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INDONESIAN PORT SECTOR REFORM AND THE 2008 SHIPPING LAW

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TABLE OF CONTENTS

ABSTRACT

For an archipelago nation such as Indonesia, an efficient and well run sea freight transport system is a crucial element of economic competitiveness as well as national integrity. Indonesia has relatively high sea transport costs and this reduces incentives to trade both domestically and internationally. Indonesia's ports, regarded as relatively inefficient and poorly equipped/managed, are an important factor driving up shipping costs. Vessels involved in domestic trade for example, are spending over half their time sitting idle or waiting at or outside ports. Poor port performance can be explained in large part by the long-held legislated monopoly of port services by state-owned enterprises (SOEs) and the current legal and regulatory environment that effectively constrains competition both within and among ports.

The 2008 Shipping Law provides the foundation for a comprehensive reform of the Indonesian port system. Most notably the law removes the state-sector monopoly on ports and opens the door for new participation by the private sector. This could lead to the injection of much needed competition in the ports system, putting downward pressure on prices and driving general improvements in port services. Whilst there is some guarded optimism about the new law, investors must now confront a policy vacuum whilst awaiting the development of implementing regulations and supporting institutions.

Key concerns focus on:

- The composition, orientation, and financial / technical capacity of the planned Port Authorities.
- The possible restrictiveness of the national and individual port master-plans.
- The degree of pricing autonomy of terminal operators.
- The ability of private ports to convert their status to commercial public ports in order to compete with the incumbent SOEs.

1. INTRODUCTION

As the world's largest archipelago nation, Indonesia requires a well-developed and efficiently run ports sector. Producer competitiveness in both national and international markets, internal distribution efficiency and, more generally, national economic cohesiveness and integrity are to a significant extent influenced by port sector performance.

Despite its critical importance to the national economy, Indonesia does not have a port system that performs well from the perspective of its users.[1] Indonesia's main port terminal, The Jakarta International Container Terminal (JICT), has been shown to be one of the least efficient of the main terminals in Southeast Asia, in terms of productivity and unit costs (Ray 2003). JICT however is one of the better performing Indonesian ports. Performance indicators for all the major commercial ports suggest the entire port system is highly inefficient and in urgent need of upgrading. Data on berth occupancy rates, average turn-around times and working time as a percentage of turnaround time are well below international standards, and suggest that vessels are spending too much time at berth, or in queues outside ports.

Geographic factors such as the lack of deep-water harbour options and the in-land location of many ports on rivers that require near constant dredging are important constraints to port performance. Arguably the greatest constraint to development is the overall lack of private sector participation (investment) and competition in the ports system. This is in large part due to the dominance by the state in the provision of port services through the activities of four state owned enterprises, the Indonesian Port Corporations (IPCs or *Pelindo* in Indonesian), as well as the current legal and regulatory environment that effectively constrains competition both within and among ports.

The 2008 Shipping Law provides the foundation for a comprehensive reform of the Indonesian port system. Most notably the law removes the legislated state-sector monopoly on ports and opens the door for new participation by the private sector. This could lead to the injection of much needed competition in ports, putting downward pressure on prices and driving general improvements in port services. Transforming the Indonesian ports system, however, will be a long and arduous process. The 2008 Shipping Law is a crucially important and positive first step, but much remains to be done with regards to developing supporting institutions, regulations and planning documents. Until this regulatory and institutional framework is in place, investors face a policy vacuum, unsure of what processes must be pursued, and what approvals and permits must be obtained from what agencies.

This paper outlines a number of immediate challenges confronting the port reform effort, giving particular attention to possible constraints on competition and private sector participation. These key challenges as outlined in section 3 relate to foreign investment restrictions, the development of the national ports masterplan, the role of local port authorities, port service pricing and the regulation of private ports. Before discussing each of these issues, section 2 of the paper provides a brief introduction to the current state-of-play of Indonesian ports focusing on governance, performance and the wider international context.

[1] In the 2006 Global Competitiveness Report (GCR) Indonesia's 'Port Infrastructure Quality' ranking was 98 out of 121 surveyed countries and had actually fallen by over 5 ranks since 2001. Note that the GCR is driven by business-owner perceptions.

2. THE CURRENT CONDITION OF INDONESIAN PORTS

2.1 GOVERNANCE AND STRUCTURE

Indonesia's ports are currently governed according to the 1992 Shipping Law and its supporting regulations. The new regulatory regime, under the umbrella of the 2008 Shipping Law, will not be fully implemented until 2011. The port system is organized into a hierarchic system of approximately 1700 ports. There are 111 ports, including the 25 main 'strategic' ports, which are deemed as *commercial ports* and are controlled by the four state owned Indonesian Port Corporations (thereafter IPCs) I, II, III and IV with geographic coverage as outlined in table 1 below. In addition there are approximately 614 UPT or *non-commercial ports* that tend to be unprofitable and are of little strategic value.

There are also approximately 1000 'special purpose' or dedicated private ports that serve the needs of individual companies (both private and state-owned) in a number of industries including mining, oil and gas, fishing, forestry etc. Some of these ports have facilities that are appropriate for only one or a group of commodities (e.g. chemicals) and have limited capacity for the accommodation of third party cargo. Others, however, have facilities appropriate for a broad range of commodities, including in some cases, containerized cargo. Currently the IPCs enjoy a legislated monopoly in the main commercial ports as well the regulatory authority over private sector ports. In almost all of the main ports, the IPCs act as both sole operator and port authority, dominating the supply of all major port services as listed below:

- Port waters (including dredged channels and basins) for vessel traffic movement, anchoring and berthing.
- Pilotage and towage (tugboats).
- Port facilities for stevedoring, animal handling, warehouses and stacking yards; conventional, container and bulk terminals; passenger terminals.
- Electricity, fresh water supply, garbage disposal and telephone services for vessels.
- Land space for offices and industrial estates.
- Port training and medical centers.

TABLE 1. INDONESIAN PORT CORPORATIONS (IPCS): GEOGRAPHIC COVERAGE

PORT CORPORATION	COVERAGE (PROVINCES)	PORTS ADMINISTERED
Pelindo I	Aceh, North Sumatera, Riau	Belawan, Pekanbaru, Dunai, Tanjung Pinang, Lhokseumawe
Pelindo II	West Sumatra, Jambi, South Sumatra, Bengkulu, Lampung, Jakarta	Tanjung Priok, Panjang, Palembang, Teluk Bayur, Pontianak, Cirebon, Jambi, Bengkulu, Banten, Sunda Kelapa, Pangkal Balam, Tanjung Pandan
Pelindo III	Central Kalimantan, South Kalimantan, West Nusa Tenggara, East Nusa Tenggara (previously East Timor)	Tanjung Perak, Tanjung Emas, Banjarmasin, Benoa, Tenau/Kupang
Pelindo IV	Sulawesi (S,SE,Central and North), Maluku, Irian Jaya	Makassar, Balikpapan, Samarinda, Bitung, Ambon, Sorong, Biak, Jayapura

Whilst current legislation prevents the private sector from competing directly with the incumbent IPCs, other elements of the governance structure ensures no competition both within and among the IPCs. As noted by Patunru et.al (2007), the IPCs are required by law to subsidize each other to ensure overall financial sustainability and to meet their public service obligations. Within the IPCs, profitable ports are required to subsidise unprofitable ports further reducing performance incentives.

In addition port tariffs, which are largely determined by the central government, are imposed in a standard manner across ports further reducing opportunities for competition. This is particularly significant where there are two IPC ports sharing a contestable hinterland such as the ports of Tanjung Emas in Semarang and Tanjung Perak in Surabaya, both of which are operated by IPC III.

2.2 PORT TRAFFIC

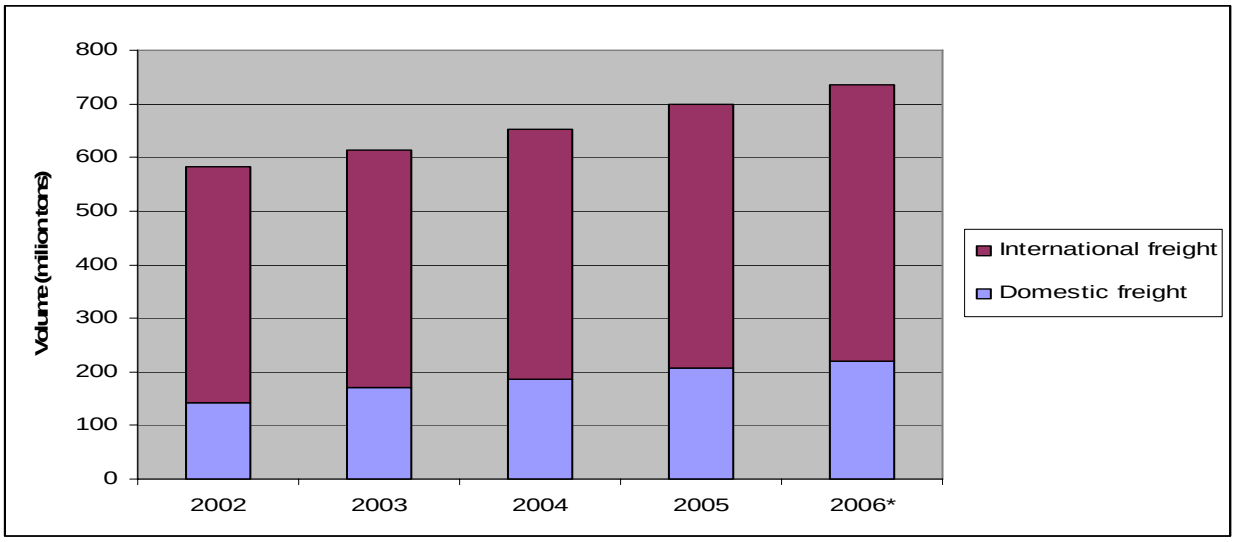
Approximately 90% of Indonesia's external trade is transported via sea, and almost of all of the non-bulk trade (such as containers) is trans-shipped through Singapore, and increasingly, the Malaysian port of Tanjung Pelepas. Indonesia does not have its own trans-shipment port capable of accommodating direct calls from large trans-oceanic vessels, despite long-held government plans to develop such facilities in Bojonegara (just west of Jakarta) and in Bitung (in North Sulawesi) and elsewhere in the archipelago. Even most of Indonesia's intra-Asia trade must be transshipped through regional hubs. Within Indonesia, the port of Tanjung Perak in Surabaya serves as the primary hub port for Eastern part of the country (from Kalimantan to Papua).

Data from the Transport Ministry shows that total tonnage handled at Indonesian ports has increased from 582 millions ton in 2002 to 736 million tons in 2006, with an average annual increase of around 6 percent (Figure 1). Over this period domestic freight has grown at an average 11.5 percent per annum, more than twice that of international freight at 4.1 percent. In recent years growth in domestic freight has been particularly robust in eastern Indonesia. In absolute terms, both international and domestic freight have increased by around 77 million tons over the four year period.

In the 11 main container terminals (provided with container cranes and declared by the Transport Ministry as 'Container Terminals') overall container volumes have increased by a million TEUs (Twenty foot Equivalent Units – i.e. the equivalent of a 20 foot container) over the 2005-7 period with an average annual growth of around 12 percent (Table 2). The Port of Tanjung Priok in Jakarta accounts for approximately half the container throughput of Indonesia's port system. In 2007 total container volume for the four terminals in the port was just under 3 million TEUs and this is expected to reach 3.7 million TEUs.[2]

[2] This includes data from the Mustika Alam Lestari (MAL) container terminal in Jakarta which handled approximately 300,000 TEUs in 2007.

FIGURE 1. TOTAL PORT TRAFFIC HANDLED AT INDONESIAN PORTS (MILLION TONS)



Source: Ports and Dredging Directorate, Ministry of Transport. Note: 2006 data is an estimation.

TABLE 2. CONTAINER VOLUMES IN THE 11 MAIN IPC PORTS 2005-2007

CONTAINER PORT	UNIT	YEAR		
		2005	2006	2007
Belawan (Medan)	Box	217,629	237,703	251,144
	TEUs	281,106	304,002	320,515
Palembang	Box	60,805	65,648	76,893
	TEUs	65,879	70,338	82,546
Panjang	Box	82,994	70,586	67,825
	TEUs	93,164	81,545	79,767
MTI (Jakarta)	Box	192,005	151,842	96,888
	TEUs	295,477	222,762	135,019
JICT (Jakarta)	Box	994,352	1,085,977	1,212,564
	TEUs	1,470,467	1,619,495	1,821,292
Koja (Jakarta)	Box	382,004	391,582	478,907
	TEUs	573,410	583,065	702,199
Pontianak	Box	125,033	129,375	131,619
	TEUs	132,273	138,991	143,443
Tanjung Perak (Surabaya)	Box	762,143	743,445	799,966
	TEUs	1,073,385	1,051,960	1,113,478
Tanjung Emas (Semarang)	Box	211,443	219,965	233,582
	TEUs	353,675	370,108	385,095
Makasar	Box			
	TEUs	238,394	255,998	302,043
Bitung	Box			
	TEUs		44,958	55,623
11 Port Total	**TEUs**	**4,061,161**	**4,698,264**	**5,085,397**
Annual growth			**15.7%**	**8.2%**

Source: Ports and Dredging Directorate, Ministry of Transport

2.3 THE INTERNATIONAL CONTEXT

There are a number of trends in global sea-freight impacting Indonesia's shipping and ports sector.

1. The ***first*** is what Penfold (2007) refers to as the ongoing 'size-based revolution in container ships' describing the use of increasingly larger vessels to enjoy lower per-unit transport costs. Recent data shows that a vessel of 12,000 TEUs on the Europe-East Asia route would generate an 11 percent cost saving per container compared to that of an 8000 TEU vessel and a 23 percent saving when compared with a 4000 TEU vessel (ESCAP 2007). Increasingly the main trans-oceanic routes are being dominated by large vessels with 12,000+ TEU capacities. The smaller 5000-8000 TEU vessels previously used on these main trunk routes are being displaced to regional feeder routes. This has two important implications for Indonesia:

    - Larger vessels will require deeper channel draft and basin depth, bigger and faster cranes and improved cargo-handling in the smaller regional ports (including commercial ports in Indonesia).
    - The presence of these larger vessels on regional feeder routes, will put added pressure on local shipping companies to upscale their fleet of relatively small and aging ships.[3]

2. The ***second*** relates to the robust growth in international sea freight traffic and the impact this is having upon regional ports. Over the past two decades international merchandise trade has grown at 1.5 – 2 times the rate of growth of the global economy. Due to the increasing rate of containerization of freight, container trade grew at over twice the average annual growth rate of other maritime trade over this same period (ESCAP 2007). The most rapid growth in container volumes has been in East Asia which now commands over half the world's container traffic. As noted by Kruk (2008) and others, regional container terminal capacity is now reaching critical levels.[4]

3. The ***third*** important trend is the increasing role of the private sector in developing and operating container terminals. This is especially the case in developing countries where the public sector can no longer finance investment in new and expanded capacity (World Bank 2001). Since the early 1990s, nearly US $ 33 billion has been invested by the private sector in developing country seaports, 44 percent of which has been in the East Asia – Pacific region. With cargo volume increases outpacing the growth in terminal capacity, ports are now seen an attractive option and foreign investors are paying 2-3 times the earning multiples (i.e. price) of that paid in the late 1990s (Kruk 2008). Notwithstanding some partial, and some say poorly managed privatizations in the late 1990s/early 2000s, recent flows of international investment into seaports have largely bypassed Indonesia.

2.4 INDICATORS OF PORT PERFORMANCE

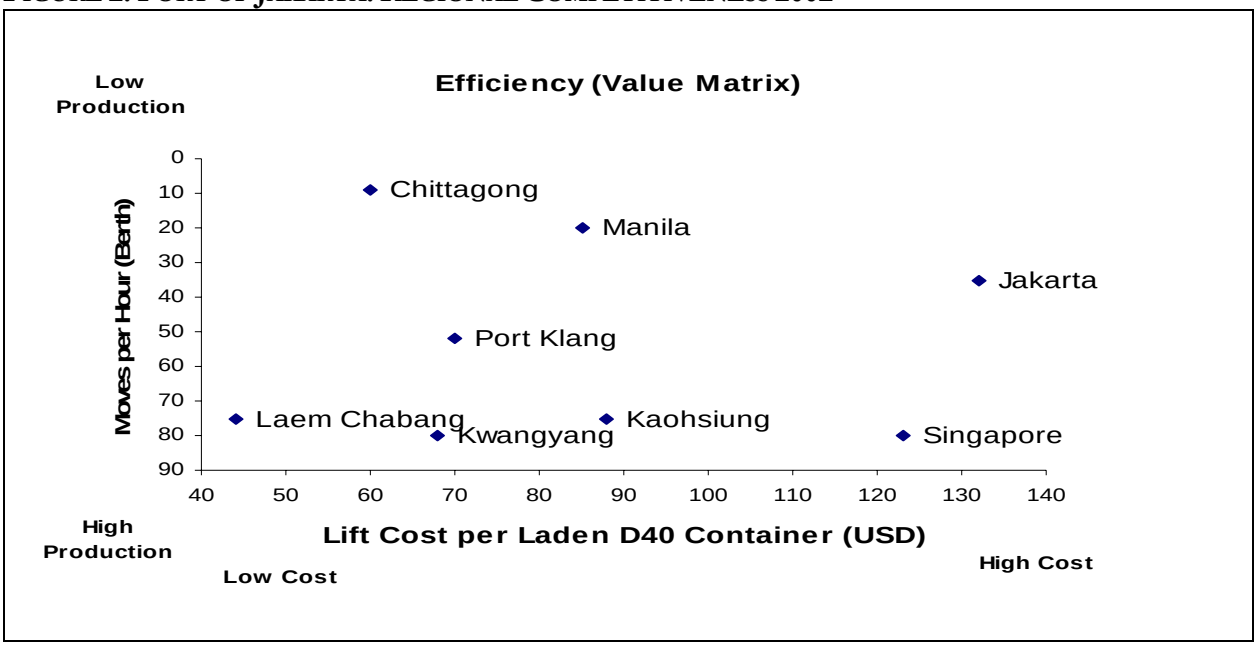
Reliable and updated data on port performance is difficult to access. The most recent data available comparing Indonesia's performance internationally is from 2002 and is limited to the main trade gateway

[3] Of the thirty six container vessels registered in Indonesia in 2005, thirty four had capacities of less than 1500 TEUs and more than half were over 20 years in age (PDP 2005)

[4] Kruk (2008) refers to data made available by the Drewry (2005) *Annual Review of Global Container Terminal Operations* which calculates regional capacity utilization based on a) confirmed plans and b) unconfirmed expansions. The figures for North East Asia and South East Asia were 109%/105% and 108%/91% respectively reflecting the over-capacity of regional container facilities.

Jakarta, as shown below in Figure 2. Whilst the data is now a few years out of date, it nevertheless illustrates the relative (lack of) competitiveness of Indonesia's main port of Jakarta. Interviews with various international shippers reveal that these relativities have not changed. Jakarta remains both expensive and inefficient

FIGURE 2. PORT OF JAKARTA: REGIONAL COMPETITIVENESS 2002



Source: Overseas Shippers Representatives Association (OSRA) quoted in Ray (2003)

Time delays in the major port are now a matter of great concern for the main shipping lines. In 2002, the port was achieving roughly 30-40 container moves per hour (MPH). Technical and operational improvements saw productivity increase to approximately 60 mph by mid 2007. However increased container traffic and port congestion coupled with problems associated with various labor issues as well as customs delays has seen productivity fall to around 40-45 mph in early-mid 2008.

This is less than half the productivity rate in the Singapore and Tanjung Pelepas (Malaysia) trans-shipment ports which are currently working at around 100 – 110 moves per hour (mph).[5] Due to delays in cargo handling, the main shipping lines report that they often must leave the port of Jakarta before a vessel is fully loaded as published schedules must be kept. This involves various 'redressing' charges in addition to the costs to procure space on 3rd party feeders as well as losses from wasted space on their own feeders. As a result, these shipping lines are cutting back on capacity planned for the Jakarta port.[6]

[5] It is a debatable point as to whether it is appropriate to compare container terminals in Jakarta, which at most provide 2-3 cranes per ship, with Singapore or Tanjung Pelepas where ships can be serviced by 3-5 cranes. On a per-crane basis, the main container terminals in Indonesia are achieving in the range of 18-22 mph, whilst in Singapore/Tanjung Pelepas at least 30-35 mph is being achieved.

[6] This paragraph draws heavily upon information obtained through interviews with country managers of major international shipping lines in Jakarta (April/May 2008). Note that 'redressing' is the term used to describe a situation where a container planned for a particular vessel must be rescheduled for another vessel.

Indonesian international shippers enjoy very competitive (trans-shipment) port services in Singapore and Malaysia however must pay high feeder costs due mainly to high port costs in Indonesia. Supply-chain analysis shows that accessing regional hubs represents a disproportionate amount of total international freight costs. Carana (2004) estimates that 20-50 percent of international freight costs for exports are typically incurred in the first 1000 miles accessing regional hubs. In one example, the 600 miles from the Port of Semarang (Central Java) to Singapore represents 10 percent of the distance, but over 45 percent of the total freight costs to export furniture to the end-market in Valencia, Spain.

Whilst accessing performance data on Indonesia's main gateway port remains difficult, some performance data is available for most of the other 25 'strategic ports'. From the 19 ports on this list of 25 for which complete data is available (i.e. excluding the ports managed by IPC II) it can be seen that the delivery of port services to users has been poor, and there has been little improvement since the late 1990s. This is reflected in a number of key performance indicators such as berth occupancy rate (BOR), vessel turn-around time (TRT) and working time (WT) ratios (Table 3).[7]

TABLE 3. PORT PERFORMANCE DATA FOR 19 MAIN PORTS: DOMESTIC CARGO

PORT	1999	2006	1999	2005/6						
	BOR	BOR	TRT	TRT	WT	PT	AT	NOT	ET	IT
	%	%	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
Belawan	62.7	52.4	77.9	72.6	1.4	16.6	1.7	22.4	29.8	0.9
Dumai	73.6	74.0	83.4	81.5	4.2	26.8	9.6	11.4	27.3	2.4
Lhokseumawe	43.2	22.4	88.8	62.7	0.8	5.8	1.3	25.8	27.4	1.6
Pekan Baru*	59.2	51.3	109.9	96.5	1.4	14.5	11.4	45.4	22.5	1.2
Tanjung Pinang	82.9	90.3	84.4	82.9	0.0	2.3	2.0	58.4	16.0	4.2
Banten	41.6	39.1	57.9	65.1	1.0	0.8	7.8	34.5	21.1	0.0
Palembang*	62.9	34.7	73.6	61.8	0.1	0.0	17.7	20.0	23.3	0.7
Banjarmasin	81.0	74.7	55.0	52.0	1.0	1.0	6.0	23.0	21.0	0.0
Benoa	60.1	56.0	22.0	137.0	0.0	0.0	1.0	122.0	14.0	0.0
Tenau/Kupang	74.4	65.7	79.0	167.0	10.0	1.0	6.0	65.0	85.0	0.0
Tanjung Emas	79.0	27.8	51.0	77.0	1.0	2.0	2.0	11.0	49.0	12.0
Tanjung Perak	63.0	69.0	99.0	38.0	0.0	5.0	4.0	9.0	20.0	0.0
Ambon	60.2	54.2	62.1	54.8	0.1	0.3	0.3	24.0	29.6	0.6
Biak	71.2	49.5	96.0	80.0	1.0	0.0	1.0	10.0	67.0	1.0
Bitung	65.1	70.2	95.6	60.5		0.6	0.4	28.0	31.6	0.0
Jaya Pura	65.2	70.9	164.5	103.5	0.4	0.1	0.5	23.7	33.9	44.6
Makassar	53.8	43.2	66.7	124.3	0.0	0.0	3.0	15.2	93.4	12.6
Samarinda*	64.0	68.9	93.0	88.8	7.3	0.0	5.0	10.0	59.2	7.3
Sorong	72.4	80.0	38.3	50.0	6.0	0.0	1.0	20.0	22.0	1.0
Average	65.0	57.6	78.8	81.9	2.0	4.0	4.3	30.4	36.5	4.7

Note: BOR is berth occupancy ratio, TRT is turnaround time, WT is waiting time, PT is postpone time (caused by port administration), AT is approach time, NOT is down time, ET is effective working time and IT is idle time. Source: Ministry of Transport (2006)

[7] Note that the data discussed here relates to domestic cargo. Also data on the individual elements comprising turnaround time as described in Table 3, is not available for the 6 IPC II ports, hence Table 3 only includes data from the 19 ports managed by IPCs I, II and IV.

Overall, the simple average for berth occupancy rate for these ports in 2006 was 57.6 percent, which has fallen from 65 percent in 1999 but nevertheless well beyond what Nathan Associates (2001) and others regard as the maximum internationally acceptable standard of 40 percent. This raises concerns that growth in container volumes, without adequate upgrade in capacity will lead to increased delays and waiting times for vessels.

Average turn-around time (a measure aggregating all time required at port including waiting time, approach time, idle time, working time etc) also suggests poor port performance with vessels requiring on average 82 hours in port (approximately 3.5 days) up from an average of 79 hours in 1999. For the complete list of 25 'strategic ports' (including IPC II ports) turn-around time in 2006 for domestic shipping was 74 hours (3.1 days) falling to 65 hours (2.7 days) in 2007. Working time as a percentage of turnaround time averaged around about 44.5 percent in 2005/6 which means that for the time a vessel was in port it was only being serviced (i.e. unloaded/loaded) for less than half that time (Table 4.). The same figure for 1999 was slightly higher at 44.7 percent, suggesting that there has been little or no improvement in this important indicator in recent years. [8]

TABLE 4. PORT WORKING TIME RATIOS FOR THE 19 MAIN PORTS

	1999	2005/6
Effective working time/Turnaround time	44.7%	44.5%
Effective working time/(Turnaround time – Approach time)	46.9%	47.0%

Source: Ministry of Transport (2006)

The simple conclusion drawn from the above analysis is that the Indonesian cargo fleet is spending too much time sitting idle or waiting at ports. Average sail time between the 19 ports listed on table and the main feeder ports of Jakarta and Surabaya is on average 1-2 days (Indonesia Shipping Gazette March 3, 2008). This information combined with the TRT data found in table suggests that many Indonesian domestic cargo vessels will be spending at least half maybe three-quarters of their time in port.

2.5 KEY FACTORS CONTRIBUTING TO POOR PORT PERFORMANCE

A number of factors combine to undermine the performance of Indonesia's commercial ports system:

- **Geographic constraints.** Port depth appears to be a major problem in virtually every port in Indonesia. The country has very few natural deep-water harbours and a river system prone to serious siltation that restricts port depth. For many ports, continuous dredging is a very real and expensive reality. Where dredging is not feasible, such as the case with the river port of Samarinda, vessels often have to wait until high tide until entering the port, which leads to more non-working time for vessels.

  Physical geography is particularly constraining for the country's main ports on the northern coast of Java, which service the most populous and industrialised regions of the country. This is due to the highly alluvial and unstable coastal soils/seabeds coupled with shallow coastal waters. The Port of Semarang, the main seaport for Central Java, is particularly problematic in this regard as it is sinking at a rate of 7-12 cm per year and for many days of the month large parts of the port are underwater. Every

[8] Some of the ports in this list are river ports with longer approach times (AT) such as Samarinda, Palembang and Pekan Baru. However, removing AT from the TRT denominator has little impact upon working time ratios (Table 4.)

7-10 years the container terminal must go through an expensive and time-consuming exercise to elevate the main wharf and container storage area.

- **Labor issues.** The non-working time discussed above is explained in part by the manner in which labor is used at ports which effectively institutionalizes underutilization of port facilities and limits the potential for efficiency improvements. In many ports, only one-shift of labor is provided and opportunities for overtime are limited. For those ports that are meant to operate on a 24-hour basis, six hours out every 24 are being lost because of rigid break periods not staggered to ensure continual servicing of vessels (Nathan Associates 2001).

- **Lack of security.** Cargo shipments from Indonesia typically attract an insurance premium 30-40 percent higher than for cargo originating in Singapore. This is explained not only by piracy at sea, but also by port based activities of organized crime groups, general theft and pilferage as well as strikes and work stoppages (Carana 2004). As noted later, the main ports involved in export-import must now upgrade their security to satisfy new international security requirements, known as ISPS.

- **Corruption.** Another cause of non-working time is delay due to unfairness and corruption in berth assignment (Nathan Associates 2001). LPEM-FEUI (2005) notes that use of informal payments to cut queuing time resulting from the lack of key infrastructure facilities such as gantry cranes and storage space is also commonplace. Such costs are in addition to a broad range of informal payments required at the port for export and import procedures which continue to be highlighted in media reports.

- **Lack of port infrastructure.** Many regional ports lack container facilities, requiring shipping lines to use own-gear, both on board or stored at port. Only 16 of the 111 commercial ports have container handling equipment of some type. Recently there has been long shipping delays in certain ports, most notably Panjang in Lampung and Belawan in North Sumatra, caused by the breakdown of key port-side equipment (such as gantry cranes) and the delays in getting replacement parts. [9]

  Lack of space for container storage and stuffing is another problem confronting most Indonesian ports. This often mandates the use of a fleet of rotating trucks to deliver cargo directly to the customer or container freight station (CFS) directly from the ship leading to further delays, greater port congestion (both land and sea side) and increased handling costs (Carana 2004).

  Almost all the major Indonesian ports are located close to large urban areas where access is via busy city roadways. Such congestion problems are often exacerbated by the arrival of passenger vessels, as only a few regional ports have separate facilities for cargo and passenger ships. In ports with high berth occupancy rates, the simultaneous presence of passenger and cargo vessels results in even further delays, and increases the total turn-around time for cargo vessels.

[9] In Panjang for example, it was reported that damaged cranes were causing delays of up a day and half in May 2008 (Indonesia Shipping Times July 2008)

3. THE 2008 SHIPPING LAW

After fours years of development, a new shipping law was passed in April 2008. This law comprising some 355 articles covers a broad range of maritime-related issues such as shipping, navigation, environmental protection, sailor welfare, maritime accidents, human resource development, community involvement, the creation of a coast guard, amongst many others.

The law has received positive attention in the media, particularly with regards to its provisions on cabotage[10]. Cabotage rules, which limit domestic carriage to national flag vessels, represent nothing new for Indonesia and the law essentially restates existing regulations[11]. This focus on cabotage reflects the strength of the local shipping industry lobby, in particular the Indonesian Shipowners Assocation (INSA) which has advocated that Indonesia needs a larger cargo fleet to displace foreign flagged ships from domestic routes.

There is little doubt that Indonesia would clearly benefit from having an upgraded fleet comprising larger and more modern vessels. However no matter how large and modern the fleet is, the shipping sector will struggle to be profitable if ships must spend a considerable proportion of working time queuing outside, or berthed at congested ports (as discussed above). Hence improving the efficiency of the existing fleet is a more immediately compelling task than increasing its size.

In this regard the 2008 Shipping Law is significant as it provides the foundation for a radical transformation in the national system of port governance that could lead to substantial efficiency improvements in the medium-long term. As noted earlier the law removes the IPC's legislated monopoly on commercial ports and in so doing opens the sector up to participation by other operators, including those from the private sector. The law also provides a clear separation between operator and regulator.

Under existing regulations, the IPCs have regulatory authority over other (potentially competing) ports in their respective geographical regions of control. Under the new law, most regulatory authority at the port level will be vested with the newly-formed port authorities. The role of the IPC, at least on paper, is subsequently reduced to that of a port operator.

With this new system of port governance Indonesia will be implementing a common model of port administration known as a 'Landlord Port'. In simple terms, this model sees the government - as represented by the port authority – own, provide and regulate access to port land, port waters as well as basic port infrastructure, such as breakwaters, sea channels, navigation aids etc. The port operators on the other hand, lease these facilities and provide port services on a long term contract or concession basis (World Bank 2004).

[10] See for example the editorial in the Jakarta Post (April 14, 2008) 'Bolstering the Shipping Industry'.
[11] Such as Government Regulation PP 17/1988 and Presidential Instruction (*Inpres*) 5/2005.

FIGURE 3. THE GOVERNANCE STRUCTURE OF PORTS UNDER THE 2008 SHIPPING LAW

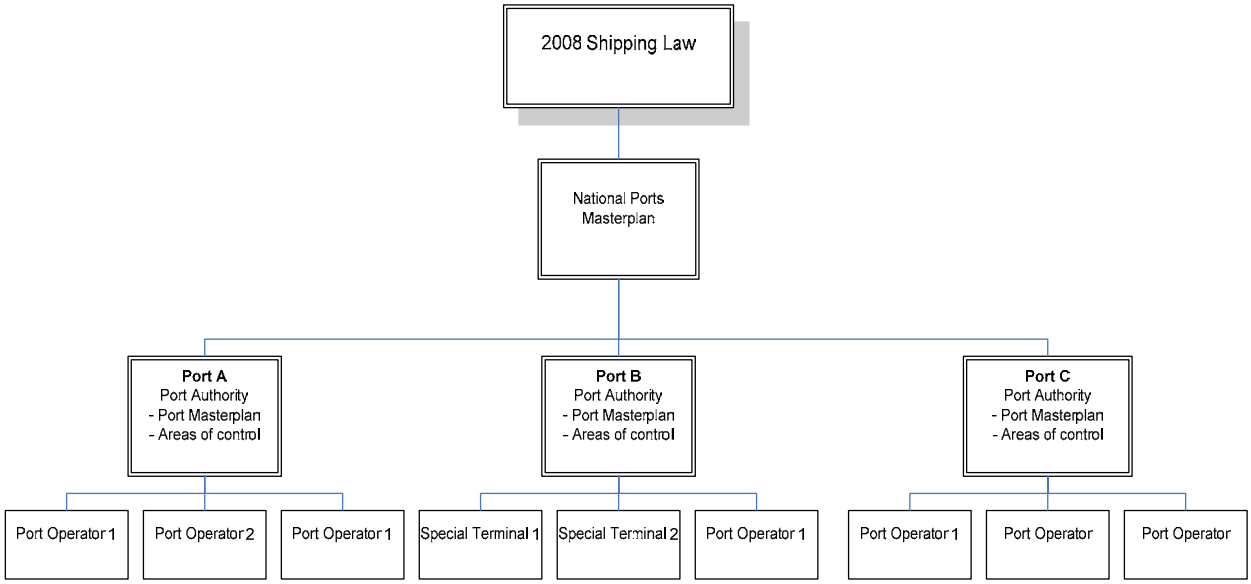


Figure 3 provides a simple schematic mapping out the governance structure of the national commercial ports system under the new shipping law. A crucial supporting document is the National Ports Masterplan which determines both current and planned ports, in terms of locations and hierarchy (function). At the port level, the Port Authority is responsible for the individual port masterplan including the geographic (land and water) working areas, the provision of basic infrastructure and also to determine and regulate port operator access to facilities[12].

As with many Indonesian laws, in particular those sponsored by the Transport Ministry, the Shipping Law is very general and important detail will be provided in the implementing regulations. The Transport Ministry will be developing supporting regulations over the next year and expect to have this completed by April 2009. Since the passing of the law a number of investors, both local and foreign, have made public their intention to explore new port investment opportunities most notably the former Prime Minister of Thailand, Mr Thaksin Shinawatra. However, such investors are unable to progress their investment plans until necessary implementing regulations, planning documents and supporting institutions are developed. Discussed below are five areas where action is required by government such that new investment, and hence competition can be quickly injected into the ports system.

3.1 CONSISTENCY WITH THE NEGATIVE INVESTMENT LIST

The Indonesian government has long maintained a 'Negative Investment List' (known in Indonesia as the DNI) with the intention to protect certain sectors from foreign and/or large investors. In the most recent iteration of the list, issued in December 2007, more industries have been opened up to foreign investment than have been closed. One exception is the ports sector. According to this latest list all port activities are now limited to 49% foreign ownership limits. This includes stevedoring, tug boat operation, container terminals, liquid and dry bulk terminals, RO-RO terminals as well as investment in wharfs and port superstructure.

[12] Note that at the time of writing it was still not clear whether there will be a dedicated port Authority for a each single ports (comprising multiple terminals), or whether port authorities will oversee multiple ports.

It is not immediately evident as to what the benefits are of this restriction which clearly runs counter to the liberal and pro-competition nature of the port section of the Shipping Law. Indonesia has an inefficient ports sector suffering from decades of poor governance and under-investment. Foreign investment would provide crucial upgrades in capacity using best international practices and technology and help inject much needed welfare-enhancing competition into the ports sector. Given that national sovereignty over ports is ensured by the very nature of the landlord port concept, it seems unlikely the above-mentioned ownership cap is driven by nationalist considerations. Rather it is more likely that this limitation has been imposed to protect local port operators, both current and future. In regards to the latter it is interesting to note that the influential Indonesian Shipowners Association (the largest members of which now have ambitions to also become port operators) have appealed publically to the government that the implementing regulation on ports now being developed prioritize local over foreign investors.[13]

The 49 percent ownership cap will dissuade some, but not all foreign investors from investing in the ports sector. Nevertheless it will make the process more complicated as they will need to find local partners, explore nominee arrangements etc. Indeed for the major international container port operators there are considerable economic and political advantages to partnering with cashed-up and influential local investors, but would nevertheless insist upon operational control of the port to ensure returns to their investment.

The investment restriction has been openly criticized by the business community and also from within government.[14] With growing foreign investor interest in Indonesian ports, the Transport Ministry, the key sponsor of this 49 percent cap, will be under increasing pressure to remove or soften the restriction in subsequent iterations of the DNI.

3.2 THE NATIONAL PORT MASTERPLAN

Beginning in mid-2008, the Ministry of Transport will begin to develop the national ports masterplan, a policy document that will determine the locations, functions and hierarchies of Indonesia's ports. The plan is expected to be completed by June 2009. The Transport Minister is responsible for this document which has a shelf-life of 20 years. Changes can be made every 5 years or more frequently if emergency circumstances require.

Although it is not articulated in the law, the national masterplan is expected to implement the long-held plan of the Ministry to reduce the number of ports with direct international links. Currently there are over 100 ports allowed to have direct international connections. This is expected to be reduced down to approximately 25 and would most probably comprise the list of 25 'Strategic Ports' mentioned in section 2 (*Bisnis Indonesia*, 25 March 2008).

Port rationalization has its merits but also has its costs. Given the large number of international ports in Indonesia, aggregation could translate into lower per unit cargo-handling and freight costs (Carana 2004). This of course presupposes competitive feeder services (for trans-shipped cargo) and requisite road interfaces (for hinterland cargo) which is typically not the case in Indonesia . As discussed earlier, recent international experience suggests that there are considerable efficiency gains to be enjoyed by using larger vessels visiting ports with deeper harbors and more developed cargo handling infrastructure.

[13] See for example the comments by the INSA Secretary General Sungkono Ali in Bisnis Indonesia (19 June 2008, page R1).

[14] See for example, the comments by Mohamad Ikhsan, Expert Staff for the Coordinating Minister for Ecoomic Affairs, in Media Indonesia (29 July, 2008)

Another argument for port rationalization also is that it will make it much easier for Indonesian ports to comply with the International Ship and Port Facility Security Code (ISPS) standards that were developed in the wake of the September 11 attacks in the US and the bombing of a French oil tanker in 2002.[15] Until now Indonesia has struggled to meet these standards. In February 2008 the United States Coastguard issued a Port Security Advisory (PSA) for the majority of Indonesian international ports, whereby ships visiting Indonesian ports within 5 port calls must undergo extra security procedures before being allowed to visit US ports. The US Coast Guard has exempted 16 Indonesian ports from PSA requirements as they are ISPS compliant. Of those 16, only 8 are commercial public ports, the other 8 are private special purpose ports (US Embassy February 2008).

Two other reasons to pursue poor rationalization as emphasized by the Transport Ministry are to support the implementation of cabotage and to address smuggling[16]. Reducing international gateways will increase demand for feeders which will likely benefit domestic shipping companies. Inasmuch as smuggling occurs through international ports, concentrating the customs service and facilities in a smaller number of ports, may improve monitoring of trade flows.[17]

Port rationalization which will see some ports and regions lose their direct international links will likely be a contentious issue, attracting considerable debate and scrutiny. If international gateways are to be reduced to provide more demand for domestic feeders, then these benefits need to be balanced up against the higher cargo costs imposed upon users from regions that lose their direct international connections.

Likewise careful consideration should be given to the possible impacts of rationalization upon inter-port competition. Until now, Indonesia has not been able to enjoy the benefits of ports competing in the same hinterland for cargo. With the new shipping law, competition is possible not only within ports (i.e. competing terminals) but also across ports. However with the development of the national masterplan, there will be concerns that decisions regarding port locations, functions and hierarchies will be made in such a way as to reduce competitive pressures upon the incumbent IPCs.

3.3 THE ROLE OF THE PORT AUTHORITIES

A key innovation of the new law is the development of Port Authorities to supervise and manage commercial operations within each port. Their primary responsibility will be to regulate, price and supervise access to basic port infrastructure and services including port land and waters, navigation tools, pilotage, breakwaters, port basins, sea channels (dredging) and port road networks. In addition, the port authority will also be responsible for developing and implementing the port master-plan (including determining land

[15] The ISPS is an amendment to the Safety of Life at Sea (SOLAS) convention of 1974/1988 and represents a comprehensive set of standards designed to improve the security of ships and port facilities. As Indonesia is a signatory to the SOLAS convention, ISPS standards must be applied to all ships on international voyages of GT 500 tons and upward (plus mobile offshore drilling units) as well as the ports serving these vessels.

[16] Interviews with various officials. See also comments by the Director General for Sea Communications, Effendi Batubara in Bisnis Indonesia (25 March 2008)

[17] However even this reduction in gateways is unlikely to satisfy API, the Indonesian Textile Association which is the main association representing the textiles and garments sector and a key advocate for stronger measures against smuggled imports (but not against the trade barriers that promote smuggling). This association is now recommending only two dedicated ports for textile and garment imports: Tanjung Priok (Jakarta) for Western Indonesia and Tanjung Perak (Surabaya) for Eastern Indonesia (Indonesia Shipping Times July 2008, page 14).

and sea areas of control) as well as ensuring port orderliness, security and environmental sustainability. Port operators on the other hand can participate in providing cargo handling, passenger facilities, mooring services, refueling and water supply, towage as well as storage and other superstructure, amongst others.

This is a common division of responsibility across the public and private sector in a landlord port setting (Asian Development Bank 2000, World Bank 2001). Whilst there is typically some variance in these arrangements across ports and countries, the general rule is that where there are public interest or natural monopoly considerations, such functions are best provided by government. Indonesia's port authorities will be no exception in this regard and have roles and functions similar to many port authorities elsewhere. A matter of greater concern, however, is whether Indonesia's port authorities will have the requisite technical and financial capacity to effectively carry out these functions. Technically, concerns will focus on the requirement in the law that only public servants (PN) can staff the port authorities (paragraph 86). This is a departure from the recent practice of establishing government regulatory and supervisor bodies (as well as other government agencies providing key services) with the status known as *Badan Layanan Umum* or BLU (general service agencies), a type of government legal entity that has considerable more flexibility in the recruitment of professional staff. Allowing port authorities to assume BLU status would enable the recruitment of higher paid staff with a more varied skill set, such as retired shippers.[18] Instead, the Transport Ministry has made it clear that they expect the port authorities to be staffed by a combination of Ministry officials from the Sea Communications Directorate and Port Administration (Adpel) offices.[19]

The move to a landlord model necessarily means the development of a more complex set of public-private sector interactions at the port level. A crucial task for the port authorities will be to manage these interactions in such a way as to ensure competitive prices and services. However in Indonesia there is little experience in managing ports in a competitive context. The only recent context has been that of a public-sector monopoly characterized by little or no contestability in the provision of port services. Where there have been opportunities to introduce competition, these have been poorly managed. One key example noted by Nathan Associates (2001) is from the late 1990s, when separate concessions for the two main container terminals at the Port of Jakarta (JICT and Koja) were sold to the same corporate entity. With the impending deregulation of operator prices (as allowed by the new shipping law, see below) the implications of this decision not to sell these concessions to separate and competing entities will now become increasingly apparent.

Another matter relates to how the planned port authorities will interact with the incumbent IPCs. Given the unique historical, institutional and even personal relationships that the IPCs share with the civil servants likely to comprise these port authorities, there are concerns about possible discriminative treatment against new investors. This could take many forms including, for example, unequal to access to key facilities and services such as land and basic infrastructure, overly prescriptive and/or restrictive port master-plans that present entry barriers for new investors, discriminative pricing etc and so on.

Financially, concerns will focus on the ability of port authorities to fulfill their mandate to provide basic infrastructure. Existing port infrastructure is currently being used by the incumbent IPCs. Whilst some ports may be able to be expanded such that new entrants can use existing breakwaters, sea channels, navigation devices etc, it is also likely that the development of new terminals and operator facilities will

[18] A recent example of a BLU serving this purpose is the BP Migas (*Badan Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi*), a government regulatory agency set up to supervise the upstream oil and gas industry.

[19] See for example the comments by the Transport Ministry's Director of Ports and Dredging, Kholik Kirom in Kontan (2008)

require investment in new basic infrastructure. Delay in such investment, will prevent new entry which will obviously advantage the IPCs.

It is therefore critical that the port authorities have the capacity to generate their own sources of funding, and not be entirely dependant upon transfers from the central government. Operating expenses for example could be financed in part by fees and charges paid by terminal operators, including fees currently paid by the private (special) ports to the IPCs (see below). New basic infrastructure could be concessioned by the port authorities on some kind of BOT (build-operate-transfer) basis. However this will require the development of considerable in-house capacity on the part of the port authorities as well as necessary approvals from the central government. Moreover the DNI restriction as noted above may limit, or at least complicate foreign investor participation in basic infrastructure. More ambitiously, port authorities could launch bonds to finance and build basic infrastructure.

3.4 PRICING OF PORT SERVICES

According to UNCTAD (1998) the freedom to price according to commercially and financially sound principles is a '*sine qua non*' (essential pre-condition) to the successful and sustainable operation of private enterprise within a landlord port context. The same report notes that granting price autonomy to the private operator has four major advantages:

- Ensures greater probability that cost-based tariffs will apply (and hence improving the chances of a private operator remaining financially viable).
- Reduces the incentive to pursue cross-subsidization practices (i.e. using freight rates to cover port costs).
- Promotes efficiency pricing whereby users with more demands/greater needs pay higher tariffs.
- Ensures a stronger link between tariffs imposed and benefits/services provided..

The new shipping law in theory enables private operators to set their own tariffs. However the language used in the law raises concern about how much price autonomy operators will actually enjoy. According to paragraph 110 (2):

> *Port service tariffs will be determined by port operators based on tariff types (jenis), structure (struktur) and categories (golongan)' as determined by the government*

The second part of this sentence suggests that government will continue to play a role in influencing prices. Interviewed transport ministry officials, however, insist that operators will have full price autonomy and that the government will only determine what types of tariffs can be applied and not allowable tariff levels (floors/ceilings etc). The same interviews however reveal there are government concerns that within this new model of port governance that there may emerge cases of 'destructive competition' that subsequently require government intervention.

Further clarification is required to clearly outline the role (if any) of the government in influencing operator tariffs. Continuing uncertainty in this regard will give rise to concerns that the language discussed above will be used to influence prices in such a way as to diminish the competitive advantage of new port operators vis-à-vis the incumbent IPCs.

3.5 THE REGULATION OF PRIVATE (SPECIAL) TERMINALS.

The IPCs have regulatory authority over private ports within their area of control, and typically use this authority to prevent competition with their own commercial ports. This has been a matter of some policy debate as many private ports are able to accommodate third party (general) cargo and have unused capacity. Local governments, empowered by the decentralization process, have been able to challenge this authority to regulate private ports to a certain extent (Ray 2003). However the central government, through the IPCs, in most part has managed to keep a tight reign on private ports, most significantly to prevent competition with the IPCs. Under the new law, private ports remain tightly regulated and continue to be barred from accommodating third party cargo. They are no longer referred to as 'ports' but as 'terminals' which are governed by the nearest port authority, according to that particular port's masterplan. The law also differentiates between 'special' and 'own-use' terminals. The former are located outside of - and the latter within - the port operating area (both land and waters).

An important change with this new law is that special terminals can apply to become general cargo terminals. This change in status is conditional to approval by the relevant port authority and to being deemed 'consistent' with the local port master-plan, amongst other requirements. Given the nature of the landlord port model, this change in status will also require that all basic port infrastructure such as breakwaters, sea channels etc, be surrendered to, and then leased back from the state (as represented by the port authority). This is an important point as most special terminals by definition are outside of the port operation area and have therefore developed their own basic infrastructure.

A recent study by The Asia Foundation (2008) highlights the economic importance of allowing select private dedicated ports with unused capacity to accommodate third party cargo. Focusing on Sulawesi, the study notes that most ports on the island are quite small with very few with quay length of over 100 meters and with approach draft of over 5 meters (most have draft less than 2.5 meters). This lack of port capacity, limits vessel size and hence opportunities for consolidation and bulk handling. Many of the islands main agricultural commodities such as cocoa are shipped in bags, with a relatively high cost of around US $165 per ton to Europe. If these same commodities were loaded and shipped in bulk, the rate to Europe would fall to around $ 80 per ton and required vessel time in port would reduce from 6 to 2 days.

The study identifies a private (foreign owned) dry bulk terminal in the Port of Makassar handling mainly wheat that could accommodate large dry bulk vessels. It is a well equipped terminal with over 250 meters of wharf length capable of handling vessels of 60,000 to 80,000 DWT. In addition it has existing (or soon to be installed) bulk loading/unloading equipment that can easily be converted/upgraded to handle other key dry bulk commodities from the hinterland, such as cocoa. Also as it is located inside the Port of Makassar it already has access to basic infrastructure, such as a breakwater, approach channel etc. Most importantly this dry bulk terminal is only operating at around 20 percent capacity and the owners are interested in selling this unused capacity to other users.

This is one of a number of opportunities for port status conversion in Sulawesi identified by this report. Many other opportunities for conversion can be found in other parts of the country. The most well known example is the Port of Cigading in Cilegon, Banten owned and operated by PT Krakatau Steel. This is the largest and deepest dry bulk terminal in Indonesia capable of handling large vessels up to 150,000 DWT. Approximately only 30 percent of capacity is required for Krakatau Steel's purposes. This port is currently applying to change its status from special to commercial port, but has openly serviced third party cargo for years (Bisnis Indonesia 31 March 2008)

4. CONCLUSION: OPTIONS FOR PROMOTING COMPETITION AND PRIVATE SECTOR PARTICIPATION

The new governance structure to be established by the 2008 Shipping Law provides for three avenues to promote competition and private sector participation (PSP) in Indonesian ports:

- The ***first*** involves the unbundling of existing port assets such that they can be broken into separate, and preferably private-held, competing entities. This approach, commonly known as 'unbundling' is a favored option in the privatization literature for the immediate injection of competition into infrastructure sectors hitherto dominated by state monopoly. However in this case it is probably the most politically difficult option to pursue. As noted in a variety of media reports in the weeks leading up to enactment in April 2008, there was considerable opposition to the law from port union groups who were threatening to go on strike. More subtle opposition came from the IPCs and the Ministry of State-Owned Enterprises (Ray 2008). In response the government has made a clear commitment that no major IPC assets will be sold to the private sector.

- The ***second*** option is greenfields investment in new terminals. This provides an important mechanism for upgrading capacity and enhancing competition in the medium-long term. However this will require lifting (or at least softening) the foreign investment cap on port operations and the development of new basic infrastructure by the government, as well as a host of regulatory approvals, all of which is likely to take some time. Most importantly it will require the establishment and subsequent capacity development of a number of civil-servant manned port authorities which will oversee planning and port operations and regulate operator access to key port services and facilities. This will also take some time and new investors will be cautious as to how they will be treated by these new authorities vis a vis their incumbent IPC competitors.

- The ***third***, and perhaps most feasible option to immediately promote competition and PSP in Indonesian ports is to allow the conversion of special and own-purpose private terminals such that they can accommodate general cargo. Indonesia currently has considerable unused container and bulk handling capacity in these private ports that could immediately be used to compete with the IPCs. Allowing at least some of these ports to accommodate third party cargo would provide some short to medium term solutions to Indonesia's current port logistics problems, whilst waiting for longer term solutions through investment in new capacity as made possible by the 2008 Shipping Law.

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