Effect of Tariff Regulation in Major Port Container Terminals: The Case of Jawaharlal Nehru Port Trust

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Abstract

Tariff at India's centrally-administered major ports, including privately operated terminals therein, are regulated and prescribed by the Tariff Authority for Major Ports (TAMP). TAMP was set up under an amendment of the Major Port Trusts Act 1963 in 1997. This paper analyses the evolution of TAMP's tariff policy against the growth of container terminals at the Jawaharlal Nehru Port. This major port, and India's largest container port, is run by the Jawaharlal Nehru Port Trust (JNPT), an autonomous body constituted under the Major Port Trusts Act, 1963. Various regulatory issues related to cost-plus approach to tariff setting, unsustainable royalty payments, regulatory capture, regulating performance, varying tariffs across CTs, and market assessment and capacity utilisation have been discussed.

Keywords: major port; JNPT; tariff regulation; TAMP; royalty; cost-plus; container terminal

1. Introduction

As of December 2015, JNPT has five container terminals (CT) out of which three (one port-owned and two licensed) have already been operationalised, one (licensed) is partially operationalised and one (licensed) is under construction. Exhibit 1 gives brief details of the various CTs and a schematic layout of JNPT.

This paper complements another paper which analyses the various legal issues that JNPT has faced over the same period since the commissioning of JNPT.[1] The earlier paper also covers regulatory issues with respect to controlling monopoly during the bidding process of JNPT's CTs. This paper focusses on the various issues surrounding tariff regulation. The paper chronologically analyses the evolution of the Tariff Authority for Major Ports (TAMP's) tariff policy and consequently tariff rates pertaining to CTs at JNPT over the years since its commissioning. Using a case-based approach, we have examined case studies, tariff guidelines, tariff orders, published and unpublished papers, media reports, court judgements, primary data from discussions, and secondary data.

2. Towards CT Privatisation: Need for a Regulator

[1] G RAGHURAM, PRASHANTH D UDAYAKUMAR & RICHA PRAJAPATI, EFFECT OF LEGAL ISSUES IN INFRASTRUCTURE DEVELOPMENT: THE CASE OF CONTAINER TERMINAL BIDS IN JAWAHARLAL NEHRU PORT TRUST (2015), www.iimahd.ernet.in/assets/snippets/.../2891616442015-10-03.pdf.

The port was constructed in the mid-1980s,[2] at an initial cost of INR 11.09 billion.[3] The port-owned CT, Jawaharlal Nehru Port Container Terminal (JNPCT), had a rated annual capacity of 500,000 TEUs. The port was inaugurated on May 29, 1989, the date having been advanced, in time for the then-held national elections. This compromised on the service infrastructure and the training of the project-affected persons who had been offered employment in the port. Consequently, the JNPCT had a slow ramp-up in traffic (Exhibit 2).

Seeing the underutilisation of facilities, P&O Australia, along with their Indian partner, the RPG group, made an unsolicited proposal in 1992 to manage the port. [4] While the Government of India (GoI), fresh from the major liberalisation that had happened in 1991, was sympathetic to the proposal, in 1993, it decided to request a Group of Experts appointed by the World Bank to do the groundwork for the tendering.[5] This 'group' recommended to the then Ministry of Surface Transport (hereafter referred to as the 'Ministry'[6]) that a licensee could be selected based on a royalty offered, while guaranteeing minimum performance levels and at tariffs not exceeding what was set by the Ministry for JNPCT.[7]

However, both due to labour resistance and insufficient political buy-in, the tender kept getting postponed. With the appointment of a new Minister, the Ministry changed the concept from licensing out the JNPCT to privatising the second CT, which had been conceived in the master plan. The global tender for private involvement in the second CT was issued in December 1995.[8] The bidder with the highest net present value (NPV) of its cumulative royalty payments (annual payment would be the product of royalty and minimum guaranteed throughput (MGT), both of which could be quoted for that year) would win the bid.

Some of the other bid terms, that Shashikumar[9] points out, were:

- The licensee had to achieve "gross average productivity of quay cranes of not less than 20 moves per hour per crane every month."
- The licensee would bill users of the CT for "services, including terminal charges, container handling and cargo related charges."
- The licensee was "liable to pay a royalty for the guaranteed traffic in the event of not achieving the minimum traffic" indicated unless the failure was attributed to factors outside the licensee's control.
- A 20-25% increase in tariff was anticipated every three years, "with the next revision expected in early 1997."

[2] MINISTRY OF SHIPPING, ANNUAL REPORT 2014-15 (2015), http://shipping.nic.in/showfile.php?lid=2016.
[3] REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA ON PUBLIC PRIVATE PARTNERSHIP PROJECTS IN MAJOR PORTS, (2015), http://www.saiindia.gov.in/english/home/Our_Products/Audit_Report/Government_Wise/union_audit/recent_reports/union_performance/2015/Comm/49of2015/Report No. 49_English.pdf.
[4] N Shashikumar, Privatisation at India's Premier Container Port: Jawaharlal Nehru Port Trust – A Case Study, in INFRASTRUCTURE DEVELOPMENT AND FINANCING: TOWARDS A PUBLIC-PRIVATE PARTNERSHIP (G Raghuram et al. eds., 1999).
[5] *Id. at 552.*
[6] The then Ministry of Surface Transport is today the Ministry of Shipping. In the interim, it has also been called as the Ministry of Shipping, Road Transport and Highways.
[7] Shashikumar, *supra* note 4, at 552.
[8] Bharat Salhotra, Concession for Nhava Sheva International Container Terminal, PLAN. COMM. GOV. INDIA (2007), http://planningcommission.nic.in/sectors/ppp_report/4.Case Studies/7.Concession for port terminal JNPT.pdf.
[9] Shashikumar, *supra* note 4.

At the instance of the Ministry of Finance, an India Infrastructure Report had been commissioned under Rakesh Mohan, an economist. This 1996 report drew attention to the inefficiency of the major ports of India and suggested private partnership as a possible reform.[10] Taking a cue from this, the Ministry issued guidelines for all Major Port Trusts regarding private sector participation on October 26, 1996. The financial bid would have to indicate the upfront license fee, royalty per TEU and the MGT.[11] While private players would continue to charge what the ports did, the guidelines did emphasise the need for an independent tariff regulator.[12]

3. Creation of TAMP

On January 1 and 6, 1997, JNPT held negotiations with the highest-bidding consortium led by P&O Ports Australia Private Limited, where the latter agreed to raise the MGT from 550,000 TEU to 600,000 TEU per annum in the 15th year of awarding the license.[13] On February 3, 1997, the bid for the second CT was awarded to the consortium of P&O Australia Ports, Konsortium Perkapalan Behrad and DBC Group of Companies, based on the highest NPV of royalty offered.[14] P&O's financial offer had royalty payments at INR 47 per TEU in 1999-00 (first year of operation), at INR 2670 in 2014-15 and at INR 5,610 per TEU in 2026-27 (last year of operation).[15]

On March 25, 1997, the Major Port Trusts Act (MPTA), 1963 was amended by the Port Laws (Amendment) Act 1997 to constitute the TAMP. [16] In April 1997, TAMP was set up as an independent authority to regulate and prescribe all tariffs - both vessel-related and cargo-related, and rates for lease of properties in respect of major port trusts and the private operators located therein.[17]

Though TAMP follows a consultative approach, the orders are final, with no provision for appeals within the system, except for reviews under exceptional circumstances.[18] Aggrieved parties could approach the High Court (HC) for redressal. However, the Central government has "the power to modify . . . [TAMP's] order or issue 'policy directions' on matters related to port pricing."[19]

NSICT was incorporated on March 27, 1997.[20] On July 3, 1997, a License Agreement was signed between JNPT and P&O Consortium to build and operate the second CT as NSICT for a 30 year concession period.

4. 1998 TAMP Guidelines

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[10] AMIT S RAY, MANAGING PORT REFORMS IN INDIA: CASE STUDY OF JAWAHARLAL NEHRU PORT TRUST (JNPT) MUMBAI (2004), http://siteresources.worldbank.org/INTWDR2005/Resources/477407-1096581040435/wdr2005_india_port_reform2.pdf.
[11] Salhotra, *supra* note 8, at 2.
[12] Salhotra, *supra* note 8, at 3.
[13] Shashikumar, *supra* note 4.
[14] *Id.*
[15] REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA ON PUBLIC PRIVATE PARTNERSHIP PROJECTS IN MAJOR PORTS, *supra* note 3.
[16] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, INTRODUCTION, http://tariffauthority.gov.in/ (last visited Dec 26, 2015).
[17] *Id.*
[18] *Id.*
[19] *Id.*
[20] RAGHURAM, UDAYAKUMAR & PRAJAPATI, *supra* note 1.

In February 1998, after holding deliberations over the “concepts, principles, approaches and modalities” for fixing tariffs at major ports and their privately operated terminals, TAMP issued guidelines for tariff regulation.

Some salient features, as Bharat Salhotra lists in his paper, were:[21]

- Adopting a cost plus approach with an assured rate of return of 20% on equity, for tariff fixation
- Tariff proposals could be initiated by any of the stakeholders - port trusts, port users, operators and representative bodies
- TAMP could exercise suo motu jurisdiction in fixing tariffs
- Participatory approach in the course of tariff reviews
- A generally two year validity cycle, with a provision to propose revisions ahead of schedule “for good reasons”

Though the guidelines provided an assured return on equity, they did not specify a normative debt equity ratio.[22] The interest on debt would be considered as a cost. Since the rate of return on equity was higher than the interest rate of debt, the debt-equity ratio had implications for the tariff. In its Order of May 10, 1998, TAMP accepted a debt equity ratio of 65:35 as given by NSICT.

Through an Order issued on December 5, 1998, TAMP agreed to the NSICT proposal to temporarily adopt the existing tariffs of JNPCT till NSICT was able to provide the cost data.

NSICT was constructed at a cost of INR 7.5 billion in about two years. NSICT was commissioned and became partially operational by April 1999.[23] This was part of NSICT’s strategy of reaching out to the market early. The CT attracted a container traffic of 600,000 TEU, its first year of full operation (Exhibit 2), though such traffic had been guaranteed only by 2011-12, the 15th year.

As Amit Ray points out in his paper, NSICT’s faster turnaround and diversion of traffic from JNPCT led to a ‘demonstration effect’ on the latter. Amid fears that a lazy JNPCT might spread its lethargy to the operator of a new CT[24], the presence of a well-managed NSICT created a competitive environment that spurred modernisation of the neighbouring JNPCT.[25] JNPCT worked on their capacity augmentation, modernisation of facilities, capacity restructuring, financial restructuring and enhancing labour productivity.[26] Exhibit 2 shows JNPCT’s traffic picking up and going well beyond its original annual capacity of 500,000 TEU.

After 18 months of operation with steady growth of traffic, NSICT applied for a 30% raise in tariff. TAMP in its Order notified on November 15, 2000, permitted a 16% increase of tariff over the existing rates based on traffic and cost projections of NSICT for 2000-01 and 2001-02. The order stated, “If this approach seems to have given undue advantage to the terminal operator, at the time of review during the next revision of tariffs, any undue benefit accrued to the Terminal Operator may be set off against

[21] Salhotra, *supra* note 8, at 6.
[22] Salhotra, *supra* note 8, at 8.
[23] Jawaharlal Nehru Port Trust, NSICT (2015), http://164.100.157.202/NSICT.aspx (last visited Jul 20, 2015).
[24] Shashikumar, *supra* note 4.
[25] Salhotra, *supra* note 8.
[26] RAY, *supra* note 10.

the future revision of tariffs".[27] Since there were no norms regarding the capital or operating costs, TAMP had to rely on the operator for the cost data.[28] [para sourced from 28]

TAMP allowed a debt-equity ratio of 50:50, while stating that "TRAI [Telecom Regulatory Authority of India] also recognises 1:1 as a reasonable debt-equity ratio in the telecom sector."[29] The allowed increase in equity share from 35% to 50% enabled an increase in tariff for NSICT.

Table 1 shows the wide gap between the projected and actual traffic. There was a steep increase in container traffic, with JNPT becoming the first Indian port to handle container traffic of more than 1 m TEU in 2000-01 (Exhibit 2). Yet the tariff review took place only in 2005 and not in 2002 as the guidelines had advised. Also, working over the original capacity led to issues with NSICT's customers regarding congestion and strict norms on last moment cargo loading.[30]

Table 1: Projected versus Actual Traffic of NSICT (2000-01 to 2002-03)[31]

Item (unit)	2000-01	2001-02	2002-03
Projected in November 2000 (TEU)	4,93,450	5,79,803	6,50,000
Actual (TEU)	6,94,899	9,43,928	12,01,119
Variation (%)	41	63	85

In its Order on July 29, 2003, the Ministry decided that royalty or revenue share payable to the port trust by the private operator would not be allowed as an admissible cost for tariff computation.[32] For projects, including NSICT, whose bidding processes were finalised before this date, the tariff computation was to be allowed to include royalty or revenue share as much as to prevent losses due to the same not being allowed as cost, subject to the maximum amount bid by the next lowest bidder.[33]

There was a serious congestion issue from April to October 2004 at JNPT due to a variety of reasons like the holiday season in April/May resulting in increased passenger trains at the cost of freight trains, maintenance works of Railways that caused a mega block between May 21 and 28, monsoons, shortage of container rakes and the inability of ICD Ludhiana to handle the required rate of incoming traffic. All of this resulted in reduced container movement by CONCOR, which was the sole provider of rail-borne container transportation between the port and the hinterland.[34] [para sourced from 35]

In October 2004, arbitration hearings for a variety of issues between JNPT and P&O commenced with two former Chief Justices of India, who in turn had appointed an umpire in Mumbai. One issue was

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[27] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, TAMP ORDER DATED NOVEMBER 7, 2000 (2000), http://www.tariffauthority.gov.in/htmldocs/ORDERS/NSICT/jnpt0018.pdf.
[28] Salhotra, *supra* note 8.
[29] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, *supra* note 27.
[30] RAY, *supra* note 10.
[31] Salhotra, *supra* note 8, at 10.
[32] Salhotra *supra note 8.*
[33] Salhotra *supra note 8.*
[34] PORT OF ROTTERDAM AUTHORITY, COORDINATION OF BUSINESS PLANS FOR MAJOR PORTS IN INDIA: CONSOLIDATED PORT DEVELOPMENT PLAN (VOLUME 2) (2007), http://en.calameo.com/books/000046992e418be9b56a3.

related to payment of annual royalties and bank guarantees, which according to the CA would increase over the years. The second issue was that JNPT had wanted NSICT to do part payments to the Central Industrial Security Force (CISF) that provided security to the entire port premises. But NSICT had declined, saying it was the duty of a landlord port to provide security. Thirdly, the TAMP-notified rates had distortions due to the cost-plus approach. Whenever NSICT handled 'mixed trains' which also carried containers to JNPCT, it charged rates 16% higher than what was charged by JNPCT for similar services. In a fourth dispute over providing additional land to NSICT to develop a container yard, NSICT had disagreed to make any annual lease rental, claiming the land was part of the original CA. Having decided to de-link the issue of handing-over of land from payment-related disputes, JNPT conceded and decided to hand over the land, since trade was at the receiving end of congestion.[35] [para sourced from 35]

5. 2005 TAMP Guidelines

While holding consultations and discussions with representatives of various stakeholders like Chairmen of port trusts, associations (steamer agents, stevedores, custom house agents), shipping lines, private terminal operators, chambers of commerce and industry, and other users, TAMP also commissioned studies on efficiency-linked tariff scheme, cross-subsidisation and allowable return on investments in major port tariffs.[36] After TAMP held discussions over the recommendations made in the study reports and submitted the draft guidelines to the Ministry, the latter issued revised guidelines for tariff fixation at major ports and their privately operated terminals on March 14, 2005, which TAMP later notified on March 31, 2005.[37] The whole process, starting from the preliminary discussions held in April 2003, had taken about two years till notification of the new guidelines.

The 'Guidelines for Regulation of Tariff at Major Ports, 2004' (hereafter called the 'Revised Guidelines') superseded the 1998 guidelines and were to remain for five years, unless reviewed earlier or extended further. However, the principle evolved through earlier tariff orders were to remain as long as they were consistent with the guidelines. Though Clause 2.8(iv) maintained that a cost-based approach would be followed, Clause 2.8(viii) mentioned that the long-term objective would be to move to competitive pricing.[38] [para sourced from 38]

Some salient features of the Revised Guidelines were:[39]

- The cost plus approach would be followed with an assured return of 15% on capital employed (ROCE).
- Royalty payable to landlord port would not be allowed as an admissible cost for tariff fixation (Ministry Order on July 29, 2003).
- The TAMP-fixed rate will ordinarily be effective only prospectively. It shall be in force for three years unless specified otherwise in the CA or by TAMP.
- TAMP may, suo motu, review its orders for 'good and sufficient' reasons. This will follow a

[35] G RAGHURAM, A DIAGNOSTIC STUDY OF JAWAHARLAL NEHRU PORT TRUST (2006), http://vslir.iimahd.ernet.in:8080/xmlui/bitstream/handle/123456789/408/2006-04-09graghuram.pdf?sequence=1&isAllowed=y.
[36] Government of India Tariff Authority for Major Ports, Ministry of Shipping, GUIDELINES FOR REGULATION OF TARIFF (2005), http://tariffauthority.gov.in/htmldocs/ORDERS/Guidelines/rev-guideline.pdf.
[37] *Id.*
[38] *Id.*
[39] Salhotra, *supra* note 8.

consultative approach.

- Clause 2.4.1: "Attempts will be made to evolve normative cost of each component of port operations."[40]
- Clause 2.4.2: "TAMP will examine the reasonableness of the costs and investments to ensure that inefficiencies, uneconomic uses/practices/excesses are not passed on to users."[41]

From 2000 to 2005, NSICT had charged INR 3016 per TEU while JNPT charged INR 2600 per TEU. The TAMP Order of August 4, 2005 stated:[42]

> During the last revision, the cost statement for the NSICT showed average deficit of 15.61% for the years 2000-01 and 2001-02. Based on this deficit position, this Authority accorded a 16% increase. . . . The cost statement prepared . . . indicate an average additional surplus of 29% for the years 2000-01 to 2004-05 after allowing maximum permissible return on its investment and admissible costs. This amounts to Rs 473.42 cr for the period 2000-01 to 2004-05. . . . The accrual of additional surplus is on account of estimation error and the NSICT's failure to come up with its review of tariff on expiry of the tariff validity period.

According to the Revised Guidelines, "Only 50% of such cost reduction [established as due to efficiency improvement] will be considered in the relevant estimates of expenditure to be relied upon for fixing tariff for the succeeding tariff validity period." This would mean that 50% of the cost reductions would not result in reduction in tariff. According to Salhotra[43],

> The TAMP Order of August 2005 provided for setting off Rs 236.71 cr ($ 59.2 million) which was equal to 50% of the surplus of Rs 473.41 cr ($118.4 million) accumulated during 2000-05. . . . It notified a rate reduction of 12.8% in the tariff for the period between August 2005 to [and] April 2008 . . . . Contrary to the Guidelines [Revised Guidelines], it [TAMP] treated the entire royalty payment as a cost to be recovered from port users not only prospectively (2006 to 2008), but also retrospectively (2000-05).

After the DoS, in a letter on November 22, 2005, had sought clarification from TAMP on allowing full royalty as a cost item, the TAMP Order of April 2006 allowed a pass through of royalty payments at a reduced level of 69.5% (next highest bidder). This meant an additional reduction in tariff by 12% during 2006-08. TAMP had already permitted NSICT to recover 100% royalty as cost from port users during 2005-06, though.[44]

Salhotra's assessment put the total unrequited benefits received by NSICT from 2000-01 to 2007-08 at INR 949.54 cr.[45]

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[40] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, *supra* note 36.
[41] *Id.*
[42] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, TAMP ORDER NOTIFIED ON AUGUST 4, 2005 (2005), http://tariffauthority.gov.in/htmldocs/ORDERS/NSICT/SUO MOTU-75-meet-g-115-4-aug-05.pdf.
[43] Salhotra, *supra* note 8, at 12.
[44] Salhotra, *supra* note 8.
[45] *Id.*

In November 2001, expressions of interest were invited for a third CT to be developed by converting the existing bulk terminal into a CT. The bid was to be on a revenue share basis rather than on the earlier royalty model. The JNPT Board excluded P&O from bidding for this CT, saying that it wanted competition, even though the license agreement with P&O for the second CT had permitted them to bid for future projects. P&O unsuccessfully contested this both at the HC and the Supreme Court (SC). After the SC judgement of May 5, 2003, the bids were received and evaluated. A consortium of APM Terminals and CONCOR with a revenue share of 35.5% were the winning bidders in March 2004. The CA was signed on August 10, 2004 with the SPV, Gateway Terminals of India Private Limited (GTIPL), which had been incorporated in July 2004.[46] [para sourced from 46]

A week after the SC judgement, the Ministry issued a new policy for bidding to this effect:[47]

- There should be at least two operators across the terminals
- One operator cannot have more than two terminals at the same port
- Awardee cannot bid for the next terminal ('next project exclusion')

The project cost of GTIPL was INR 10.78 billion.[48] Though required to be commissioned by February 2007, GTIPL started operations in March 2006. Exhibit 2 shows GTIPL's container traffic growing rapidly. It surpassed that of NSICT in 2008-09. The terminal demonstrated growth even during the recession years from 2008 to 2011.

In November 2006, JNPT invited EOIs for a fourth CT of 2000 m and 4.4 m TEU annual capacity. 40 EOIs were received.

In September 2007, the Central Government issued a circular to JNPT asking them to proceed to invite global competitive bidding for an independent, 'standalone' CT for a 330 m extension of container berth towards the north of NSICT.[49] The circular excluded the Maersk-CONCOR consortium from the bidding for the standalone project and stated that "for the next BOT container terminal in JN Port in future, the successful bidder of the 330 metre extension project would be excluded as so on." [50] The convention was to be "followed in all Ports in its true spirit with a view to avoid monopoly and promote competition till such time a formal Policy is finalized and notified."[51]

6. 2008 TAMP Guidelines

Based on the Ministry's communication dated February 12, 2008, TAMP issued guidelines for upfront fixing of tariffs for PPP projects at major ports. The previous revised guidelines notified in 2005 were to continue to apply to the earlier projects at JNPT (JNPCT, NSICT and GTIPL). [52] The port trust concerned

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[46] RAGHURAM, UDAYAKUMAR & PRAJAPATI, *supra* note 1.
[47] G RAGHURAM & NIRAJA SHUKLA, ISSUES IN PPPS IN PORTS IN INDIA (2014), http://www.iimahd.ernet.in/assets/snippets/workingpaperpdf/15518989842014-01-06.pdf.
[48] REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA ON PUBLIC PRIVATE PARTNERSHIP PROJECTS IN MAJOR PORTS, *supra* note 3.
[49] Supreme Court of India, APM Terminals B.V v. Union of India & Anr, (2011), http://indiankanoon.org/doc/1802783/.
[50] *Id.*
[51] *Id.*
[52] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, GUIDELINES FOR UPFRONT TARIFF SETTING FOR PPP PROJECTS AT MAJOR PORT TRUSTS, 2008 (2008), http://tariffauthority.gov.in/htmldocs/ORDERS/Guidelines/2008/guidelines08.pdf.

would have to include the upfront tariff caps so fixed in the bid document for PPP projects thereafter bid with upfront fixing of tariffs. [53]

Some of the salient features of the guidelines, notified in the gazette on and applicable from February 26, 2008, were: [54]

- A normative cost plus approach was to be used allowing a reasonable ROCE of 16%.
- Container handling charges were to be allocated 90% of the total revenue requirement.
- Revenue share would not be considered as a cost item for fixing the upfront tariff.
- Every year, on April 1, the tariff caps would automatically be indexed to 60% of the variation in Wholesale Price Index (WPI) between January 1 of the year in question and January 1, 2008.
- The optimal capacity of the terminal, considered 70% of the maximum capacity, would be the lower of the optimal quay capacity and stack yard capacity.
- The actual performance of the private terminal, which was to comply with norms set in the bid documents, would be regulated by TAMP.
- The upfront tariff fixed for a particular commodity or service provided at a port would be applicable to identical commodities or services provided at terminals bid out in the next five years in that particular port.
- When reviewing tariff caps every five years (generally), technological improvements were to be accounted for and performance norms be thus set at "progressively higher" levels.

In June 2008, JNPT floated a tender for the standalone CT, excluding GTIPL from the project in accordance with the Ministry's circular. GTIPL's plea to allow it to bid was rejected. JNPT officials also conveyed that the selected developer for the standalone project would not be allowed to bid for the fourth CT project. In October 2009, after delays due to two court cases with ABG and poor response from bidders, JNPT scrapped the tender for the standalone project.[55] On November 10, 2009, JNPT re-issued the tender for the standalone CT. [56]

On March 2, 2009, JNPT had issued a global invitation for bids for the fourth CT. Though initially allowed to attend the pre-application conference, APM Terminals was later disqualified on the Ministry's direction.[57] Unsuccessful in its request to the Ministry for intervention, APM also lost in its litigation at the Bombay HC.

On August 2, 2010, the Ministry issued a new policy, replacing the 2003 policy, under Section 111 of the Major Ports Trusts Act 1963, which was to the following effect:[58] "If there is only one private terminal/berth operator in a port for a specific cargo, the operator of that berth or his associates shall not be allowed to bid for the next terminal/berth for handling the same cargo in the same port. 'Specific Cargo' means (i) containers (ii) liquid bulk, (iii) dry bulk or (iv) multipurpose/other general cargo."

[53] *Id.*
[54] *Id.*
[55] RAGHURAM, UDAYAKUMAR, AND PRAJAPATI, *supra* note 1.
[56] *Id.*
[57] *Id.*
[58] G RAGHURAM & NIRAJA SHUKLA, *supra* note 47.

However, on May 11, 2011, APM Terminals won the case at the SC, winning the right to bid for the fourth CT. But, APM decided not to bid, citing financial unviability. In an interview with Business Line, Hans Ole Madsen, Vice-President of APM Terminals had mentioned that the tended document did not allow for an upward revision of the starting tariff.[59]

According to an August 2011 'The Financial Express' article, congestion at the port had aggravated owing to berthing restrictions caused by the installation of new cranes at the JNPCT. Traders who used JNPCT were being charged an additional INR 15 million a day in surcharge imposed by shipping lines to recover the additional expenses due to berth delays and restrictions on volumes handled at the CT. Due to the congestion, some shipping lines were calling at the Mundra Port in Gujarat for berthing. Feeder vessels to bring the cargo from Mundra to JNPT caused additional expenditure.[60] [para sourced from 60]

A 2012 'The Economic Times' article reported that slashing of tariff rates by TAMP at the two private CTs led to the operators' slow handling of cargo to offset losses and in turn congestion at the port. In February 2012, TAMP had ordered GTIPL to reduce tariff by 44.28%. GTIPL had asked for an 8.72% increase. The article also described that in March 2012, TAMP also ordered the NSICT to cut rates by 27.85% while the request was for a 30% increase. Both orders were issued after reviewing the performance of the terminals and existing charges. Before the rate cuts, the port was reported to be operating at 120% of its then capacity. The private operators also failed to get a stay against the TAMP's order directing them to cut port charges after the SC declined to admit the special leave petitions filed by both the companies.[61] [para sourced from 61]

For the three year period 2012-13 to 2014-15, NSICT had submitted an estimated cost statement based on a container handling of 1.2 m TEU and royalty considered at 100% pass-through, resulting in deficit, consequent to which a 30% tariff increase was sought. However, TAMP moderated the estimated cost statement based on a 1.5 m to 1.6 m TEU container handling (maximum achieved previously), 69.5% pass-through of royalty (as per the 2005 guidelines), and operating costs under a more efficient scenario, consequent to which a 25.64% surplus on income was projected. With a few other adjustments, TAMP recommended a 27.85% reduction in tariff. [62] [para sourced from 62]

With this reduction in tariff, NSICT was of the view that it would be making losses in operating the CT at the intended volumes. Since the total royalty amount was a fixed cost until the MGT, and the marginal revenue on a TEU would cover the marginal non-royalty operating costs, it made economic sense to operate until the MGT. Beyond the MGT, since the marginal revenue on a TEU would not be in a position to cover the operating costs including royalty, there was no economic sense in increasing the throughput. Hence they decided to bring the throughput down to 600,000 TEU, subject to meeting

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[59] N K Kurup, *JN Port 4th terminal is unviable, says APM official*, BUSINESS LINE, June 27, 2011, http://www.thehindubusinessline.com/todays-paper/tp-logistics/article2140034.ece.

[60] Nikita Upadhyay, *Shippers paying for delays due to congestion at JNPT*, THE FINANCIAL EXPRESS, August 22, 2011, http://archive.financialexpress.com/news/shippers-paying-for-delays-due-to-congestion-at-jnpt/835216.

[61] Manu Balachandran, *JNPT pvt cos DP World and APM terminals go slow on cargo handling*, THE ECONOMIC TIMES, May 22, 2012, http://articles.economictimes.indiatimes.com/2012-05-22/news/31816198_1_gateway-terminals-india-tariff-authority-largest-container-port.

[62] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, *supra* noteTariff Authority for Major Ports, Ministry of Shipping, Government of India, TAMP ORDER NOTIFIED ON MARCH 1, 2012 (2012), http://tariffauthority.gov.in/htmldocs/ORDERS/NSICT/2012/NSICT-G55-122-2012-Order-ALL.pdf.

pending long-term commitments to customers. As a consequence, the capacity would not be fully utilized, due to a conscious act of the operator.

A 74:26 consortium of PSA-ABG, with a revenue share of 50.82%, won the bid for the fourth CT. PSA-ABG, however, amidst differences with JNPT over stamp expense payments and allegedly to avoid higher project costs, failed to sign the CA. In September 2012, JNPT thus terminated the contract and encashed the bid security of INR 670 million.[63] [para sourced from 63]

Though JNPT informed ABG and other qualified bidders, on November 15, 2011, that the date of submission of RFP for the standalone project had been extended to December 30, 2011, ABG was disallowed to bid. This was by consequence of the award of the fourth CT contract, as per the 2007 circular and the May 23 clarification. ABG's petition against the decision was dismissed by the Bombay HC on October 4, 2012.[64] [para sourced from 64]

On the same day, DP World won the bid for the standalone project, with a revenue share of 27.5%. After an issue over whether Hindustan Ports Private Limited, an asset holding company of DP World, could sign the CA, DP World was awarded the project. The latter agreed to share 28.09% of its revenue over a 17 year concession period on Design, Build, Finance, Operate and Transfer (DBFOT) basis. The CT, to be run as Nhava Sheva India Gateway Terminal (NSIGT), was to be constructed at a revised cost of INR 9 billion from the earlier INR 6 million. [65] [para sourced from 65]

A brief attempt to bid the fourth CT as two projects of equal quay length and capacity saw an opportunity for even existing operators DP World and APM to bid. However, JNPT returned to the one-project plan after a change of Chairman on May 16, 2013. There was a re-bid on June 5, 2013.[66]

7. 2013 TAMP Guidelines

Following a policy directive by the Ministry, TAMP issued guidelines to determine tariffs for projects at major ports, to be effective from September 9, 2013. As also hinted in the Revised Guidelines of 2005, the preamble of the 2013 guidelines acknowledged allowing more competitive pricing, with the increasing cargo share (then about 40%) of the non-major ports (administered by the state governments) calling for a 'level playing field'. The guidelines were to apply to those privately operated terminals, RFPs of which were issued after the issue of the guidelines, and to those own projects of major ports commissioned after the issue of the guidelines.[67] The 2005 and 2008 guidelines would, however, continue to apply to the respective projects under their jurisdiction. [para sourced from 67]

Some of the salient features of the 2013 guidelines were:[68]

- The tariff for a commodity or service at a major port would be determined by TAMP based on the concerned port's proposal of reference tariff and performance standards.
- The reference tariff was the highest tariff fixed for the commodity/service in that major port under the 2008 guidelines. The reference tariff was to be escalated by 60% of the variation in

[63] Raghuram, Udayakumar, and Prajapati, *supra* note 1.
[64] *Id.*
[65] *Id.*
[66] *Id.*
[67] *Id.*
[68] *Id.*

WPI per annum between January 1 of the highest tariff under the 2008 guidelines for the same commodity/service, and January 1 of the year in question.
- For the year starting on the first April 1 after commercial operations begin (second year of operation), performance linked tariffs are allowed to be proposed by the private operators.
- The port trust had to set its own performance standards for performance-linked tariffs. Clause 4.1 required that the proposed performance standards for the port trust had to be "on the same lines as would be applicable for any comparable PPP berth."
- The performance linked tariff proposal (along with performance standards) could be higher by up to 15% of the indexed reference tariff for the concerned year.
- During the first year of performance-linked tariffs, TAMP was to seek the port trust's views on the performance of the PPP operator. Performance-linked tariff for subsequent years required compliance to previous year's performance standards, evaluated by an engineer.
- Unless reviewed or revised earlier, the guidelines were to be valid for five years from the date of issue. The bid documents and concession agreements for projects bid after the issue of guidelines were to mention the reference tariff and performance standards.

As reported in the Economic Times, hired workers operating trailers of transport contractors that carted containers from the wharf to the storage yard and vice versa at GTIPL resorted to a go-slow in late October 2013, seeking more wages. The transport contractors were being paid by GTIPL on a per-container basis. GTIPL had shut the gates through which export containers were brought to the terminal and vehicles began queuing up to 17 km to the port gate.[69] [para sourced from 69]

As reported on Live Mint, on November 15, 2013, JNPT issued show-cause notice to GTIPL seeking reasons for not running the CT properly. JNPT had expected the operator to take responsibility and cancel the contract with the transporters in case the latter were not performing. GTIPL had 7 days to respond. Meanwhile, much of the cargo was being re-routed via Pipavav and Mundra ports in Gujarat at an additional cost.[70] [para sourced from 70]

By November 21, 2013, GTIPL reached an agreement with the drivers in the presence of the labour commissioner. According to the agreement, every driver would get INR 6 per box handled as an incentive by GTIPL directly. If a driver handled more than 500 boxes per month, he would get INR 10 for every extra box.[71] [para sourced from 71]

In December 2013, RFP was issued to seven qualified bidders for the fourth CT project. Of PSA and an APSEZ consortium who had submitted the price bids, PSA won with a revenue share of 35.79%. The project, to be run by PSA's subsidiary - Bharat Mumbai Container Terminal (BMCT), was over a 30 year

[69] Megha Mandavia, JNPT's Gateway Terminal reaches pact with trailer drivers, THE ECONOMIC TIMES, November 23, 2013, http://articles.economictimes.indiatimes.com/2013-11-23/news/44389854_1_gateway-terminal-jnpt-apm-terminals.
[70] P Manoj & PR Sanjai, JNPT issues notice to Gateway Terminals as cargo piles up, LIVE MINT, November 21, 2013, http://www.livemint.com/Companies/R1RniiBI8AiOQrxMQBQ2FK/JNPT-issues-notice-to-Gateway-Terminals-as-cargo-piles-up.html.
[71] Mandavia, *supra* note 69.

concession period on DBFOT basis at a revised cost of INR 79.15 billion against the earlier INR 62 billion.[72] [para sourced from 72]

The "Policy for Determination of Tariff at Major Ports, 2015" was notified by the Ministry and came into effect on January 13, 2015. The policy was to apply for a period of three years, to only major port trusts.[73] Under this broad policy framework, after consultations with the port trusts and incorporating their inputs, TAMP issued working guidelines, notified on June 4, 2015, to operationalise the Tariff Policy. [para sourced from 74]

Some of the salient features are:[74]

- The major port trust would assess the Annual Revenue Requirement (ARR) which is the average of the actual expenditures as per the final audited accounts of 2011-12 (Y1), 2012-13 (Y2) and 2013-14 (Y3) plus return at 16% on capital employed as on March 31, 2014, duly certified by a practising Chartered Accountant/ Cost and Management Accountant.
- Exclusions from this expenditure are detailed in the working guidelines.
- This ARR, indexed by 100% of the WPI for 2014-15, had to be used along with the traffic projected for 2014-15 to arrive at the Scale of Rates (SOR) for 2014-15.
- The proposed SOR along with performance standards had to be submitted to TAMP 90 days before its implementation.
- The performance standards for the major port trusts had to be in terms of, inter alia, average ship berth day output, average crane moves per hour (container cargo), average turnaround time of vessels, and average pre-berthing time of vessels.

On July 8, 2015, TAMP notified that the "Guideline for Regulation of Tariff at Major Ports, 2004" would continue to be applicable till March 31, 2016, only to the BOT terminals (NSICT and GTIPL) governed by the said guidelines (Exhibit 3).[75]

In the same month, Live Mint reported that Deloitte Touche, in a study commissioned by the Ministry, suggested a roadmap for migrating existing cargo handlers to a "market-driven pricing regime" from the "regulated setup". Even as the Ministry and the port industry were discussing a potential migration of 16 existing port contracts, the study suggested that "the most suitable option for the government would be

[72] RAGHURAM, UDAYAKUMAR, AND PRAJAPATI, *supra* note 1.
[73] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, POLICY FOR DETERMINATION OF TARIFF FOR MAJOR PORT TRUSTS, 2015 (2015), http://tariffauthority.gov.in/htmldocs/ORDERS/Guidelines/TARIFF_POLICY_2015/Final guidelines 2015-Eng1.pdf.
[74] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, WORKING GUIDELINES TO OPERATIONALIZE THE POLICY FOR DETERMINATION OF TARIFF FOR MAJOR PORT TRUSTS, 2015 (2015), http://tariffauthority.gov.in/htmldocs/ORDERS/Guidelines/2015/WS-G207-M148-2015-Guidelines-ALL.pdf.
[75] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, TAMP ORDER NOTIFIED ON JULY 8, 2015 (2015), http://tariffauthority.gov.in/htmldocs/ORDERS/Guidelines/2015/WS-G240-M149-2015-GUIDE-ORDR.pdf.

to go for re-bidding of the projects for the market to determine suitable revenue share that can be expected from the respective projects in a deregulated scenario."[76] [para sourced from 76]

In August 2015, another Live Mint article reported that JNPT went for arbitration with PSA, seeking a damages claim of INR 4 billion towards the first bid of the fourth CT. PSA had offered a much lower revenue share in the rebid and also got the flexibility to propose tariff rates based on 2013 TAMP Guidelines.[77]

8. Lessons

In this section, issues pertaining to tariff regulation during JNPT's growth story are discussed.

8.1. Cost-plus Approach to Tariff Setting

Tariff is central to profitability of the private operator of a CT. TAMP was set up in 1997 and adopted the cost-plus approach to tariff setting. The attendant issue was what would constitute cost. One of the most contentious issues was whether royalty would be considered as cost.

TAMP was set up much after the bid documents for the first privately operated CT (second CT) were issued in December 1995. The second CT was bid out on a royalty model without clarity on whether it would be considered as part of cost. Later on, it was decided that royalty amounts up to the next highest bidder would be considered as cost, in case there would be losses otherwise. (It should be noted that subsequent CT bids were changed by policy into revenue share, making this a non-issue.)

There were also concerns due to different CTs incurring different costs (partly due to age of the asset and consequent depreciation) for the same activity, thus charging differentially on a cost-plus basis. This became distortionary when the service was to be provided mutually between two CTs, like for example, unloading/loading a container on a train in one CT and delivering to the other. Such tariffs to one another are being challenged through arbitration.

Since the cost-plus tariff was originally anchored on a return on equity, there were concerns on what is the extent of permissible equity. This was later on corrected to a return on capital employed.

In general, a cost-plus approach has been viewed as being distortionary and not incentivising efficiency. Some corrections have been applied with tariff setting during reviews focussing on efficiency expectations.

The recent bids have been based on upfront tariffs, with a provision for inflationary increase and increases to incentivise efficiency.

8.2. Unsustainable Royalty Payments

[76] R Manoj, *Cargo handlers may get to opt for market-driven pricing regime*, LIVE MINT, July 13, 2015, http://www.livemint.com/Politics/5X4N77amxuEZfHBzzyES1O/Cargo-handlers-may-get-to-opt-for-marketdriven-pricing-regi.html.

[77] P Manoj, JNPT seeks damages from Singapore's PSA, LIVE MINT, August 17, 2015, http://www.livemint.com/Companies/D2NFBPTeFhbs8alQOBSZQI/JNPT-seeks-damages-from-Singapores-PSA.html.

Firstly, the approach of admitting part of the royalty as cost did not provide relief if the operator faced losses even after these adjustments.[78] As a point of debate, why a government-owned landlord port should provide relief for a loss-making private operator whose expertise is operational efficiency and profit-making, is a question to be looked at.

Salhotra argues that "if royalty is permitted to be recovered from port users in this manner, then by implication, NSICT got the award because it offered to charge the highest tariff from port users….Further if the bidders had known that royalty could be collected from port users, then no bidder would have a personal stake in bidding any amount as royalty."[79]

The skewed royalty payments towards the latter half of the concession period when the tariffs would not increase in tandem with the royalty per TEU had resulted in NSICT facing losses and cutting down on volumes in the later years, as seen in Exhibits 2 and 4. Forty-nine percent of the guaranteed royalty payments were distributed to be paid in the last seven years of the concession period.[80] Salhotra had rightly predicted that operations would become unsustainable if the scenario moved to one where the royalty payable was more than the profits.[81] The CAG 2015 report agrees that "JNPT erred in structuring the project by including a royalty model that was incompatible with the tariff."[82]

8.3. Regulatory Capture

According to Salhotra, JNPT failed to discharge its responsibility under Section 42 of the MPTA by not seeking the intervention of TAMP for a tariff review, especially to prevent NSICT from recovering monopoly rents. Though TAMP had suo moto jurisdiction to revise tariffs, it blamed NSICT for not responding to its requests to expedite submission of proposal for a review.[83]

Even after noticing NSICT's higher-than-projected traffic, TAMP accepted NSICT's projections in August 2000 during the request for tariff increase.

According to Salhotra's cost-volume-profit analysis[84], "the large increase in the profits was evidently on account of a reduction in the unit fixed costs per TEU rather than any efficiency driven reduction in variable cost". While TAMP blamed NSICT for estimation error and Salhotra's analysis confirms that the large surplus was on account of increase in traffic, TAMP in its Order of August 4, 2005 allowed for 50% of surplus to be retained by NSICT towards efficiency gains.

In the case of royalty, while issuing guidelines that royalty can be passed through only to the extent of 69.5% in the case of losses, TAMP's own order later allowed a 100% royalty pass-through to NSICT. TAMP itself admits to the "non-observance of a prudential debt-equity norm" in its Order of November 15, 2000, while considering permissible equity. JNPT as a landlord port did not raise concerns about the skewed royalty payments in NSICT's bid offer during the negotiations with P&O.

[78] *Id.*
[79] *Id.*
[80] Salhotra, *supra* note 8.
[81] *Id.*
[82] REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA ON PUBLIC PRIVATE PARTNERSHIP PROJECTS IN MAJOR PORTS, *supra* note 3.
[83] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, TAMP ORDER NOTIFIED ON AUGUST 4, 2005 (2005), http://tariffauthority.gov.in/htmldocs/ORDERS/NSICT/SUO MOTU-75-meet-g-115-4-aug-05.pdf.
[84] Salhotra, *supra* note 8.

All this leads to the possibility of regulatory capture, under a situation of a nascent regulator evolving systems.

8.4. Regulating Performance

Compared to regulating tariff, regulating performance-related parameters would be more pertinent to and effective in attaining the regulator's goal of ensuring competition and the landlord port's goal of leveraging the private party's expertise in efficiency and operations. TAMP could intervene only when 'competition' and efficiency is being compromised. According to Salhotra[85], in the agreement with NSICT, the only performance related standard was crane productivity with no penalties for shortfalls in performance. Though TAMP has brought in incentives for performance in the 2013 guidelines, this benefit would apply only to the fourth CT that is being constructed.

8.5. Varying Tariffs across CTs

JNPCT, initially under the purview of the 2005 guidelines, now falls under the new policy framework and working guidelines for port trusts notified in January and June 2015 respectively. NSICT and GTIPL fall under the purview of the 'Revised Guidelines' notified initially in 2005 and extended to apply until March 31, 2016. NSIGT, which has started partial operations, falls under the guidelines notified in 2008. It is also to be noted that while DP World's NSICT still runs under the royalty model, its adjacent standalone project in the same port runs on a revenue-sharing model. Exhibit 3 lists TAMP's guidelines and the varying tariffs across the various CTs of JNPT.

The RFP for the second bid of the fourth CT project was issued in December 2013, a few months after the new TAMP Guidelines were notified on September 30, 2013. Consequently, tariff for the fourth CT came under the purview of these guidelines that allowed 15% higher tariff (Performance-linked Tariff) over the WPI-indexed Reference Tariff (Exhibit 3). As Raghuram et al[86] elaborate the circumstances leading to delays in the conclusion of the bidding processes of fourth CT and standalone CT ('next project exclusion' policy), we observe here how this 'sequentiality' of projects led to projects falling under different tariff regimes.

8.6. Market Assessment and Capacity Utilisation

NSICT reached its 15th year annual guaranteed traffic of 600,000 TEU in its second year of operations. Likewise, in the case of every new CT at JNPT, we see latent demand being converted into a steep rise in traffic (Exhibit 2). This shows the gap between latent traffic demand and capacity at JNPT. Poor market assessment on the part of the landlord port and the Ministry, and delayed response in capacity creation, has thus resulted in failure to extract maximum and timely returns for the government.

With the first bid for the standalone CT having failed and the fourth CT's bidding process still not having concluded, JNP handled 4.27 m TEU in 2010-11. This was in spite of the fact that JNPCT, NSICT and GTIPL were designed to handle a total of only 3.6 m TEU a year.[87] This caused severed congestion. The issue of

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[85] Salhotra, *supra* note 8.
[86] RAGHURAM, UDAYAKUMAR, AND PRAJAPATI, *supra* note 1.
[87] P Manoj, PSA-ABG team set to get India's biggest container terminal deal, LIVE MINT, June 29, 2011, http://www.livemint.com/Companies/hjSEXXjqtgY8X1tdoBmo0K/PSAABG-team-set-to-get-India8217s-biggest-container-term.html.

congestion was aggravated by the installation of new cranes in 2011 and the go-slow by truckers in 2013.

In general, there have been delays in capacity expansion through new CTs. Delays of projects, congestion and capacity constraints at JNPT have diverted a lot of potential container traffic to private/non-major ports. Over the past three years, the growth in container traffic has been at a compounded annual growth rate (CAGR) of 12.5% at non-major ports but only 1.3% at major ports (Table 2). (JNPT accounts for 56% of the container traffic of major ports.) The issue of non-major ports growing at a faster rate than major ports is applicable even for non-containerised traffic, which are also regulated by TAMP.

Table 2: Traffic Growth at Major and Non-major Ports[88]

Cargo Type	Year	Major Ports		Non-major Ports	
		Traffic	CAGR (%)	Traffic	CAGR (%)
Container Cargo (000 TEU)	2011-12	7651	1.3	2286	12.5
	2014-15	7960		3256	
All Cargo (million tonnes)	2011-12	560	1.2	354	10.0
	2014-15	581		471	

Such delays at major ports have been due to regulatory uncertainty, legal issues and inadequate policy formulation.

9. Conclusions

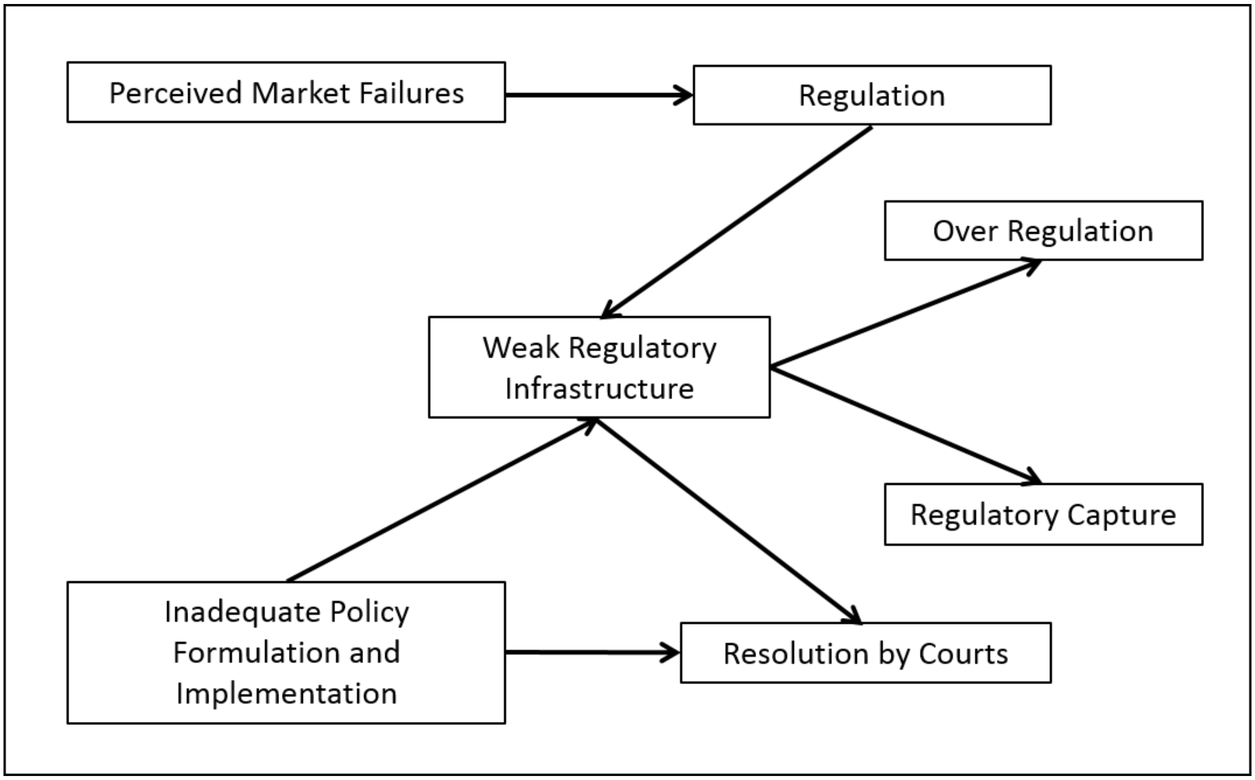
The evolution of TAMP's tariff policy and its impact on JNPT brings out the state of the regulatory infrastructure and its consequences, in the context of JNPT. We can conclude that such infrastructure, though well intended, was at best weak, leading to either over-regulation or regulatory capture. Aided by inadequate policy formulation, many issues had to be resolved by taking recourse to courts. These consequences are presented visually in Figure 1.

The regulation, especially the use of a cost-plus approach, has led to various distortions. Notable among these are charging of different rates for the same activity by different operators in the port and forcing an operator to underperform. At another level, evolving regulation has created a situation of CTs in a port operating under different tariff regimes and the same CT operating under different tariff regimes over time.

The final point for reflection is whether there is need for tariff regulation at all, especially in the context of container handling. CTs within and across ports compete with one another. Non-major ports in India are not covered under any tariff regulation. Some of the non-major port private CT capacity is larger than those of major ports. The aggregate capacity in the country is more than the actual traffic, leading to a competitive environment. It may be best to let market forces operate.

[88] Authors' analysis; TRANSPORT RESEARCH WING, MINISTRY OF ROAD TRANSPORT & HIGHWAYS, GOVERNMENT OF INDIA, UPDATE ON INDIAN PORT SECTOR (31.03.2015) (2015), http://shipping.gov.in/showfile.php?lid=2020.

Figure 1: Regulatory Infrastructure and Consequences[89]



[89] Authors' analysis

Exhibit 1

CTs and their Operators

CT #	SPV/CT	Operator	Quay (m)	Signing of CA	Bid criterion	PPP mode
1	JNPCT	JNPT	680	Commissioned on May 26, 1989		
2	NSICT	DP World (P&O)	600	July 3, 1997	Highest NPV of royalty (INR 2354 million)	BOT
3	GTIPL	APM Terminals	712	August 10, 2004	Revenue sharing (35.5%)	BOT
330 m	NSIGT	DP World	330	June 19, 2013	Revenue sharing (28.09%)	DBFOT
4	BMCT	PSA	2000	May 6, 2014	Revenue sharing (35.79%)	DBFOT

Schematic Diagram of CTs

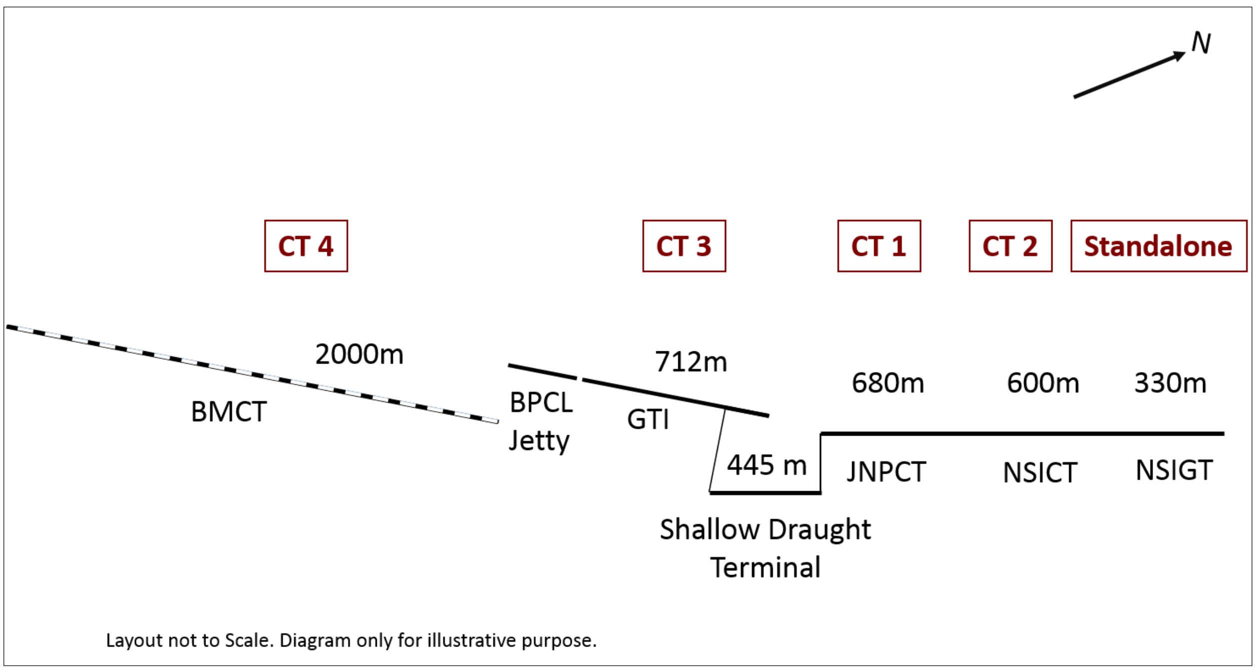


Exhibit 2

Container Traffic at JNPT[90] (1989-90 to 2014-15) (000 TEU)

Year	JNPT				Mumbai	Total Mumbai Area	India Total
	JNPCT	NSICT	GTIPL	Total			
1989-90	34			34	310	344	633
1990-91	55			55	324	379	681
1991-92	109			109	280	389	683
1992-93	143			143	315	458	798
1993-94	173			173	428	601	1052
1994-95	244			244	487	731	1257
1995-96	339			339	518	857	1449
1996-97	423			423	583	1006	1698
1997-98	504			504	601	1105	1892
1998-99	669			669	509	1178	1932
1999-00	546	343		889	430	1319	2185
2000-01	494	695		1189	321	1510	2470
2001-02	630	944		1574	254	1828	2887
2002-03	729	1201		1930	213	2143	3366
2003-04	1038	1231		2269	197	2466	3900
2004-05	1138	1232		2370	219	2589	4502
2005-06	1340	1324	4	2668	156	2824	4998
2006-07	1310	1360	630	3300	138	3438	5964
2007-08	1261	1508	1291	4060	118	4178	7512
2008-09	1060	1430	1460	3950	92	4042	7671
2009-10	776	1532	1753	4061	58	4119	8019
2010-11	877	1537	1856	4270	72	4342	8620
2011-12	1028	1402	1891	4321	58	4379	9937
2012-13	1208	1044	2007	4259	58	4317	10004
2013-14	1313	969	1880	4162	41	4203	10225
2014-15	1294	1160	2013	4467	45	4512	11216

[90] RAGHURAM, UDAYAKUMAR & PRAJAPATI, *supra* note 1.

Exhibit 3

TAMP Guidelines for Tariff Fixation at Major Ports[91]

Guidelines	Date of Notification
Issue of Corrigendum to rectify an inadvertent error noticed in Working Guidelines notified by the Authority to operationalise the Policy for Determination of tariff for Major Port Trusts, 2015	July 8, 2015
Extension of the validity of the Guidelines for Regulation of Tariff at Major Ports, 2004 [92]	April 16, 2010, April 17, 2011, April 16, 2012, August 16, 2012, March 26, 2013, July 17, 2013, December 26, 2013 October 24, 2013 June 2, 2014 October 20, 2014 July 8, 2015
Working Guidelines to operationalize "Policy for Determination of Tariff for Major Port Trust, 2015"	June 4, 2015
Policy for Determination of Tariff for Major Port Trusts, 2015	January 27, 2015
Revised Guidelines for Determination of Tariff for Projects at Major Ports, 2013 w.e.f September 9, 2013	September 30, 2013
Guidelines for Determination of Tariff for Projects at Major Ports, 2013	August 8, 2013
Guidelines for upfront tariff setting for PPP Projects at Major Port Trusts, 2008.	February 26, 2008
Guidelines for Regulation of Tariff at Major Ports, 2004.	March 31, 2005
Guidelines for Tariff Regulation	February 1998

[91] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, GUIDELINES FOR TARIFF FIXATION, http://tariffauthority.gov.in/htmldocs/Guidelines_rev2.htm (last visited Dec 27, 2015).

[92] The dates of extending validity are derived from the tariff guidelines in the previous note and may not be exhaustive.

TAMP Tariff for Handling Foreign-going Loaded Containers between Ship and Yard [93] [94] (INR/TEU)

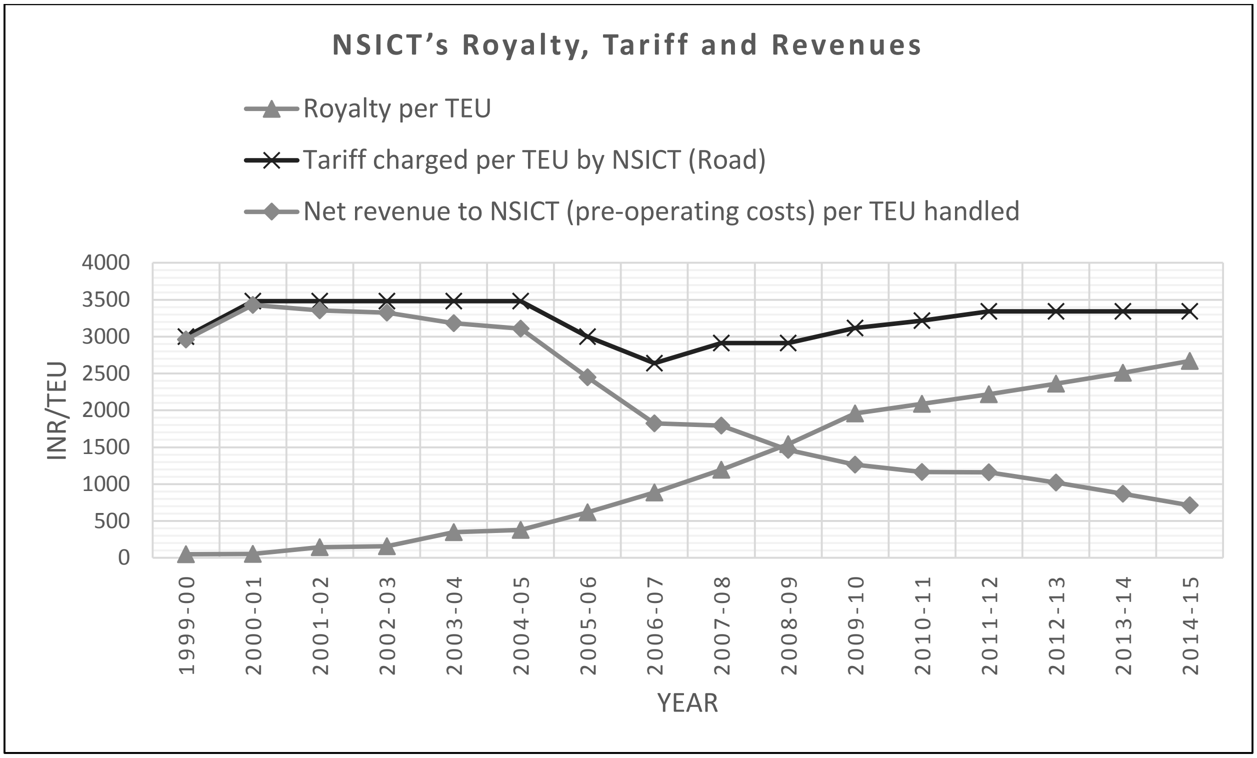
Order w.e.f \ CT	JNPCT	NSICT	GTIPL	NSIGT
1996	1950.00			
1998	2600.00	2600.00		
2000		3016.00		
2005		2600.00		
2006	2210.00	2288.00	2210	
10/2006			3068.00	
10/2008		2524.00		
01/2009		2699.84		
04/2010			2761.20	
12/2010			3451.50	
03/2011	2607.80			
03/2012		2089.28	1538.54	
09/2013	2607.80			
06/2014	3094.00			
04/2015				3916.68

The upfront tariff for BMCT, which is yet to start operations, is INR 3755.04 per TEU as per the TAMP Order in September 2013.

[93] Salhotra, *supra* note 8.
[94] Tariff Authority for Major Ports, Ministry of Shipping, Government of India, TARIFF ORDERS, http://tariffauthority.gov.in/htmldocs/JNPTorNSICT.htm (last visited Dec 27, 2015).

EXHIBIT 4

NSICT's Royalty, Tariff and Revenues[95] (1999-00 to 2014-15)



[95] Authors' analysis

NSICT's Royalty, Tariff and Revenues[96] (1999-00 to 2014-15)

Year	MGT	Actual handled	Tariff charged per TEU by NSICT (Road)	Royalty per TEU	Total revenue of NSICT	Total royalty to JNPT	JNPT's share	Actual royalty received by JNPT as per annual account	Net revenue to NSICT (pre-operating costs)	Net revenue to NSICT (pre-operating costs) per TEU handled
Units	TEU	TEU	INR/TEU	INR/TEU	INR million	INR million	%	INR million	INR million	INR/TEU
1	2	3	4	5	6 = 3*4	7 = 3*5	8 = (5/4)*100	9	10 = 6-9	11 = 10/3
1999-00	175000	343187	3000	47	1029.6	16.1	1.57	14.0	1015.6	2959.2
2000-01	350000	694899	3480	52	2418.2	36.1	1.49	35.5	2382.7	3428.9
2001-02	500000	943928	3480	143	3284.9	135.0	4.11	117.1	3167.8	3355.9
2002-03	500000	1201119	3480	157	4179.9	188.6	4.51	184.7	3995.2	3326.2
2003-04	550000	1230555	3480	348	4282.3	428.2	10.00	368.2	3914.1	3180.8
2004-05	550000	1232470	3480	378	4289.0	465.9	10.86	456.2	3832.8	3109.8
2005-06	550000	1323801	3000	615	3971.4	814.1	20.50	732.8	3238.6	2446.4
2006-07	550000	1359125	2640	886	3588.1	1204.2	33.56	1111.9	2476.2	1821.9
2007-08	550000	1508056	2912	1194	4391.5	1800.6	41.00	1686.5	2705.0	1793.7
2008-09	550000	1427128	2912	1542	4155.8	2200.6	52.95	2069.3	2086.5	1462.0
2009-10	550000	1532075	3115	1960	4772.4	3002.9	62.92	2839.5	1932.9	1261.6
2010-11	550000	1537240	3217	2086	4945.3	3206.7	64.84	3154.3	1791.0	1165.1
2011-12	600000	1401847	3341	2218	4683.6	3109.3	66.39	3060.0	1623.6	1158.2
2012-13	600000	1044105	3341	2361	3488.4	2465.1	70.67	2422.0	1066.4	1021.3
2013-14	600000	969458	3341	2510	3239.0	2433.3	75.13	2398.3	840.7	867.1
2014-15	600000	1160220	3341	2670	3876.3	3097.8	79.92	3052.3	824.0	710.2

[96] REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA ON PUBLIC PRIVATE PARTNERSHIP PROJECTS IN MAJOR PORTS, *supra* note 3, at 9.

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