs on the basis of a 2,000m terminal? As per 2008 guidelines, the tariff cap would be uniform across all new terminals of that port.

TAMP finally cleared the proposal by fixing an upfront tariff of Rs 3,434 for handling a loaded standard container at the new 330m terminal, on the basis of a representative (hypothetical) terminal of 1,000m. This has not solved the bias in favour of the two projects.

The user tariff of Rs 3,434 is considered high, taking into account the investment and expenses for developing and running a container terminal of 330m coasting Rs 600 crores. According to one calculation, the tariffs should be only around Rs 2,078 for a loaded container. The tariff is high compared to the tariff prevailing not only in that port where three separate terminals are operating, but in other state-run ports as well. A higher tariff would hit the ability of the new terminal to attract cargo in a competitive environment. Higher handling costs of containers will also hurt competitiveness of Indian goods in the global market.

The new rules have put the JN Port in a bind. The next terminal, which will be bigger in terms of investment, construction costs, size and design, will have to content with this user tariff for a project costing around Rs 6,700 crore. TAMP has cleared the proposal though many potential port operators and user groups wanted separate tariffs for the two terminals taking into account a realistic assessment of capital expenditure and operational costs (Livemint, 2009).

#### **4. CONCLUSIONS AND RECOMMENDATIONS**

Indian port sector is constrained by capacity and connectivity to its hinterland. The sector is not yet working in a competitive environment, as the end users do not have many choices. This is also evident by the fact that TAMP had always set only the ceiling tariff in all the three guidelines. In spite of a clear mention in TAMP guidelines that the operators could charge less than the tariff set by the TAMP, operators always charged this ceiling tariff from end users. Most of the Indian terminals are running beyond their capacity, so they do not even need to lure customers by offering discounts. In this context:

TAMP guidelines of 2008 with upfront tariff setting are applicable only for new terminals. While the new terminals will be able to set tariff as per the market demand, the existing terminals can charge the tariff fixed by TAMP. This will affect the existing terminals negatively and will also not create a healthy competitive environment between the operators. It is therefore recommended that the upfront tariff setting should be applicable uniformly to all terminals across the port. Appropriate provisions can be made with the existing operators to factor in the extra profits/losses they would be making due to this change eg the extra profits must be reinvested in improving the efficiency of the terminal and common port activities.

There is a need to have a regulator, which has control on tariff instead of leaving the sector just on the market forces. Market forces alone are the best means of regulation where competition has already set in, which is not the case in Indian port sector. But a regulatory body like TAMP, in its current form, has not been very effective. The regulator should have a much broader scope including pricing and should have control on all ports in the country to create a level playing field. Powers should include setting service levels, implementation, monitoring, and penalties in case of non-performance.

On the similar lines, there was a proposal to set up a Major Port Regulatory Authority (MPRA). In 2009, the draft Major Port Regulatory Authority Act, 2009, was put up out by the DoS for discussion. If this act is passed by the Parliament, MPRA will replace TAMP and will have the regulatory powers. However, the scope of this authority will be only on the major ports.

Going beyond the scope of MPRA, there is a need to have a unified authority to regulate all major and non-major ports in the country. This should also include coastal regions and dry ports such as inland container depots and container freight stations to facilitate efficient multimodal transportation in the country (Mehta, 2009).

Regulator should be in place before the bids are invited so that bidders are more realistic in quoting their financial bids. TAMP came into effect after some of bids were already submitted with exorbitant royalty figures.

Government should corporatize ports for improved efficiency, greater accountability, and increased commercial orientation. Corporatization would provide more autonomy to ports, which currently suffer from excessive government control. This will also give them access to commercial funding for expansion. Though GoI, as part of the 1996 policy guidelines, substantially increased financial and other powers of the port trusts, corporatization of existing port trusts is yet to happen (TERI, 2009).

Figure 1: Major Ports of India



## REFERENCES

- Farrell, Sheila (2002). "The Regulation Of Privatized Ports: What Are We Trying To Achieve?" IAME Panama 2002 Conference Proceedings (2002).
- ICRA (2009). "Challenges in Private Sector Participation in Port Projects," Report from ICRA,
- Indian Kanoon (2009). "PSA Sical Terminals Limited vs Tariff Authority for Major Ports," Indian Kanoon (15 October, 2009)
- Livemint (2009). "New Tariff Rule at Government Ports Defies Rationale," Newspaper Article. 2nd April, 2009
- Mehta, Pradeep S (2009). "Competition and Regulation in India"
- Planning Commission (2008). "Approach to Regulation of Infrastructure: Issues and Options," The Secretariat for the Committee on Infrastructure.
- Planning Commission (2009). "Tariff setting for PPP Projects in Major Ports," The Secretariat for the Committee on Infrastructure
- Planning Commission (2009). "The Position Paper on the Port Sector in India," The Secretariat for the Committee on Infrastructure.
- Rao, Narasimha D. And Subhashish Gupta (2006). "Regulatory Framework for Infrastructure," Asian Development Bank
- Ray, Amit S (2005). "Managing Port Reforms in India: Case Study of Jawahar Lal Nehru Port Trust (JNPT) Mumbai," Background paper prepared for World Development Report
- Salhotra, Bharat (2007). "Concession for Nava Sheva International Container Terminal," Planning Commission
- Sundar, S and S K Sarkar (1999). "Transition to a liberalized environment: Experiences and Issues in Regulation," Background Paper, TERI
- Sunder, S. "Port Restructuring in India".
- TAMP (2008). "Tariff Authority for Major Ports (30th December 2008)," Department of Shipping, Ministry of Shipping, Road Transport and Highways
- TAMP (2007). "Revision of Guidelines for the Regulation of Tariffs in the Major Ports," Department of Shipping, Ministry of Shipping, Road Transport and Highways
- TERI (2009). "Competition issues in regulated industries: Case of Indian transport sector - Railways and Ports," The Energy and Resources Institute
- World Bank (2007). Port Regulation Module, Port Reform Toolkit Second Edition. The World Bank (2007)

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<sup>1</sup> predatory pricing is the practice of selling a product/service at a very low price, intending to drive competitors out of the market

<sup>2</sup> Major ports in India are the ones which are administered by the central government