80871

State of Logistics Indonesia 2013

State of Logistics
Indonesia
2013

Logistics Studies

STC B.V.

Panteia
Research to Progres

Multi Donor Facility
Trade and
Investment
Climate

Colophon

Preface

We are very proud to present to you "State of Logistics Indonesia 2013". This publication has been produced under the umbrella of project INDF10/RI/21 under the Indonesia Facility financed by the Government of the Netherlands with technical support from the World Bank office in Jakarta. The project aims at establishing a Dutch-Indonesian Centre for Logistics. There are four project partners: NEA Transport Research and Training, which nowadays has become a business unit of Panteia; the STC Group in the Netherlands; the Asosiasi Logistik Indonesia ALI (Logistics Association Indonesia); and the Institute of Technology in Bandung (ITB) in Indonesia. During the implementation of the project also ORGANDA, the Indonesian National Association for Land Transport, has become involved in Dutch-Indonesian cooperation in the field of transport and logistics.

The project long term objective is to improve Indonesia's logistics performance and to reduce the costs of transportation, which will lead to more affordable prices of basic commodities; connectivity and integration in the country and an improved competitive position of Indonesia on the global market. These aspects are expected to contribute to poverty alleviation in Indonesia. The concrete short term objective is to strengthen Indonesia's knowledge base in the field of transport and logistics through training and research. Towards this end the Dutch-Indonesian Centre for Logistics is to be developed, contributing to sustainable results.

This publication joins a tradition of various countries the world of publishing an annual report on national logistics performance. Core component of such an annual report is an estimation of the calculation of the annual national logistics costs. Many countries have based this calculation on a methodology developed in the USA more than 30 years ago. We have also tried to do this in the case of Indonesia. The results of this calculation and the methodology applied can be found in Section 1 - Chapter 3 of this publication and is based on research carried out by ITB in Bandung under the leadership of the Chief Editor, Prof. Dr. Ir. Senator Nur Bahagia. The editors acknowledge the support of the Multi Partner Facility for Trade and Investment Climate (MPFTIC), funded by the Kingdom of the Netherlands and State Secretariat for Economic Affairs SECO Switzerland, to make this publication possible. Section 2 of Chapters 4, 5 and 6 appeared earlier as technical notes of the Competitiveness team of the World Bank Indonesia Office.

The partners are already preparing "State of Logistics Indonesia 2014", which will be published in January 2014. It is the intention to start a cycle of annual publication of this kind of logistics report for Indonesia.

On behalf of all partners of the INDF10/RI/21 project - Panteia/NEA, the STC Group, Asosiasi Logistik Indonesia (ALI) and ITB Bandung – , we wish you a good reading of this document, which is published in two languages – Bahasa and English – to reach a wider audience.

Prof. Dr. Ir. Senator Nur Bahagia
Chief Editor

René Meeuws
Project Director

Jakarta, July 17, 2013

Table of Content

Abbreviations

ALFI	Indonesian Logistics and Forwarders Association
ALI	Asosiasi Logistik Indonesia
ASEAN	Association of Southeast Asian Nations
BC 1.1.	Customs Identification Number for Document of Cargo Manifest submit by shipping line
BNSP	National Agency of Professional Certification
BPOM	National Agency for Drug and Food Control (Badan Pengawasan Obat dan Makanan)
CDP	Cikarang Dry Port
CMEA	Coordinating Minister for Economic Affairs
CIF	Cost, Insurance and Freight
CSIR	Council for Scientific and Industrial Research
DO	Delivery Order
DT	Dwell Time
EDI	Electronic Data Interchange
ELA	European Logistics Association
FF	Freight Forwarder
FOB	Free On Board
GDP	Gross Domestic Product
INALOG	National e-Logistics System
INSW	Indonesia National Single Window
IPC	Indonesia Port Corporation
JICT	Jakarta International Container Terminal
KADIN	Indonesian Chamber of Commerce and Industry
KKNI	Indonesia Qualification Framework (Kerangka Kualifikasi Nasional Indonesia)
KPPT	Integrated Customs Service Area
KOTI	Korea Transport Institute
KP3EI	Committee on Acceleration and Expansion of Indonesia's Economic Development
LPI	Logistics Performance Index
MITA	MITRA UTAMA (Customs Priority Channel)
MP3EI	Master Plan for the Acceleration and Expansion of Economic

	Development of Indonesia
NKRI	Unitary State of the Republic of Indonesia
NPMP	National Port Master Plan
ORGANDA	National Association of Land Transport Operators
Pelindo	PT. Pelabuhan Indonesia
PIB	Pemberitahuan Impor Barang (Import Declaration)
PJL	Logistics Service Provider
PL	Logistics Actor
RPJMN	National Mid-Term Development Plan
SISLOGNAS	Sistem Logistik Indonesia
SME	Small and Medium-sized Enterprise
SOE	State-Owned Enterprise
SP2	Final invoice
SSS	Short Sea Shipping
SPPB	Surat Pemberitahuan Pengeluaran Barang (customs notification of cleared goods)
STC	Shipping and Transport College (part of STC Group, Rotterdam, NL)
TPB	Customs Bonded Storage Area
TPFT	Integrated Physical Inspection Facility
TPS	Customs Temporary Storage Area

1. Introduction

1.1   Background

Indonesia is the world largest archipelagic country consisting of more than 17,000 islands spread over more than 5,000 kilometres from west to east. The land area is 1,860,360 km² and the sea area 5,800,000 km² with a total of 81,000 km of coastal line. The population is more than 237 million (2010). The population density is 124 inhabitants per km². The population is very uneven distributed over the islands. Java has 58% of the population with only 7% of the total area. The population density in Java is 1,055 inhabitants per km². Maluku & Papua and Kalimantan have much lesser population densities with 11 and 25 inhabitants per km², respectively. Table 1.1 shows the pattern of the population distribution over the different provinces.

Table 1.1   Indonesia: Area and Population

Province	Area (km)	%	Population	%
Sumatra	480,793	25	50,631,000	21
Java	129,438	7	136,610,600	58
Bali, Nusa Tenggara	73,070	4	13,074,800	6
Kalimantan	544,150	28	13,787,700	6
Sulawesi	188,522	10	17,371,800	7
Maluku & Papua	494,957	26	5,405,000	2
Total Indonesia	1,910,931	100	236,880,900[1]	100

Source: Compiled from 'Trends of Socio-Economic Indicators of Indonesia', 2010

The geographical nature of Indonesia with its many islands and the uneven distribution of the population put enormous challenges in developing infrastructure and tackling regional disparities. Lack of infrastructure has hampered the effort to develop and realise the national and regional economic potentials. The organisation of an efficient logistics system is a crucial factor in the socio-economic development of Indonesia.

---

[1] The total population mentioned in the 'Trends of Socio-Economic Indicators of Indonesia, 2010' was 237641300, which does not match with the sub totals.

Currently, the logistics system is in need to become more efficient. The inadequate performance of the logistics system is dragging its export capacity down and constraining the country from fully participating in the global production network[2]. Indonesia's share of exports to total GDP has been low over the period 1999-2008 at 28%, far smaller than Singapore (150%), Malaysia (91%) and Thailand (50%)[3]. Developing an efficient logistics system would increase the competitiveness of Indonesia's external trade and increase export. It also would contribute to reducing regional disparities and providing easier and cheaper access of the commodities on the domestic market

1.2   Objective and Scope of State of Logistics Indonesia

Objective

The objective of the State of Logistics Indonesia 2013 is to provide a status update of logistics performance in Indonesia. In addition, specific information is provided on logistics cases.

Scope

The State of Logistics Indonesia 2013 consists of two sections:

- Logistics Policy and Performance, providing the framework of logistics policy in Indonesia and an overview of logistics performance in terms of national logistics costs of Indonesia.

- Logistics Case Studies, providing specific insight in relevant logistics development in Indonesia.

State of Logistics Indonesia will be produced on an annual basis. The first section on Logistics Policy and Performance will be updated annually, providing a benchmark for logistics development in Indonesia. The second section will feature a varying selection of relevant cases.

---

[2] Basri and Rahardja; Managing openness: should Indonesia say goodbye to strategy facilitating exports; report for the World Bank. 2010.
[3] Siwage Dharma Negara; Logistics Enhancement for Trade Facilitation in Indonesia; 2010

Section 1
Logistics Policy and Performance

2. Logistics Policy in Indonesia

2.1   Background

An effective and efficient National Logistics System is one that drives the integration of land and sea into a whole and sovereign system contributing toward the actualization of Indonesia as a maritime nation through the implementation of its strategic role in synchronizing and aligning progresses of various economic sectors and regional developments toward an inclusive economic growth thus fortifying national economic sovereignty and security. Therefore, in addition to improve the national economy, the role of the National Logistics System is also to be one of the unifying vehicles to solidify the Unitary State of the Republic of Indonesia (NKRI).

It is a fact, however, that Indonesia's national logistics system performance in general is still not optimal and needs to be improved as indicated by: (a) inadequate infrastructure, both quantitatively and qualitatively; (b) prevalence of illegal charges and transaction fees causing high-cost economy; (c) poor export and import processing lead time, and bottlenecks on port services; (d) inadequate service capacity and networks supporting national logistics providers; (e) chronic difficulties in stocks management and price fluctuation of basic commodities particularly during national and religious holidays; and, in addition (f) significant price disparity in border, remote and outer areas. These have significant impacts on the performance of the national logistics sector as the World Bank's 2010 and 2012 the Logistics Performance Index (LPI) of Indonesia was quite poor compared with other ASEAN member countries, even though with Vietnam which is in the category of low income country while Indonesia is in the category of lower middle income. Indonesia's position was only above Laos, Cambodia, and Myanmar which were in the category of low income countries. In addition to the poor logistics performance, Indonesia also faces fiercer global and regional competition which is no longer among products and among companies, but among logistics networks and supply chains. Meanwhile, Indonesia also needs to prepare for the integration of ASEAN logistics sector by 2013 as part of the ASEAN Economic Community of 2015, and also for integrated global market. Such preparations need to be formulated and set out in a synchronized and unifying policy spelled out through a National Logistics System Blueprint.

Indonesia has put many efforts in developing a new policy to improve its national and international logistics system during the last five years. These efforts were formalized[4] through

---

[4] The World Bank's LPI 2007 and urgency to meet regional/international commitments have also contributed to this.

the issuance of the Presidential Instruction No. 5/2008 regarding Focus of Economic Programs 2008-2009, which, among others, asked for the preparation of a national logistics blueprint with the Coordinating Minister for Economic Affairs (CMEA) as the designated responsible party. The team tasked for the preparation was established and this blueprint preparation process has been strongly supported not only by related government's ministries/agencies, logistics associations members of the chamber of commerce, academicians, practitioners/ experts, but also by international institutions like the World Bank, bilateral cooperation with Japan, Australia and The Netherlands.

The results of these efforts can be found in the fact that gradually a more integrated framework is evolving, which allows the elaboration of concrete action plans as later on detailed in the Presidential Regulation No.26/2012 under which the Blueprint for the Development of the National Logistics System (Sistem Logistik Nasional, thus, SISLOGNAS) was issued on March 2012. During the preparation, the team had organized many meetings with private and public stakeholders to get the necessary inputs, and the content of the blueprint had been synchronized into Government national programs, such as the Connectivity, Economic Corridors and the Master Plan for the Acceleration and Expansion of Economic Development of Indonesia (MP3EI). The most important policy directions in this process are described below.

2.2 SISLOGNAS and MP3EI

During the preparation of the logistics blueprint, the Government was also in the process of preparing the working document to implement Law No.17/2007 on the National Long Term Development Plan 2005-2025 that would transform the country into a developed country by 2025. At the same time, the Government is also aware that not only Indonesia has to prepare itself to meet its regional/international commitments, thus, to improve its competitiveness, but there is also a need to urge more involvement of the private sector in developing the economy to compensate for the country's limited fiscal capacity. In order to be able to achieve this, a Master Plan for the Acceleration and Expansion of Economic Development of Indonesia (MP3EI)[4] has been developed, and was issued through the Presidential Regulation No. 32/2011 in May 2011, providing the building blocks to transform Indonesia into one of the 10 major economies in the world by 2025. To achieve this, real economic growth should reach 7-9% per year, on an ongoing basis. The total investments needed to implement the programmes and projects identified in the MP3EI 2011-2025 are estimated at 4,012 trillion Rp (472 billion USD).

For the implementation of this ambitious plan, the private sector has to be given a major and important role in economic development, particularly in investments to increase job opportunities. The government will not only be a regulator, it will also be a facilitator and catalyst to support this growth; the Master Plan also clearly states the need for "not business as usual" approach in achieving the objective. With regard to regulations, the government will amend or remove (debottlenecking) regulations that inhibit the implementation of investments. As a facilitator and catalyst, the government will provide incentives, both fiscal and non-fiscal.

---

[4] Master Plan for the Acceleration and Expansion of Indonesia Economic Development 2011-2025; Republic of Indonesia; 2011.

Implementation of MP3EI will include 8 main programs which consist of 22 (twenty two) main economic activities. The implementation strategy of MP3EI will integrate 3 main elements: (1) Developing the regional economic potential in 6 (six) Indonesia Economic Corridors: Sumatra Economic Corridor; Java Economic Corridor; Kalimantan Economic Corridor; Sulawesi Economic Corridor; Bali – Nusa Tenggara Economic Corridor; and Papua –Kepulauan Maluku Economic Corridor (see Figure 2.1), (2) Strengthening national connectivity locally and internationally (Figure 2.2), and (3) Strengthening human resource capacity and national science & technology to support the development of main programs in every economic corridor.

The concept of connectivity was also discussed at the 15th ASEAN Summit in October 2009, where the idea of ASEAN Connectivity (physical, institutions and people-to-people) was presented for the first time. Improved connectivity within the ASEAN would result in reduced trade costs in the region, creating economic growth and employment. In the concept of the development of ASEAN connectivity, it was proposed that each ASEAN member state should enhance the trade and freight flows by improving three components: transportation of freight; business logistics; and trade facilitation. The ASEAN countries would need to reduce their logistic bottlenecks and non-physical barriers to trade and transport like tariffs, regulation, transparent procedures, differences in business practices, language, cultural barriers, etc. Indonesia set a connectivity agenda coordinated by BAPPENAS. This connectivity agenda was based on three pillars: reducing regional disparities; accelerating poverty reduction; and enhancing competitiveness. These main objectives could be achieved by reducing inter-island shipping costs; lowering transport costs for rural citizens; upgrade access and enhance efficiency of international ports.
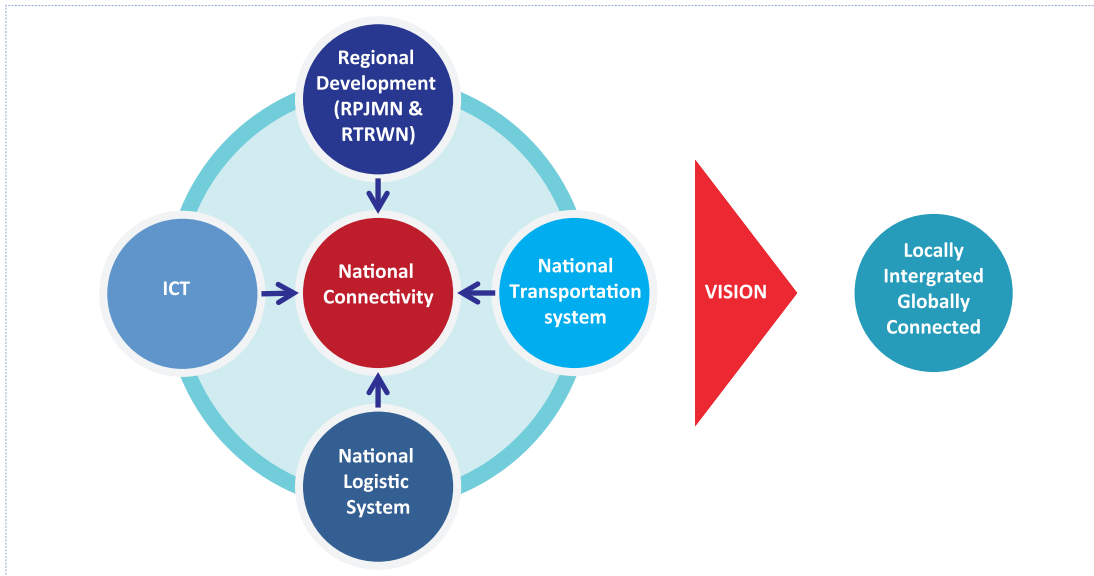
Figure 2.1   Indonesia: Six Economic Corridors
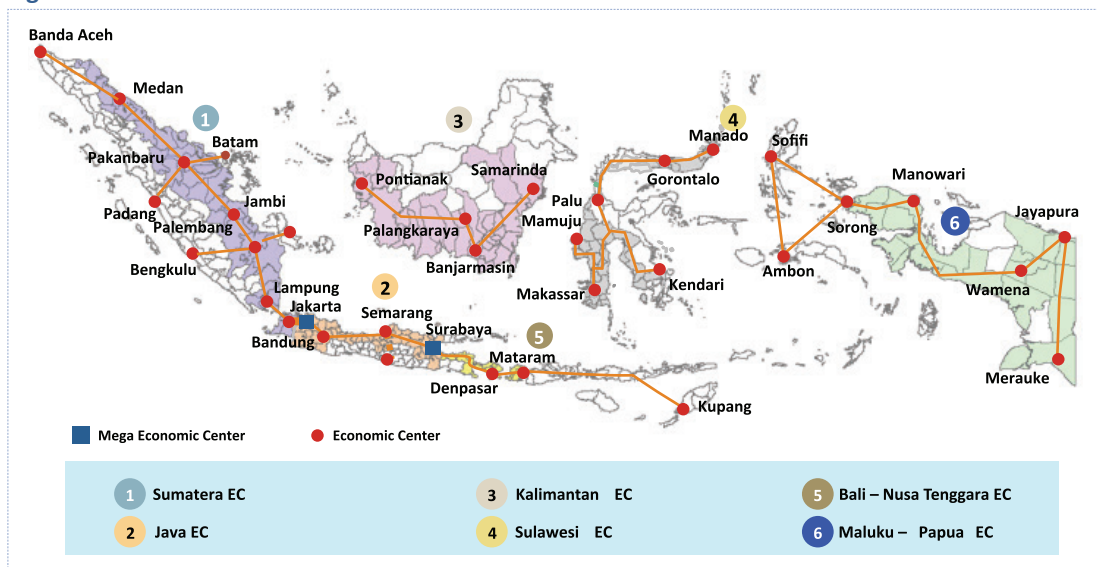
Source: Master Plan for the Acceleration and Expansion of Economic Development of Indonesia (MP3EI)

Later, the National Connectivity Framework as depicted at Figure 2.2 became one of the three main elements of the MP3EI 2011-2025.

Figure 2.2   Indonesia: National Connectivity Framework

Source: Master Plan for the Acceleration and Expansion of Economic Development of Indonesia (MP3EI)

To implement the MP3EI, the Presidential Regulation No. 32/2011 also establishes the Committee on Acceleration and Expansion of Indonesia's Economic Development 2011-2025 (KP3EI) chaired by the President with the CMEA as the executive chair. KP3EI is responsible for the coordination, monitoring and evaluation of specific strategies and actions identified in the Master Plan. Through the MP3EI the Government of Indonesia has shown its awareness of the need to invest in the improvement of the logistics system in Indonesia. These investments focus not only on hard infrastructure, but also on the so-called soft infrastructure; more conducive regulations to facilitate trade and transport. The main challenge will be to attract sufficient private capital for the planned investments.

The linkages in the implementation between MP3EI, the National Logistics System Blueprint and the related parties is depicted in Figure 2.3. Thus the Blueprint of National Logistics System Development (SISLOGNAS) is expected to contribute to the realization of goals of the National Mid-Term Development Plan (RPJMN) 2010-2014, to support the implementation of MP3EI, thus, actualizing Indonesia's economic vision 2025 (RPJPN), i.e. "Self-sufficient, advanced, just and prosperous Indonesia" with targeted per capita GDP of US$ 14,250-15,500 by 2025. Therefore, the National Logistics System is to be developed into an effective, efficient and integrated Logistics System based on Supply Chain Management (SCM) approach upon synchronized, integrated and collaborative stakeholders, supported by information technology and embodied under a reliable institutional setting with effective organizational system. It is expected that the National Logistics System will be operationalized by ethical and professional logistics actors and service providers, supported by adequate and reliable logistics infrastructure. The Blueprint of the National Logistics System takes into account the existing development of national and global logistics condition, regionally and internationally, and logistics business best practices processes in developed countries. As the main logistics activity is to ensure the flow of goods (commodities), the paradigm "ship-follows-the-trade" holds; but, due to Indonesia's vast geographic span whereby access to some areas and regions is limited, the Blueprint also hinges on the "ship-promotes-the-trade" paradigm.

Figure 2.3   SISLOGNAS Blueprint and MP3EI Implementation Framework
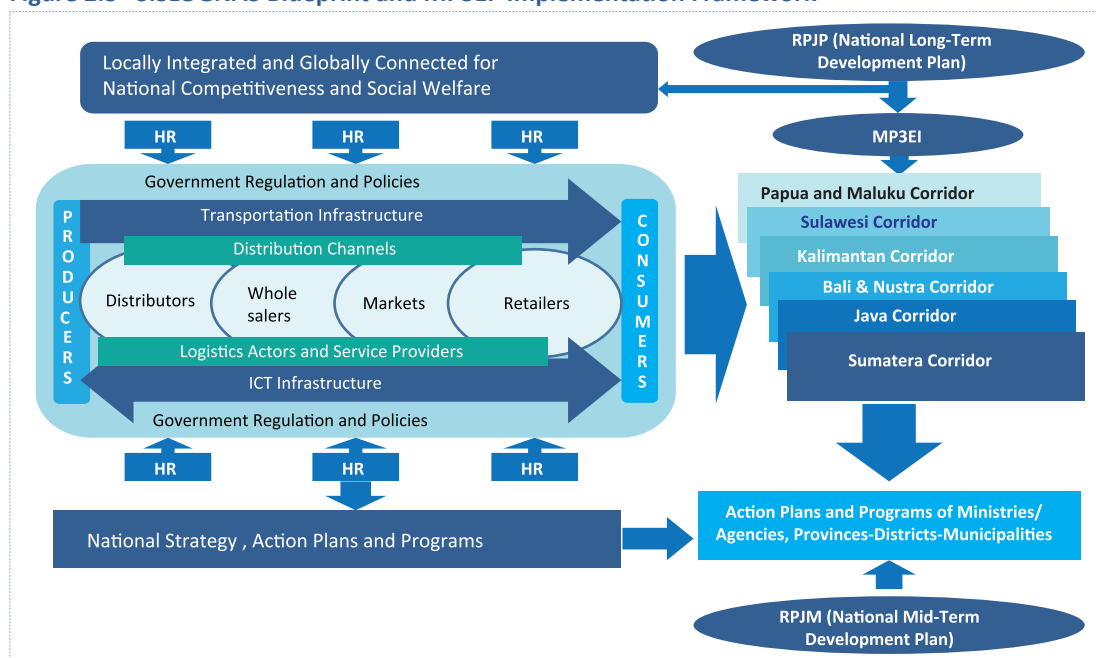
Source: The Blueprint of National Logistics System Development (SISLOGNAS)

2.3   Blueprint of National Logistics System Development

In March 2012 the SISLOGNAS Blueprint was officially approved by Presidential Regulation No. 26/2012. It also cites that the implementation of the Blueprint is coordinated by the CMEA, as the executive chair of the KPEI, and for the CMEA to establish a SISLOGNAS team, which since then has been working on an implementation plan of the National Logistics System strategy. The Blueprint of National Logistics System Development (SISLOGNAS) is not a master plan but it focuses more in laying out the direction and modules to develop a National Logistics System at the national-wide policy level to be broken down into annual Government and Ministries/ Government Agencies Work Plans. Thus, the SISLOGNAS Blueprint provides directive and guidance to the government and the business sector in developing effective and efficient National Logistics System. It is a reference to the national and local governments in developing logistics development plans and to improve transparency and coordination among ministries and agencies at the national and sub-national levels. For the business sector, the Blueprint is to support them to improve their competitiveness through creation of higher added value due to competitive costs, more investment opportunities to micro, small and medium enterprises and more opportunities for national logistics actors and service providers to build cooperation on a global scale.

The Vision of National Logistics System development until 2025 is "Locally Integrated, Globally Connected for National Competitiveness and Social Welfare". The "Locally Integrated" logistics system means that, by 2025, all logistics activities in Indonesia will be integrated effectively and efficiently at the rural, urban, interregional and inter-island levels into one unit within

the Unitary State of the Republic of Indonesia (NKRI) that brings welfare and prosperity to Indonesian people. The locally integrated vision promotes national economic sovereignty and security characterized by inclusive, just and evenly distributed economic growth among regions thus improving social welfare and unifying the whole territory of Indonesia as a maritime country. The "Globally Connected" logistics system means that, by 2025, the National Logistics System will be connected to the regional (ASEAN) and global logistics systems via International Hub Ports (including customs and trade facilitations), backed-up by "International Gateways" information and financial networks enabling national logistics actors and service providers to compete in the global market.

The locally integrated and globally connected logistics system as schematically shown in Figure 2.4 will be achieved through integrated and efficient logistics networks consisting of distribution, transport, information and financial networks supporting logistics actors and service providers. Thus, the domestic logistics system network and its connection to the global logistics network will be a key to success in global supply chain competition as competitions will not only between products or companies but also between logistics networks and supply chains and even between countries. Further, the locally integrated and globally connected logistics system will promote national economic sovereignty and security, improve social welfare and establish the NKRI as a maritime country.

Figure 2.4   National Logistics System Network
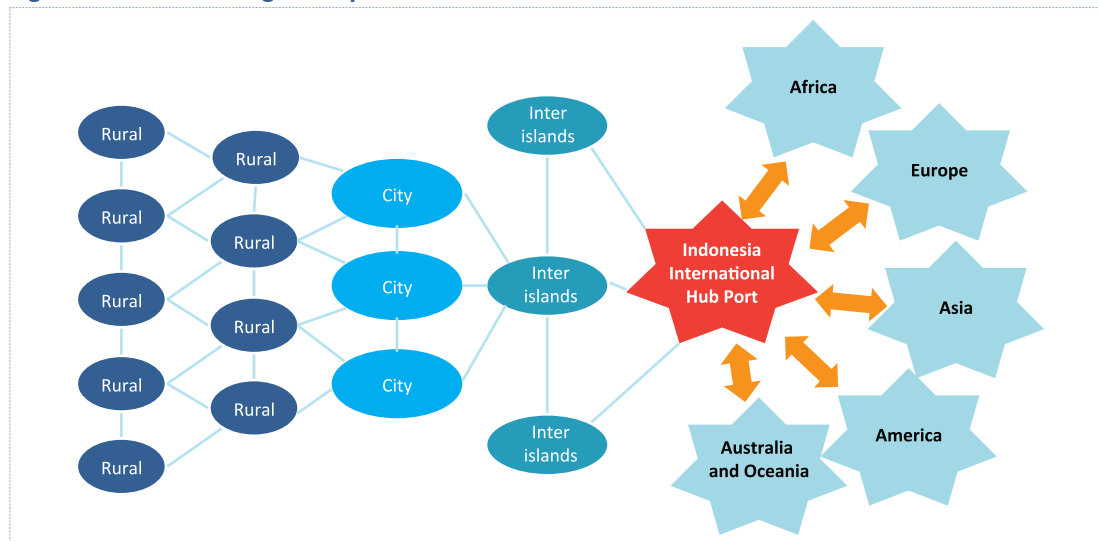
Source: The Blueprint of National Logistics System Development (SISLOGNAS)

The missions of the National Logistics System are: (1) to facilitate effective and efficient flows of goods to ensure the supply of the public's basic necessities and to improve the competitiveness of national products on the domestic, regional and global markets, and (2) to build national logistics nodes and their connectivity across rural, urban, interregional and inter-island levels to international hub ports through collaboration of stakeholders. Following up on the above vision and missions, the general goal to be achieved from developing and establishing a National Logistics System is to establish an integrated, effective and efficient

logistics system to improve the national competitiveness on the regional and global markets, and to improve social welfare. Specifically, the goals are (1) to reduce logistics costs, facilitate the movement of goods and improve logistics services thus improving the competitiveness of national products in the global and domestic market, (2) to ensure that basic and strategic commodities are available throughout Indonesia at affordable prices thus promoting a just and prosperous society, and strengthen the sovereignty and integrity of the Unitary State of the Republic of Indonesia, and (3) to prepare for ASEAN logistics integration by 2013 as part of the single ASEAN market by 2015 and global market integration by 2020.

The above vision, missions and goals dictate that the National Logistics System development is to be based on 6 (six) key drivers (Figure 2.5), i.e.: (1) Key Commodities, (2) Logistics Actors and Service Providers, (3) Transport Infrastructure, (4) Information and Communication Technology, (5) Human Resources and Management, and (6) Laws and Regulations. The 6 (six) key drivers dictate adoption of the following policy directions, coordinated under one umbrella organization: (1) Identification of Key Commodities embedded in an effective and efficient logistics networks and supply chains, governance and trading scheme, (2) Integration of logistics nodes and links to facilitate the flow of goods from the point of origin to the point of destination. The logistics nodes include logistics actors and consumers; and the logistics links include distribution, transport, information and financial networks, connecting rural and urban communities, economic growth centres, between islands and cross countries. The integration of logistics nodes and logistics links provides a major foundation for achieving local, national and global connectivity towards national economic sovereignty and security and establishing Indonesia as a Maritime Country, (3) Development and adoption of a reliable and safe information and communication system; (4) Development of local world-class logistics actors and service providers; (5) Development of professional logistics human resources; (6) Reform of laws and regulations on logistics to ensure legal and business certainty, and synchronization among national and sub-national logistics actors and service providers enabling efficient logistic activities thus to establish conducive business environment; and (7) Institutional governance for an effective national logistics system.

Figure 2.5   Key Drivers for the National Logistics System
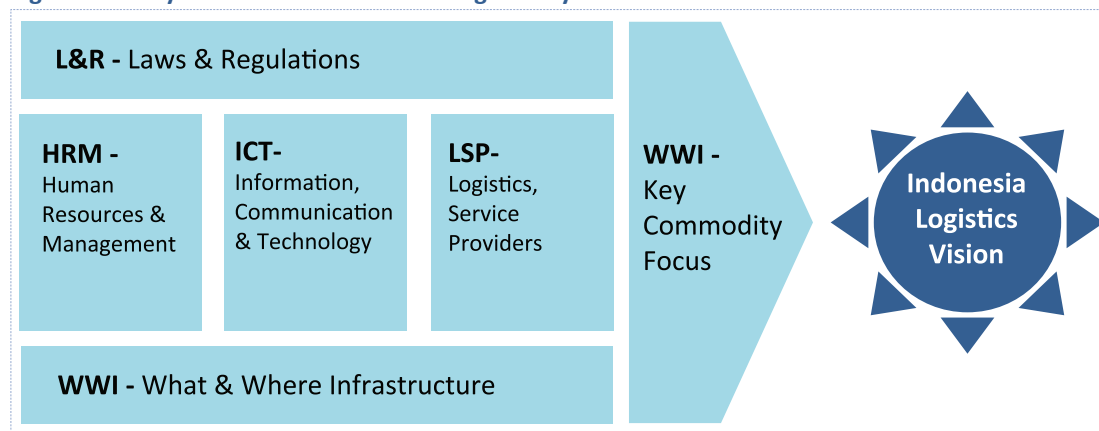
Source: The Blueprint of National Logistics System Development (SISLOGNAS)

2.4 Strategic, Program and Policy Direction

To actualize the vision, missions and goals of this National Logistics System by 2025, it is necessary to lay out policies and strategies to be further stipulated in programs, implementation phases and action plans. The policies of the national logistics system are to be developed/ implemented through are 6 (six) key drivers.

Give priority to national interest

As mandated by the 1945 Constitution, priority should be given to the national interest. With regard to the National Logistics System, it should improve the national competitiveness and people's welfare by facilitating trade of locally produced commodities. It should also contribute to the stabilization of national security by ensuring the competitive and smooth distribution of basic and strategic commodities needed by the people. In developing the National Logistics System, competency building for Indonesian human resources will be one of the priorities.

Drive the achievement of Indonesian economic vision by 2025

Upon establishment of 6 (six) Indonesian economic development and growth corridors as set out in the MP3EI, the National Logistics System is expected to drive the achievement of the Indonesian Economic Vision by 2025 i.e. "Actualizing Indonesian society that is self-sufficient, advanced, just and prosperous" with the targeted per capita GDP of 14,250-15,500 US Dollars. To achieve the vision, the national economic sovereignty and security should be upheld through the management of national potential and natural resources consistent with regional and international trade conventions.

Promote the establishment of Indonesia as a maritime state

Her endowment of thousands of islands connected by sea with abundant natural resources plus international recognition of exclusive economic zone in its territorial waters validated Indonesia as a maritime nation applying the concepts of front land and hinterland. These concepts are expected to strengthen the national economic sovereignty and security.

Promote breakthrough and acceleration to catch up in a global competition

Catching up with global competition would require leap-frog and breakthrough to make Indonesia's competitiveness at par with other countries which are also reforming their logistics systems. Adoption of front land and hinterland concepts in addition to transformation of international hub into logistic ports is an example of such breakthrough at the macro level. Micro level breakthroughs include: (a) development of short-sea shipping ports in Sumatra, Java, Kalimantan and Eastern Indonesia Region as an alternative to road infrastructure, and (b) development of logistics support in the sea region to support the optimal use of Indonesia's sea resources.

Increase local governments' role and national-local synergy

As logistics system is an integrated system, national-local governments' synergism is to be improved as it is essential to the integration of the whole national economic power. A roadmap should be drawn by the National Government with input from Local Governments (Pemda).

The roadmap can be used by the National Government to develop a national logistics system and by local governments to develop their logistics systems, including priorities in development plans. Law Number 22 Year 2000 on Regional Autonomy authorizes District Governments to put government into operation and to be responsible for satisfying local needs for basic and strategic commodities. As a result, the logistics for basic and strategic commodities are basically the responsibility of District Governments while the National Government is responsible for providing the directives and the Provincial Government is responsible for coordination.

Encourage fair competition

The main goals of logistics are to facilitate the flow of goods, improve logistics services and thus increase the competitiveness of national products on the global and domestic markets. These goals will be achieved through a sound business competition. Basically, the implementation of the national logistics system for major export commodities and unregulated commodities will follow market forces. But, in terms of basic and strategic commodities, government intervention is allowable to reduce price disparity and volatility on the domestic market as the purchasing power of the general public is weak such that unchecked increases in prices may result in social upheaval.

Promote the business world's participation and business opportunities

As the Government has limited resources, increasing participation of the private sector is encouraged in developing the national logistics system. A wide range of partnerships and alliances such as public-private partnerships in developing national logistics infrastructure should continuously be promoted. In addition, the private contributions do not only take the form of financing but also as an alternate in the operation of a logistics sub-system for a certain period of time. Further, the opportunities for members of community to start and develop logistics business in Indonesia should be made available widely through ease of business licensing and development.

The SISLOGNAS policy is based on Supply Chain Management approach upon synchronized, integrated and collaborative stakeholders, supported by information technology embodied under a reliable institutional setting with effective organizational system. The Blueprint adds that as an archipelagic nation, national logistics policy should be one that treats the sea as the connector, instead of separator, of thousands of islands that made up the country. Thus, the national logistics system development will be based on the concepts of front land and hinterland.

The front land is the territory directly bordering on other countries or international waters while the hinterland is the territory of land and sea surrounded by the front land. The hinterland is the full sovereignty of Indonesia. However, in the hinterland, foreign ships are allowed to pass Indonesia's waters along the corridor of up to 25 miles to the right and to the left of the Indonesian Archipelagic Sea Lanes (Alur Laut Kepulauan Indonesia) in accordance to the international rules (innocent passage) but they are not allowed to carry out economic and fishing activities. The establishment of the two international hub ports (Kuala Tanjung in the west and Bitung in the east) has to do with this concept.

The concepts of front land and hinterland are a strategic leap in the logistics sector to improve the competitiveness of local products on the domestic market. In addition, they are also the catalyst to in the transformation of International Hub Ports into Logistics Ports, i.e. facilities to support the flows of goods replacing the port function as a place for cargo loading and unloading. In micro terms, the concepts also crystallize two logistics related issues, at least, i.e.: (a) development of Short Sea Shipping (SSS) ports in Java, Sumatra, Kalimantan, Sulawesi, Nusa Tenggara and Papua as the alternative to developing increasingly expensive road infrastructure often hampered by land acquisition problems, and (b) development of Logistics Support in the deep sea hinterland to support Indonesia's marine resources exploitation in the EEZ.

The Blueprint reiterates the previously referred national policies and it also translates them into lists of action plans and targets for 2012-2015; 2016-2020 and 2021-2025 together with the ministries/agencies and local governments responsible for the tasks. It stresses that these policies are to actualize Indonesia as a maritime nation, through "Vision 2025: Locally Integrated, Globally Connected for National Competitiveness and Social Welfare". The phases of National Logistics System development for 2011-2025 are undertaken in a gradual and sustainable manner as Table 2.1 below shows.

Table 2.1   Milestones for Implementation Phases

Performance/ Key Driver	Phase I (2011-2015)	Phase II (2016-2020)	Phase III (2021-2025)
Key Commodities	• Establishment of Regional Distribution Centres for Basic and Strategic Commodities in each Economic Corridor • Revitalization and development of export commodity supply chain networks • Improved effectiveness of dry ports' operations	• Establishment of Provincial Distribution Centres for Basic and Strategic Commodities in Consumer Provinces • Establishment of Supply chain network with Indonesia's business partners •Inland FTA established	• Effective operation of Buffer Logistics Network for Basic and Strategic Commodities in each Economic Corridor • Effective and efficient global supply chain network for export commodities •Domination of the term of trade FOB for imports and CIF for exports
Logistics Actors (PL) and Logistics Service Providers (PJL)	• In each economic corridor, there exist reliable and competitive PLs and PJLs as local and national players • In each economic corridor, there exist reliable and competitive logistics SMEs and cooperatives as local and national players • Increased role of PJL SOEs (Posts, BGR, Bulog, etc) in rural and national logistics • Revitalization of Commercial SOEs serving as trading house for basic and strategic commodities and export commodities	• In each economic corridor, PLs and PJLs are reliable regional players • In each province, logistics SMEs and cooperatives are reliable and competitive local and national players • PJL SOEs are reliable players in rural and national logistics • Commercial SOEs serving as world class trading house (world class players)	• National PLs and PJLs as world class players

Transport Infrastructure	• Completion and formalization of detailed design of international hub seaports for the Indonesian Eastern Region in Bitung and for the Indonesian Western Region in Kuala Tanjung • Designation of international hub airports in Jakarta, Kuala Namu and Makassar • Operability of 24/7 service delivery model for air cargo at Soekarno-Hatta Airport • Actualization of scheduled short sea shipping (SSS) operations and routes at Pantura and Lalintim Sumatra to promote sea transport as national backbone transport • Improved role of trains to handle long-distance cargo transport in Java and Sumatra • Improved synergy and effectiveness of trucking, river, lake and crossing transports to actualize multimodal transport system • Establishment of multimodal terminals and logistics centres at main airports and seaports in each economic corridors	• Development of international hub seaports for the Indonesian Eastern Region in Bitung and for the Indonesian Western Region in Kuala Tanjung • Development of air cargo ports in Manado, Bali, Balikpapan, Morotai, and Biak • Operability of 24/7 service delivery model for air cargo at Main Airports • Establishment and effective and efficient operation of interisland sea transport networks to actualize sea transport as national backbone transport • Establishment of Trans-Java and Trans-Sumatra and Railway connecting production centres to transport nodes • Increased role of trucking, river, lake and crossing transports as part of multimodal transport in each economic corridor • Development and connectivity of multimodal transport networks between international hub ports, main sea ports and main airports and growth centres and dry ports	• Effective integration between international hub seaports and main ports, collector ports and feeder ports and economic growth centres; • Effective and efficient operation of international cargo airports • Effective operation of sea transport functioning as national backbone transport. • Effective operation of railway as the main alternative to cargo transport in Indonesia • Trucking, river, lake and crossing transports become an integral part of the multimodal transport system in promoting local and national connectivity • Establishment of multimodal transport networks connecting logistics nodes.
ICT Infrastructure	• National e-logistics system (INALOG) established	• Operability of INALOG connected to the ASEAN regional logistic network	• Integration of INALOG into the global logistics network
HR Management	• Organized and implemented national logistics profession education and training system in accordance to international standards	• Most logistics workers in Indonesia hold internationally recognized national logistics certificates and/or logistics related certificates issued by accredited institutions	• All logistics workers in Indonesia hold internationally recognized national logistics certificates and/or logistics related certificates issued by accredited institutions
Laws and Regulations	• Synchronization of national logistics regulations and policies to promote efficient export-import activities • Strengthening of regulation and policy implementation	• Synchronous regulations and policies between sectors and between regions (national, local and interregional) • Regulation and policy enforceability	• Synchronized laws and regulations (national logistics law) enabling efficient smooth flows of domestic and international cargoes • Effective implementation of national logistics regulations and policies
Institutions	• Establishment of a National Logistics Task Team supervising the implementation of SISLOGNAS Blueprint which also serves as a Damage Control Unit • Improved role, coordination and synergy between local and national logistics associations and stakeholders	• Improved role of logistics institutions at the National and ASEAN levels • Improved role, coordination and synergy between logistics associations and stakeholders at the regional and global levels	• Establishment of a permanent institution operating and coordinating the National Logistics System •Improved role, coordination and synergy between logistics associations and stakeholders at the regional and global levels

Source: The Blueprint of National Logistics System Development (SISLOGNAS)

The SISLOGNAS Team has established task forces according to each of these key drivers, and the action plans and target for each of them are also detailed in the Blueprint. In addition to coordinate and monitor the implementation of the national logistics policies implementation, the SISLOGNAS Team is also tasked to establish a mechanism through which policies implementation progress can be measured and tracked overtime using indicators as the improvement of reliability, efficiency (lead time) and cost of the national logistics performance. It is paramount to establish national logistics performance indicators, related to the progress made through each of the task forces of the key drivers.

2.5   Closing Remark

This National Logistics System Blueprint provides the vision, strategies, policies, implementation phases and action plans related to government policy on National Logistics System establishment and development to improve the flows of goods at home and from and to other countries effectively and efficiently. As such, it (a) provides guidelines in preparing government policy to establish and develop Indonesian logistics sector thus improving national business' competitiveness on the global market and public welfare, (b) helps the national and local governments prepare development plans thus optimizing the use of limited national resources while significantly improving the performance of the National Logistics System, (c) improves transparency and coordination among ministries and agencies and other relevant stakeholders, and (d) indicates investment opportunities for medium, small and micro enterprises and for national logistics service providers to establish cooperation on a global scale.

The SISLOGNAS is expected to contribute to the realization of goals of the National Mid-Term Development Plan (RPJMN) 2010-2014, to support the implementation of MP3EI, thus, actualizing Indonesia's economic vision 2025 (RPJPN), i.e. "Self-sufficient, advanced, just and prosperous Indonesia" with targeted per capita GDP of US$ 14,250-15,500 by 2025.

As the main logistics activity is to ensure the flow of goods, the national policy does not only promote the "ship-follows-the-trade" but also the "ship-promotes-the-trade" policies to balance the cabotage traffic due to Indonesia's vast geographic span whereby access to some areas and regions is limited. The policy is also to give priority to basic and strategic goods distribution throughout the archipelago to minimize their price disparities/availability due to geographical and cyclical issues. The logistics policy includes also the empowerment of logistics actors (such as producers, wholesalers, distributors, agents and retailers) as well as the logistics service providers.

3. National Logistics Costs

Until now Indonesia has not measured its national logistics performance both in terms of logistics cost and other logistics indicators. The necessity of the national logistics cost performance, among others, is to evaluate the effectiveness and efficiency of the implementation of the blueprint of National Logistics System (SISLOGNAS) as officially issued by Presidential Regulation No. 26 year 2012. This chapter describes a framework to calculate Indonesia logistics costs. USA's logistics cost model is chosen as a reference in developing the model of the Indonesia's national logistics costs due to the simplicity of its cost structure and components, and the appropriateness with Indonesian situation. Even though it will be modified in accordance with the data availability and it will be combined and modified with South Korea's model and South Africa's model. Using the proposed model and the availability of data, it shows that during the period 2004-2011 the Indonesia logistics costs decreased 2.97% of GDP, from 27.61% of GDP in 2004 to 24.64% of GDP in 2011. The average of Indonesian logistics costs during 8 years is equal to 26.03 % of GDP, for which transportation cost component give the biggest contribution (12.04% of GDP) to the Indonesia logistics costs, administration cost component (4.52% of GDP) give the lowest, and the contribution of the inventory costs (9.47% of GDP) was in the middle position. The transportation costs were dominated by land transportation (72.21%); rail transportation (only 0.51%) gave the lowest contribution, while the inventory cost was dominated by holding cost (49.37%).

3.1   Background

In conventional business view, logistics is frequently considered as a supporting activity to production and marketing; the function of logistics is in this view related to procuring and storing raw material needed for production processes, and to distributing finished good to the consumers. However, following the global trade liberation, since three decades ago, the role of logistics in reshaping the business competitiveness has changed. The competitiveness is not only based on the product/goods, but it also has been shifted into the competition between one company and other companies, even between company networks. Each of which is supported by each respective government. In response to this change, the Indonesian government has issued Presidential Regulation No.26 year 2012 concerning the Blueprint of National Logistics System (SISLOGNAS)

The vision 2025 of SISLOGNAS is "Locally integrated, globally connected for national competitiveness and social welfare". It is expected that SISLOGNAS can provide needed and appropriate contribution in the achievement of Indonesian economic vision as stated in MP3EI that is "a self-sufficient, just, and prosperous Indonesia". It means that in Indonesia the role of logistics is not only to flow goods effectively and efficiently but also to increase business competitiveness and economics growth. Besides that, it also has a strategic role for increasing social welfare and for strengthening Unitary State of the Republic of Indonesia.

It is a fact, however, that Indonesia's national logistics system performance in general is still not optimal and needs to be improved as indicated by the World Bank's Logistics Performance Index (LPI) and shown in Figure 3.1. In 2007 the LPI revealed that Indonesia ranked of 43rd out of 155 countries surveyed, it was lower than some ASEAN countries i.e. Singapore (1st), Malaysia (27th) and Thailand (31st). The Indonesia rank decreased in 2010 as the LPI showed the rank became 75th out of 155 countries surveyed, lower than those of some ASEAN countries i.e. Singapore (2nd), Malaysia (29th) and Thailand (35th) and it was even lower than those of the Philippines (44th) and Vietnam (53rd). In 2012, the LPI of Indonesia rank considerably increased into 59th out of 155 countries surveyed, it was still lower than those of some ASEAN countries i.e. Singapore (1st), Malaysia (21st), Thailand (38th), the Philippines (52nd) and Vietnam (53rd).

Figure 3.1   Indonesian Logistics Performance Index
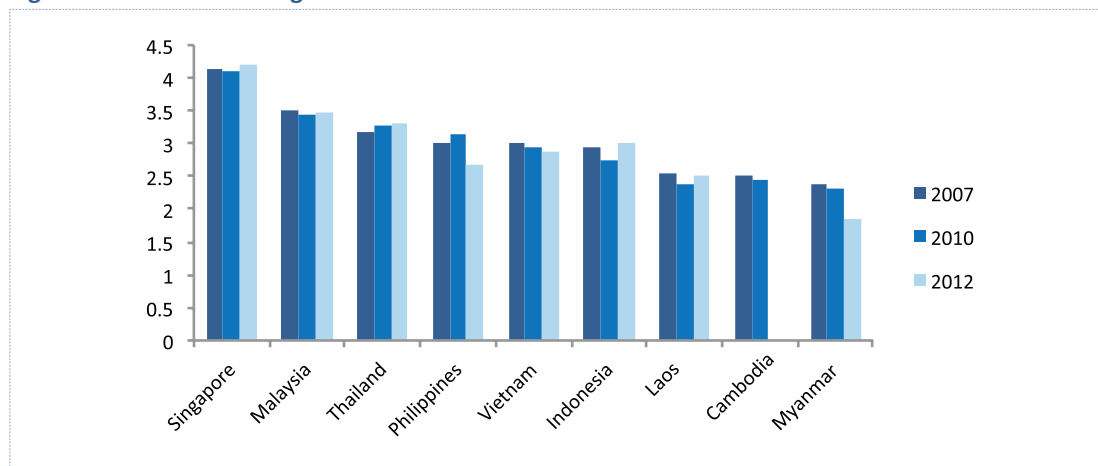
Source: Logistics Performance Index, World Bank

Figure 3.1 clearly demonstrates that in 2012 the LPI of Indonesia was quite poor compared with other ASEAN member countries. Indonesia's position was only above Laos, Cambodia, and Myanmar which were in the category of low income countries, while Indonesia was in the category of lower middle income. According to LPI Vietnam's position was above Indonesia's even though Vietnam was in the category of low income.

Based on various sources, Table 3.1 represents Indonesia's national logistics costs compared with those of advanced and ASEAN Countries.

Table 3.1   Indonesian Logistics Costs Among Advanced and ASEAN Countries

Country	Logistics Cost (% of GDP)
United State of America	9,9
Japan	10,6
South Korea	16,3
Singapore	8,0
Malaysia	13
Thailand	20
Vietnam	25
Indonesia	27

Source: Various sources

The Indonesia logistics costs could be up to 27% of the Gross Domestic Products (GDP) and its service quality was poor as stated in the SISLOGNAS (2012). The poor quality was indicated by: inadequate infrastructure, both quantitatively and qualitatively; prevalence of illegal charges and transaction fees causing high cost economy; poor export and import processing lead time, and bottlenecks on port services; inadequate service capacity and networks supporting national logistics providers; chronic difficulties in stocks management and price fluctuation of basic commodities particularly during national and religious holidays; and, in addition significant price disparity in border, remote and outer areas.

Even though Indonesia knows Logistics Performance Index (LPI) from the World Bank publication, until now Indonesia has not measured its logistics performance both in terms of logistics costs and other logistics indicators. At macro level there is the necessity to evaluate the national logistics cost performance and the effectiveness and efficiency of the implementation of the blueprint of SISLOGNAS. Subsequently it can be used to identify problems, challenges and opportunities and to synchronize appropriate policy and action plans both in public sector and in private sector and even between central and local government. In the operational level, the logistics cost indicator could be used to reduce operating costs and to increase logistics services which then can increase the flow of goods. Thus the flow of goods can be delivered more rapidly, reliably, and cheaply, and subsequently can increase business competitiveness.

3.2   National Logistics Cost Model

According to Rushton et al (2006) in Pishvaee et al (2009) the logistics cost components consist of carrying costs, storage costs, packing costs, consolidation costs, transportation costs, inventory costs, information costs, and controlling costs. Meanwhile according to Zeng and Rosseti (2003) the logistics cost components consist of transportation costs, carrying costs, administration costs, tax, risk and damage costs, handling costs and packing costs. In reality, each country has its own model and method in calculating its national logistics costs, even though generally they use three categories of logistics cost components: transportation costs; inventory costs; and administration costs.

The calculation of the logistics costs of the USA is done by using CASS Information Systems, Inc. This was firstly published by Heskett et all in 1973, then it was improved by Delaney using the transportation costs, the inventory costs, and the administration costs as the major cost components. The South Korean national logistics costs is done by KOTI (Korea Transport Institute), which uses transportation costs, inventory costs, packing costs, handling and loading/unloading costs, information costs, and administration costs. South African logistics costs is done by CSIR (Council for Scientific and Industrial Research), and the components consists of transportation costs inventory costs, and management and administration costs. Therefore, as a consequence, national logistics costs are not fully comparable among countries. The basis for the calculation of national logistics costs in USA, South Korea, and South Africa is presented in Table 3.2.

Table 3.2   USA, South Korea, and South Africa Logistics Cost Model

Country	US of America	South Korea	South Africa
Institution	CASS Information Systems, Inc.	KOTI (Korea Transport Institute)	CSIR (Council for Scientific and Industrial Research)
Cost Components	Transportation costs Inventory costs Administration costs	Transportation costs Inventory costs Packing costs Handling and loading/ unloading costs Information costs Administration costs	Transportation costs Warehousing costs Inventory costs Management and administration costs

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

3.3   Indonesian Logistics Cost Model

Apparently, not only in Indonesia but also in other countries, the availability of data is one of the major problems for developing a model of calculating national logistics costs. That is why each country has its own model and method in calculating its national logistics costs. Due to this problem the Indonesian logistics cost model has to be developed which is based on the availability of data that can be obtained regularly from related institutional agencies, both public and private. USA's logistics cost model is chosen as a reference in developing the model of the Indonesia's National Logistics Costs due to the simplicity of cost structure and components, and the appropriateness for the Indonesian situation. Even though, it will be modified in accordance with the data availability and it will be combined with South Korea's model and South Africa's model. Figure 3.2 describes schematically the Indonesia Logistics Cost Model.

Based on USA logistics cost model, the Indonesian National Logistics Cost components can be classified into 3 categories; they are transportation cost, inventory cost and administration cost:

$$OL = OT + OI + OA$$

Remark:
OL : National Logistics Costs (% GDP)
OT : Transportation Costs (% GDP)
OI : Inventory Costs (% GDP)
OA : Administration Costs (% GDP)

Figure 3.2   Framework of Indonesia Logistics Cost Model
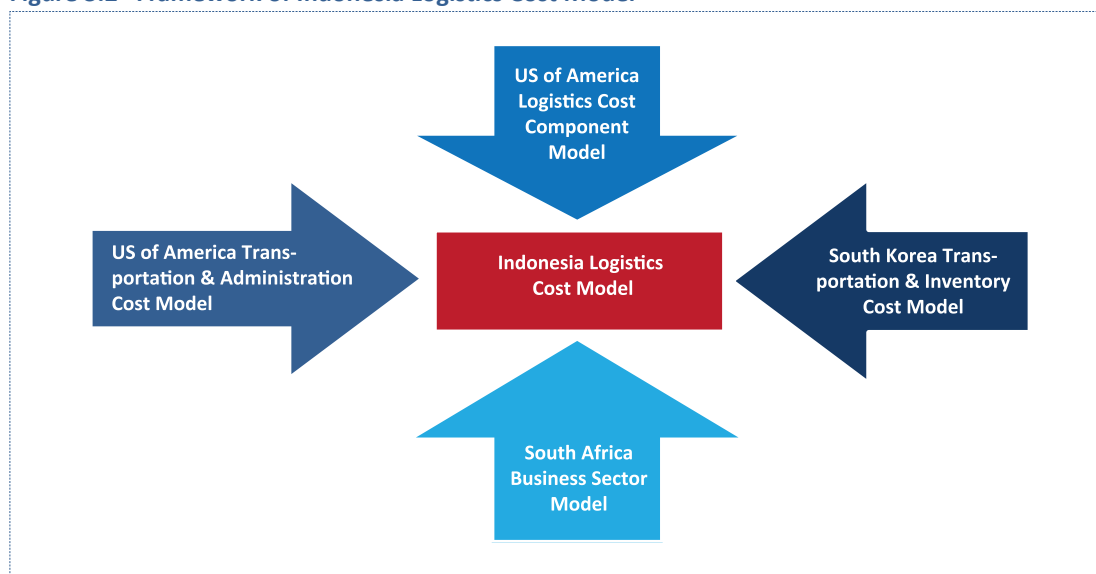
Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

For calculating each cost component, both South Korea logistics cost model and USA's logistics cost model are used. South Korea's logistics cost model is used for calculating the transportation cost and inventory cost, and USA's logistics cost model is used for calculating transportation and administration cost. South Africa's logistics cost model is used for classifying the business sector, because of the similarity between Indonesia and South Africa as natural resources (agriculture and mining) producing country.

3.4   Analysis of Indonesian Logistics Cost

Using the availability of secondary data from various sources and according to the Indonesian logistics cost model as proposed, the estimation of the Indonesian logistics costs from 2004 to 2011 is presented in the Table 3.3. It shows that during the 8 years there was a slight improvement of the performance of Indonesia's logistics costs (2.97% of GDP) from 27.61% of GDP in 2004 to 24.64% of GDP in 2011. It means that in average there was 0.37% of GDP annual improvement in Indonesia logistics costs.

Table 3.3   Estimation of Indonesian Logistics Costs 2004-2011

	2004	2005	2006	2007	2008	2009	2010	2011
GDP (Billion Rp)	2,295,826	2,774,281	3,339,217	3,950,893	4,948,688	5,606,203	6,436,270	7,427,086
Logistics Costs (Billion Rp)	633,845	762,884	961,185	1,016,611	1,238,410	1,397,267	1,543,793	1,829,669
Logistics Costs (%)	27.61	27.50	28.78	25.73	25.03	24.92	23.99	24.64

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

The breakdown of Indonesian logistics costs for each component (transportation costs, inventory costs, and administration costs) is presented in the Figure 3.3. It shows that in average the transportation cost component gives the biggest contribution (12.04% of GDP) to the Indonesia logistics costs, and administration cost component gives the lowest (4.52% of GDP).

Figure 3.3   Breakdown of Indonesian Logistics Cost For Each Component
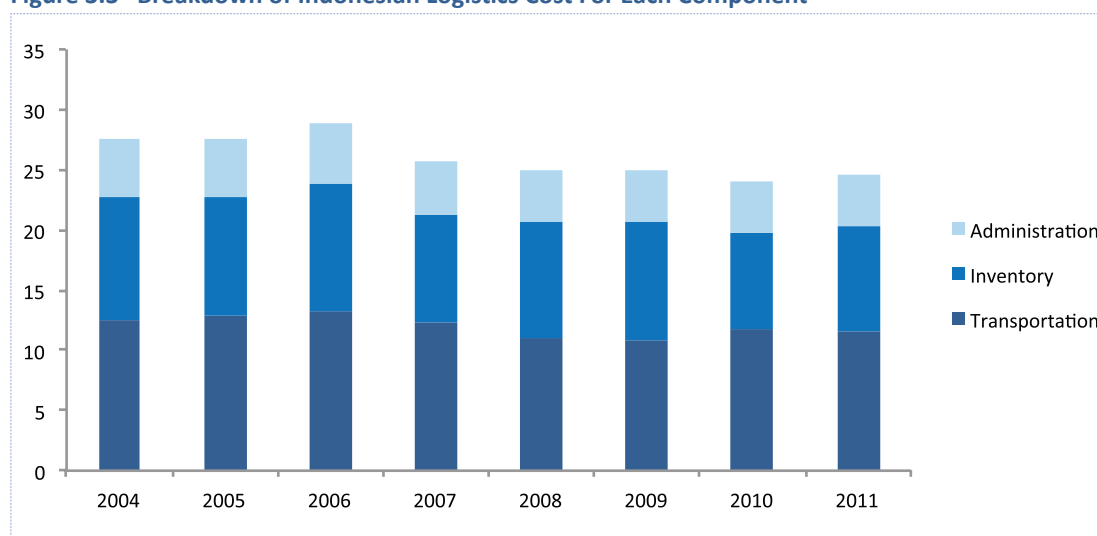
Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

Cost (% of GDP)	Year								
	2004	2005	2006	2007	2008	2009	2010	2011	Average
Transportation Costs	12.57	12.81	13.28	12.28	11.04	10.89	11.83	11.63	12.04
Inventory Costs	10.24	9.92	10.51	8.99	9.64	9.71	8.00	8.73	9.47
Administration Costs	4.79	4.77	5.00	4.47	4.34	4.33	4.16	4.28	4.52
Total Logistics Costs	**27.61**	**27.50**	**28.78**	**25.73**	**25.03**	**24.92**	**23.99**	**24.64**	**26.03**

Figure 3.3 shows the trend of Indonesian logistics cost, while the increment of the total amount of Indonesian logistics cost from year 2004 to 2011 is shown in Table 3.4.

Table 3.4   Logistic Cost Increment, Interest Rate, and BBM Price

Year	Logistics Cost Increment (%)	Interest Rate (%)	Fuel Price (USD/l)
2004	-	14,10	0,275
2005	20.36	14,98	0,275
2006	25.99	14,98	0,575
2007	5.77	12,93	0,575
2008	21.81	13,85	0,600
2009	12.83	12,56	0,437
2010	10.49	10,81	0,505
2011	18.52	10,58	0,517

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

As shown in the Table 3.4, the significant increment of Indonesian logistics costs happened in 2006 (25.99% from 2005), 2008 (21.81% from 2007) and 2011 (18.52% from 2011). From economic point of view, the significant increment in 2006 and 2008 are highly correlated with the fuel (BBM) price adjustment that increased from USD 0.275 to USD 0.575 in 2006, and from 0.575 to USD 0.600 in 2008. Fuel (BBM) price adjustment cause the significant logistics costs as the transportation cost component which was the biggest logistics cost component. The imbalance in using different transportation modes - with a large domination of land transportation, as shown in the Table 3.5, reinforced the contribution to the transportation costs in Indonesia.

Table 3.5   Breakdown of Transportation Cost

Year	Land	Water	Air	Rail	Services
2004	66.71%	21.58%	0.77%	0.62%	10.32%
2005	74.24%	17.02%	0.74%	0.59%	7.40%
2006	71.76%	20.27%	0.75%	0.49%	6.73%
2007	75.63%	16.99%	0.85%	0.43%	6.11%
2008	78.13%	14.81%	1.58%	0.41%	5.07%
2009	69.51%	22.59%	1.78%	0.58%	5.54%
2010	70.96%	22.01%	2.31%	0.46%	4.26%
2011	70.70%	22.04%	2.70%	0.51%	4.06%
Average	**72.21%**	**19.66%**	**1.44%**	**0.51%**	**6.19%**

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

The increase of the interest rate from 12.93% to 13.85% in 2008 also influenced the significant increment of the logistics costs in 2008, because the inventory cost component was dominated

by 49.37% holding cost (Table 3.6). From this phenomenon, it can be concluded that premium (BBM) price and interest rate have high correlation with the Indonesian logistics costs. Accordingly, it could be used as an indicator to predict the Indonesian logistics costs.

Table 3.6   Breakdown of Inventory Cost

Year	Holding Cost	Risk & Damage Cost	Storage Cost
2004	56.87%	21.51%	21.62%
2005	58.35%	20.77%	20.88%
2006	58.35%	20.77%	20.87%
2007	50.47%	20.82%	28.72%
2008	50.87%	19.59%	29.54%
2009	51.47%	21.86%	26.67%
2010	46.15%	22.77%	31.08%
Average	**49.37%**	**24.89%**	**25.75%**

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

3.5   Closing Remark

During the period 2004-2011 there was slight improvement of the performance of Indonesia logistics costs (2.97% of GDP) from 27.61% of GDP in 2004 to 24.64% of GDP in 2011; it means that in average there was 0.37% of GDP annual improvement in Indonesia logistics cost.
In 2011, national logistics costs constituted 25.03% of GDP, lower than average. The average of Indonesian logistics costs during 8 years (2004 to 2011) was 26.03 % of GDP, of which transportation cost component provided the largest contribution (12.04% of GDP); administration cost component (4.52% of GDP) had the lowest contribution, and the contribution of the inventory costs (9.47% of GDP) was in the middle position.

The transportation costs were dominated by land transportation costs (72.21%); rail transportation (only 0.51%) gave the lowest contribution; the inventory costs were dominated by holding costs (49.37%).

From economic point of view, the significant increment of total amount of national logistics costs was highly correlated with the fuel (BBM) price adjustment; accordingly, it could be used as an indicator to predict the Indonesian logistics costs.

Section 2
Logistics Case Studies

4. Reducing Dwell-Time of Import Containers in Tanjung Priok

4.1 Background

Import containers stay too long at the container terminals in Indonesia, negatively affecting logistics costs and having a serious adverse effect in terms of logistics costs for domestic businesses and the prices paid by consumers. This fact is well acknowledged by the Government of Indonesia, as underlined by Indonesian Port Corporation (IPC) president director Richard Joost Lino, who was quoted during the ceremony marking the start of the development of the Kalibaru Port in North Jakarta: "This is a historical moment for Indonesia because we have not expanded [the existing] Tanjung Priok Port for 130 years despite container traffic increasing at around 24 percent annually. We are committed to providing the best service in this port and to reducing dwell-time from 6.2 days to 3 days"[6].

This case study describes dwell time (DT) in Tanjung Priok, including ways to reduce DT.

4.2 Tackling Import Container Dwell-Time in Tanjung Priok[7]

As trade and the traffic of shipping containers continue to grow, Indonesia's main port of entry appears to be buckling under the pressure to keep up. According to the latest estimates, the average import container DT at Tanjung Priok has increased from 4.8 days in October 2010 to 6.4 days in November 2012 (Figure 4.1).

---

[6] Yudhoyono kicks off RI's largest port project, The Jakarta Post, March 23, 2013.
[7] The information in this case description is also presented in the World Bank's Technical Note "Tackling Import Container Dwell-Time in Tanjung Priok" (March 2013).

Figure 4.1   Dwell time at Tanjung Priok in period January 2011-June 2012
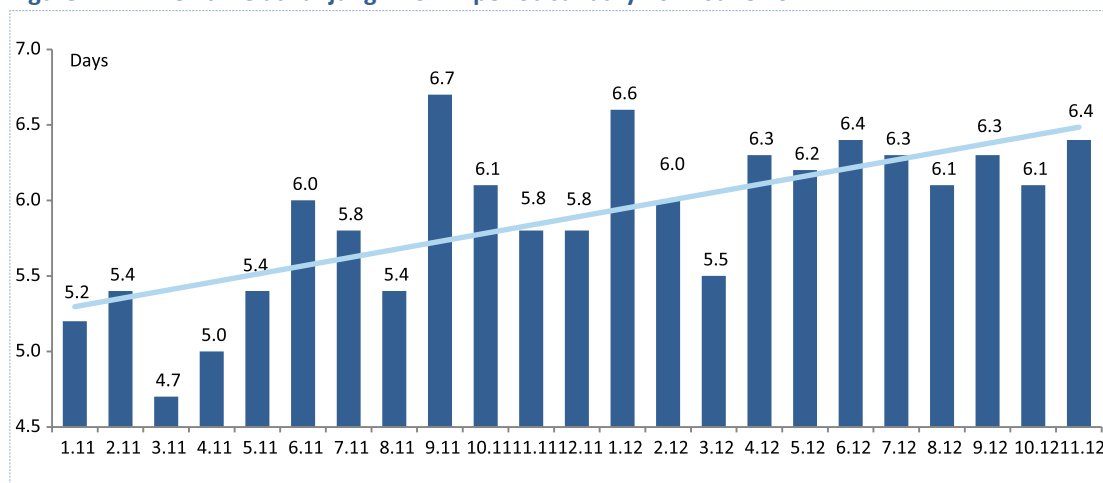
Source: Jakarta International Container Terminal (JICT)

DT measures the time from the moment the container is unloaded from a vessel until it leaves the gates of the Jakarta International Container Terminal (JICT). This is a 33 percent increase on DT measured in October 2010 (4.8 days), which is worrying given that Tanjung Priok handles over two-thirds of Indonesia's entire international trade and total container traffic forecast is expected to grow by over 160 percent by 2015 according to Pelindo II estimates. This situation is likely to be even worse at the other terminals of the port.

The deterioration of DT in Indonesia's most important international port adversely affects the country's economy in three ways. First, export-oriented industries are impacted by uncertainties due to the delays, reducing the competitiveness of Indonesian products abroad. Just-in-time inventory in manufacturing, in which firms tightly manage their schedules for importing raw materials and re-exporting finished goods, suffers even more, hampering Indonesia's transition to becoming an integral part of efficient worldwide supply-chains. It is important to note that about 19 percent of the inputs for foreign and export-oriented firms are imported. Second, the bottlenecks at the port have serious consequences in terms of costs for domestic businesses and ultimately in the prices paid by consumers. Lastly, Tanjung Priok is an integral part of the city environment, and the blockages add to the already dysfunctional traffic, which in turn also worsens the congestion in the port. As an example, the recent city floods caused the dwell-time to rise to 8 days in January 2013.

In order to keep up with the projected increases in trade, and to compensate for urban and infrastructure constraints, further time-saving efficiencies will need to be found in the very near future if DT is not to lengthen further. Understanding the reasons for the lengthening time needed in clearing and removing containers from the port becomes essential. DT can be broken in three components: upstream (between the arrival of the ship and the submission of the import declaration to Customs); Customs clearance; and downstream (from Customs clearance until leaving the gates of the JICT). The import processes from phase to phase are explained below (Box 4.1).

Box 4.1   Import Processes at Tanjung Priok

- The shipping line company prepares a manifest, a document that contains information about the containers and their owners, and submits it to Customs 24 hours before arrival, as required by Indonesian regulations.
- Customs acknowledges this document by issuing a BC 1.1. form. The serial number of the form is used in the submission of the import declaration (PIB).
- The importer (or its freight forwarder, FF) obtains the BC 1.1. information from the shipping line. In theory, the BC 1.1. information could be obtained from the shipping line before the arrival of the ship, but the fact is that it is usually acquired by the FF once the vessel has docked in the port. As most of the ships arrive over the weekend Friday-Sunday, most of the FF obtain this information the following Monday, which constitutes an important source of delay to the upstream component of dwell-time.
- In addition to the BC 1.1. serial number, the FF needs to collect all the supporting paperwork that could include documents issued by the Quarantine agency, BPOM (National Agency for Drug and Food Control), Ministry of Agriculture, Ministry of Trade and others. This process could include providing data to the different online systems of the agencies, obtaining hardcopies from others as well as payments of non-tax revenues, depending on the requirements of each agency.
- Information regarding the approvals and status of requests from FF to these agencies is usually updated through the Indonesian National Single Window (INSW), which operates mostly as a portal to obtain updates and information about the status of the process in different government agencies. Most of these documents can be obtained before the arrival of the vessel, except for the goods requiring further analysis, lab tests and inspections after arrival (e.g. some food categories, pharmaceuticals, etc)
- Once the FF has the set of documents and approvals from the relevant agencies, the FF drafts a PIB by doing a self-evaluation of the goods imported and calculating the amount of duties and taxes to be paid to Customs.
- With this estimation, the FF pays at the Bank and awaits for a confirmation of the receipt of the funds from Treasury. Although confirmation from Treasury to the bank on the receipt of the funds is electronic, this transfer of funds only happens once a day, yet creating another source of delays.
- With the confirmation of the payment, the FF can submit the PIB to Customs via EDI, starting the Customs Clearance process.
- Based on the importers information, the type of imported goods , the country of origin, the tax profile of the company and other factors, Customs then assigns one of the five risk categories available. Depending on the risk channel assigned, the importer will obtain a different treatment for Customs clearance, thus determining the length of the stay in the port from there on.
- Indonesian risk management has the standard 3 channels one would expect to find in other countries that resemble a traffic light (i.e. green, yellow and red) and 2 additional special channels, MITA Prioritas and MITA. The green channel usually means the importer obtains clearance without further revisions, yellow means document inspections and red means physical and document inspection. Average times for these channels are 5.8 days for green, 6.8 for yellow and 8.6 for the red channel (as of February 2012).
- Mita Prioritas and Mita are special channels for pre-approved importers. These importers have complied with a specific set of Customs requirements, including exemplary tax history records, minimum capital limits and recurrent and periodic import of goods, among others. The benefits for these importers have a real impact on dwell-time, especially for Mita Prioritas companies. Importers under this category have their taxes and duties deferred and are not required to submit the BC 1.1. in the PIB submission.
- Mita importers do not have these benefits, but they are waived from submitting hard copies to Customs after removing the container from the port. For dwell-time purposes, Mita importers have the same treatment as green channel importers.
- On the downstream stage, after obtaining Customs clearance, the FF arranges for transportation of the containers and pays the port handling and storage fees.
- The FF obtains the final invoice (SP2) from the terminal (JICT) and has about eight hours to pay and leave the premises before the bill expires. Since most banks do not operate 24/7, most of the payments occur in the mornings, yet adding another source of delay to the process.
- After the removal of the container from the port, the importers, except Mita and Mita Prioritas, have 3 days to submit hardcopies of their import declaration and supporting documentation to the archives of Customs in the port.

Contrary to widespread perceptions of poor performance of Customs and abuses of port facilities by importers, a recent study from the World Bank in collaboration with the Institut Teknologi Bandung (ITB), shows that the main cause of the delay is the pre-clearance stage, accounting for 58 percent of DT (Figure 4.2). Although many sources of delay can be seen throughout the import process, focusing on the efficiency gains on the upstream component could highly impact the overall dwell-time average of Tanjung Priok. The Customs clearance average time is already very competitive by international standards, accounting for approximately 1 day. On the downstream component, a faster removal of the containers would require larger investments in infrastructure to improve road connections and probably a deeper transformation of the trucking industry.

Figure 4.2   Dwell-time components
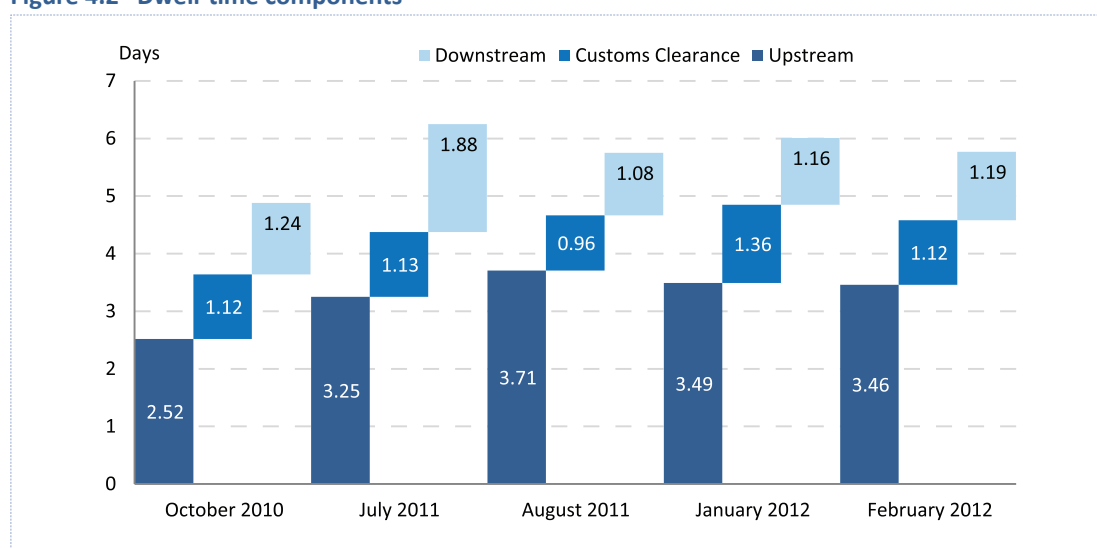
Source: Jakarta International Container Terminal (JICT) and DG Customs

4.3   Analysis and Discussion

Understanding the reasons behind the large number on days in upstream processes would bring the highest returns to the efforts on reducing dwell-time. In consultation with private sector[8], Government agencies[9] and academia[10], the World Bank came across some explanations for the delays on the upstream component:

---

[8] Terminal operators, trucking companies, freight forwarders, banks, customs brokers, importers and shipping lines.
[9] DG Customs, Menko, Ministry of Trade, Ministry of Transport, Cabinet Secretary and Bappenas.
[10] Mostly Institut Teknologi Bandung (ITB) and Institut Teknologi Sepuluh Nopember of Surabaya (ITS).

1. 24/7 is not working

- A large percentage of the vessels arrive on Saturday and Sunday, averaging 38% of the total of containers that arrive in one week (Monday through Sunday).

- Most of the freight forwarders, shipping line companies and banks do not work over weekends or after business hours, pushing the submission of the import declaration (PIB) until the following Monday, delaying the start of the clearance process. Thus, while the number of container increases, the number of submissions for the customs clearance stage decreases (Figure 4.3).

- Customs services are only available on request during weekends or after business hours, thus adding an extra step if the importer wants to clear its good during the weekend.

Figure 4.3 Average percentage of container arriving in Tanjung Priok vs. Average of Import declaration submissions
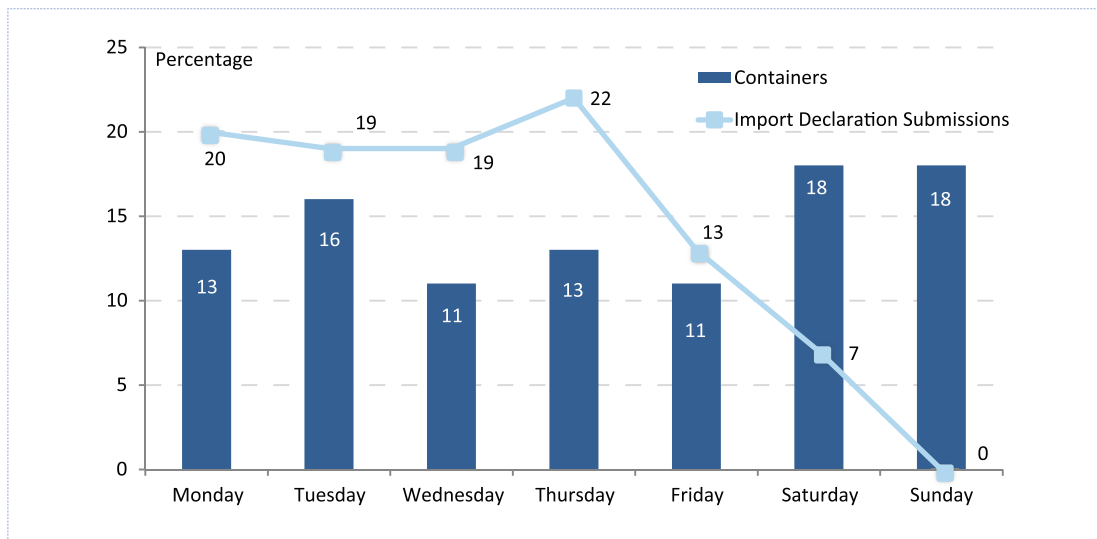
Source: Jakarta International Container Terminal (JICT) and DG Customs, May 2012

2. Delay on the submission of the import declaration

- There is a significant delay on the submission of the manifest to Customs from vessels coming from transhipment in Singapore or Malaysia. These routes sometimes have very few hours to consolidate the manifest, thus this information is delivered only a few hours before the vessel docks in Tanjung Priok and sometimes even after the vessel has already docked. The manifest information (BC1.1.) is needed to submit the PIB, thus the delay on obtaining the BC 1.1. impacts the time at which the customs clearance process starts.

- The priority risk channel (i.e. MITA Prioritas) has a relative short dwell (average of 4 days) but they only account for 16% of the containers and consist of a limited group of 105 importers. Importers on this risk channel are allowed deferred payments for customs duties and taxes, and they do not need to submit the Manifest number in the import declaration,

thus the submission of the import declaration occurs earlier than in other channels. The number of importers in this group has not changed in recent years, so an effort to increase its members or adopt more flexible policies regarding the BC1.1. information and introducing other payment options would increase the efficiency gains in dwell-time.

3. The Indonesian National Single Window (INSW) is not yet an optimal one-stop services facility for import clearance

- The INSW is a limited space for notifications and status information from each institution. Customs clearance and other border agencies' document requirements function in separate systems and are not integrated into a seamless process. On well-functioning single windows, users submit the information required by several agencies in a single entry, with a single sign-on, including payments. This system reduces physical interactions and paper-based transactions.

- Payment processes need to be done separately for all Government Agencies and port institutions, including payment of import duties, taxes, agencies' fees, terminal operator charges and others.

- The Quarantine Agency does not have access to the information on the arrival of the vessel. An estimate of 15% of total import containers requires quarantine documentation and approvals. Some imports also require entry permits and unloading permits, so in the absence of pre-arrival information, the work performed by the Quarantine agency relies heavily on the importer.

Despite the increase of average DT over the last year, Pelindo II, the container terminal operators and the Government have made some efforts to revert the situation including:

- Abolishment of cash payments on container terminal premises and introduction of ATM transactions. Although not yet optimal, reducing cash transactions is a first step on reducing delays on the downstream component.

- Shifting the day of exchange rate publication from Monday to Thursday or Friday. This shift would allow the importers to submit the PIB before the weekend with the most updated information. In the past, the exchange rate would be published on Monday which would yet give another reason to delay the submission of the import declaration.

- The introduction of i-care system (integrated cargo release) was recently launched in Tanjung Priok to integrate all services on the downstream component. The system tries to eliminate the face-to-face interactions between the drivers of the trucks and the customs officials at the gate. The trucking company will use an e-card for passing through the automatic gate, and customs will print such an e-ticket for tacking the containers out/in the port. Services include e-Delivery Order, e-billing for cargo stay at the port, ordering the truck online, and the e-ticket for entrance and exit of the port. The trial has been implemented in TPK Koja since November 2012 and it is also integrated with the INSW, and would mostly impact the downstream component.

- Although not yet launched, the Government is setting up an Integrated Physical Inspection Facility (TPFT) which will allow Customs, Quarantine and BPOM to have inspections at the same time, reducing the movement of containers and allowing for faster physical inspection times on the yellow and red channels. The TPFT is being developed in conjunction with Pelindo II and all the Government agencies and it is supposed to be launched in the first quarter of 2013. This initiative would help reduce the average dwell-time of containers falling into the yellow and red channels.

4.4   How to Reduce DT ?

Since the beginning of the study in November 2010, the World Bank has attended several rounds of discussions with Customs, Pelindo II, academia, container terminals, association of shippers, association of importers, banks and other Government agencies based in the port. The discussion has even reached the Secretary of the Cabinet, the Ministry of Finance, Ministry of Transportation and Ministry of Trade. Some of the conclusions reached to reduce the upstream component of dwell-time are as follows:

1. Consider to increase the number of importers on the MITA Priority lane

An assessment by DG Customs on the options to increase numbers of MITA Priority importers is an important step to facilitate eligible importers to access the channel. Given the strong prospect for Indonesian manufacturers to join the regional production network, discussing with key stakeholders on establishing clear, reasonable, and transparent criteria for importers to join MITA Priority channel will help improve competitiveness of Indonesian manufacturers.

2. Allow for more parallel processes to take place during the Customs Clearance component

More flexible procedures that can happen in parallel, instead of sequencing the steps, could potentially help on reducing times for the preclearance component. For example, allowing the payment to happen before the clearance (SPPB) but after the submission of the PIB. Currently, the importer has to pay all duties and taxes to Customs before starting the clearance process. Another parallel process that would help reducing dwell-time, would allow for the input of the BC1.1. information before the SPPB but after the submission of the PIB. This information is needed to match the contents of the ship with the importer claim of the containers. Parallel processes that would let the clearance process start while the matching of the information on the containers would also help on the reduction of steps of the upstream component.

3. Provide incentives for early submission of the import declaration

- DG Customs and terminal operator need to socialize the early submission of import declarations to importers and freight forwarders. A good communication campaign aligned with incentives for early submission might encourage importers to start the pre-clearance process.

- Incentives for early submission of the import declaration could include tax discounts, duties discounts, as well as reduced tariffs in the container terminal fees. Such incentives might encourage freight forwarders and importers to compensate for the cost of operating over Saturday and Sunday.

- Perform evaluation and profiling of freight forwarders by DG Customs to identify and penalize those companies that delay the submission of the import declaration.
- Improve 24/7 services by introducing service-level agreements between the terminal operator and the shipping lines, to encourage operations over weekends. Government agencies could reach a similar agreement.

4.   Improve INSW and introduce one-stop services

- Improve the INSW or, as an interim step, develop a one-stop services space where various institutions have access to all information, including Quarantine, Customs and BPOM.
- Implement a single payment for all import process, including all Government agencies fees, taxes and import duties, as well as all terminal charges.

5. Preliminary Assessment of Implementation 24/7 Program In Tanjung Priok Port

5.1 Background

The objective of introducing 24/7 maritime port services ("the 24/7") is to reduce congestion at maritime ports by extending the number of operating hours for handling sea cargo. In Indonesia, the 24/7 has been introduced since mid-January 2010. Various authorities and border control agencies accompanied with logistics service providers at ports have made their services available beyond their conventional business hours since the launch of the 24/7.

The 24/7 operations are primarily use to reduce congestions at Port by balancing work load during the week or during peak time to off-peak time. Utilizing 24 hours a day and 7 days per week gives extra time for documents processing and clearance process, which lead to speed-up overall processes and prevent congestion at the port.

However, from the World Bank preliminary assessment and interview to freight forwarders, the impact of 24/7 has been rather limited. They claimed it is due to lack of coordination among the port community, insufficient equipment for working at night time and stagnant "night time" demand growth among users.

The Government of Indonesia has been supporting the concept of monitoring to evaluate the implementation status of the 24/7 and has shown interest to take the necessary actions to enhance the effectiveness of the 24/7 together with the port community.

5.2 Evaluation of 24/7 Operations at Tanjung Priok Port

This section presents a summary of a preliminary assessment carried out by the World Bank in Jakarta aimed at analyzing and evaluating the existing condition of 24/7 operations at Tanjung Priok port. There are two main indicators to evaluate the 24/7 operations, these indicators are:

- Operations of 24 hours per day. This evaluation aims at operations beyond normal working office hours (8.00 – 18.00). It is more focussed on hourly operations per day.

- Operations of 7 days per week. This evaluation aims at operations during the weekend (Saturday and Sunday).

This summary also analyzes the two main actors of 24/7 operations at the port of Tanjung Priok, namely 1) border crossing agencies (Customs, Quarantine and BPOM) and 2) terminal operators (Jakarta International Container Terminal or JICT).

5.3   Summary of Findings

Currently, Customs is operating 24/7 but not effectively, while Quarantine and BPOM is not operating 24/7. The analysis showed that operations of 7 days per week deem to be more critical than operations of 24 hours per day. This is shown from data analysis that most containers arrive during the weekend, while there are little activities from border agencies for the customs clearance process during the weekend. This should be the main focus of the Government of Indonesia in order to improve the operations of 24/7 at the port of Tanjung Priok. Figure 5.1 explains the importance of 7 days per week operations.

Figure 5.1   Average Terminal Gate-out vs. Submission of Import Declaration and Customs Clearance (SPPB Release)
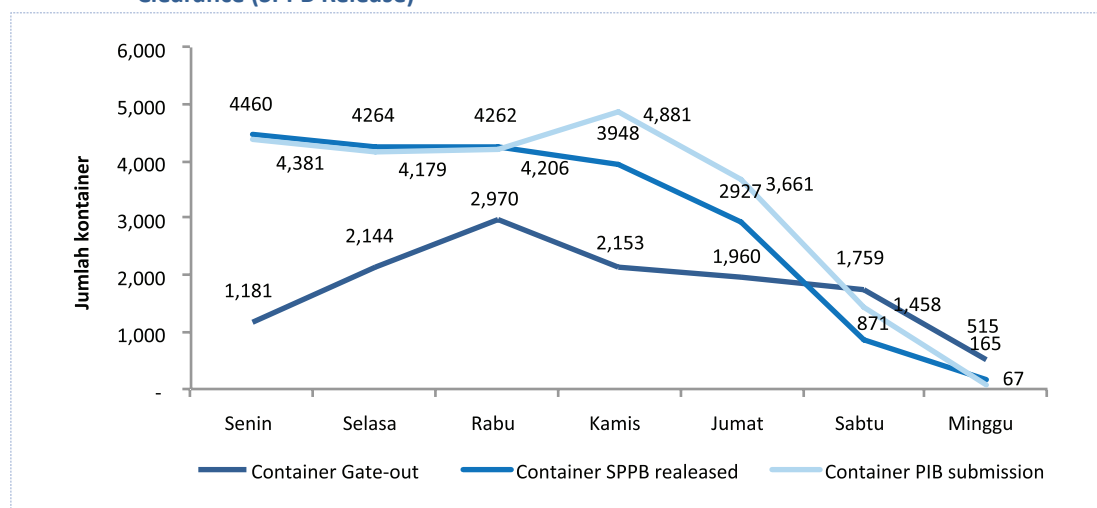
Sources: Customs and JICT
Note: Figure 5.1 explains the daily average of containers processed for customs clearance and containers going out of the terminal from Monday to Sunday. The data indicate less activities in the weekends comparing to working days during the week.

The analyzed data suggest that there are no major improvements in 24/7 operations between October 2010 and March 2012. The 24/7 operations at Tanjung Priok port have been limited to terminal operations of loading and unloading containers and activities such as gate-out containers. However, administrative processes such as customs clearance and payments of duty and payments to the terminal operator have been limited to normal working hours only.

About 36% of total containers arrived during weekend while only 5.5% of the number of documents was processed for customs clearance during the weekend (Figure 5.2). This pattern of incoming containers arriving over the weekend (Saturday – Sunday) without being processed is creating an imbalance between in-bound and cleared containers adding to the dwell time of containers in the port. Implementation of a system of 24/7 operations would enable the processing of in-bound containers arriving during the weekend, reducing the dwell time at the port of Tanjung Priok.

Figure 5.2   In-Bound Container vs. SPPB Release Container - Total for March 2012
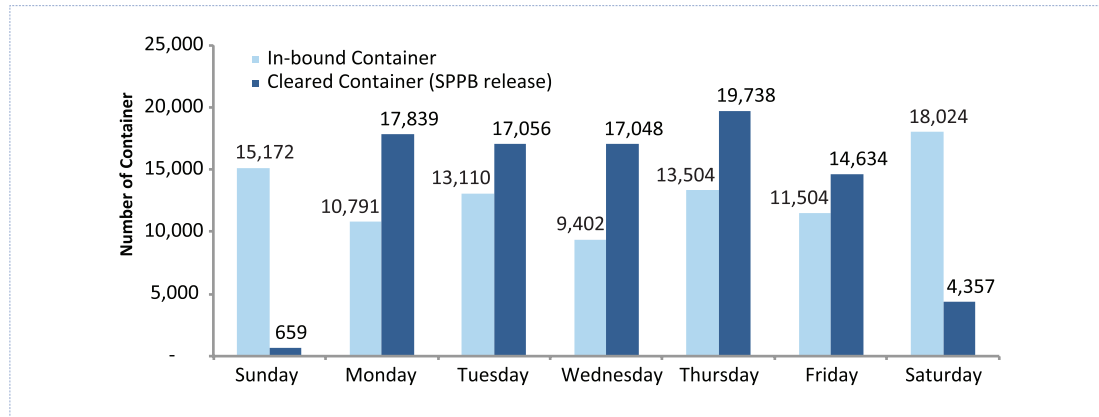

Sources: Customs and JICT
Note: Figure 5.2 explains the unbalance between the numbers of in-bound containers versus customs cleared containers from Monday to Sunday. The data indicate that the peak of in-bound containers is Saturday and Sunday, while only a small amount of containers had been cleared during the weekend by Customs.

Private sector entities such as banks and shipping line offices are not implementing 24/7 program.

- Banks that only accept payments of duty and payment to terminal operator have been limited to normal working hours (3.00 PM and half day on Saturday).

- Shipping lines are also not open for 24/7 and do not have electronic payment facilities for the delivery order process (DO). This will affect the transaction of payment for releasing the DO to the consignees as the payment is limited to normal working hours.

- Quick interviews of freight forwarders revealed that freight forwarders only operate at normal working hours (Monday to Friday) due to high costs of operation. Trucking companies will charge extra fee for delivery beyond 5 PM. However, most trucks are coming in or out of the port in Tanjung Priok at night time in order to reduce traffic congestion in the city (see Figure 5.4).

- Quick interviews of importers revealed that importers do not feel any benefit of using 24/7 and limit operations during the weekend due to high costs involved; limited warehouse and storage are also reasons for low demand from importers to utilize 24/7 at Tanjung Priok port. This can also be seen from the data showing a drop in the import declaration submission (PIB) to low level during the weekend (Figure 5.1).

**Figure 5.3   Average container gate-out for February 2012**
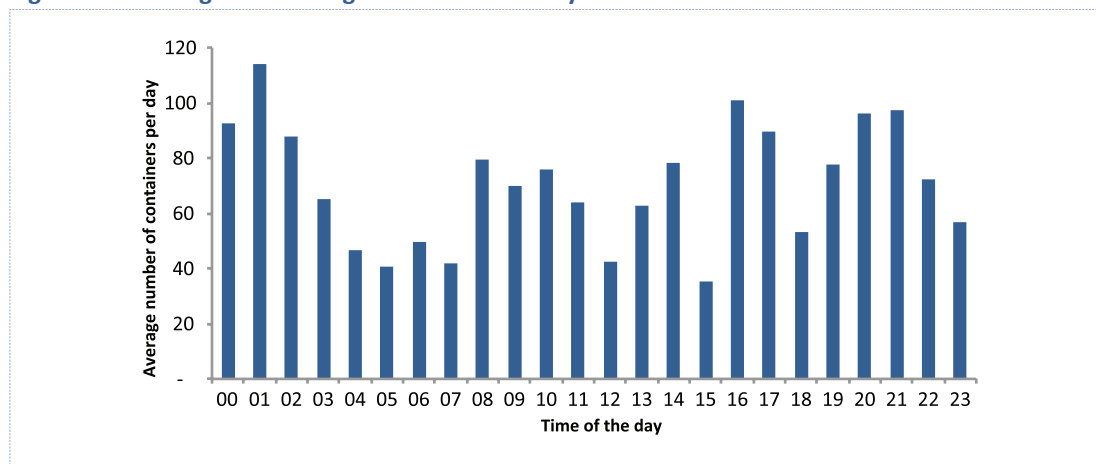
Sources: JICT (February 2012)
Note: Figure 5.3 explains the average number of containers gate-out from JICT terminal. The data indicate that the removal of containers is utilizing 24 hours operations to prevent traffic congestion in the city.

There have been limited operations of 24/7 for Government Agencies.

- Customs is operating for 24 hours per day but not in an effective way especially in quarantine processing. Only 8% of the containers get customs clearance after office hours (18.00 – 07.00). Figure 5.4 shows the average hourly customs clearance.

- Customs cited insufficient equipment and staff limitations to perform physical checks at night (night time physical inspection only by request). Based on interviews with freight forwarders, customs officers working at night shift are not able to make final decisions. Thus, if the importers require a final decision, they must wait until next morning.

- When the survey was conducted, the quarantine services and BPOM were not open on Saturday and Sunday. Both agencies were also only open during normal working time, not during 24 hours.

- Coordination among the government agencies is still a challenge. Information technology sharing among them can efficiently schedule night shift for their staff and resources can be allocated according to the needs and requirements.

- Terminal operator carries out loading and unloading of containers 24 hours per day (Figure 5.5, shows night operation of loading and unloading activities at JICT terminal). However, documents and payment are not processed 24 hours per day. Although payment can be done electronically through the Bank Mandiri ATM, hard-copy invoices still are needed.

Figure 5.4   Average number of container cleared by customs for March 2012 (SPPB)
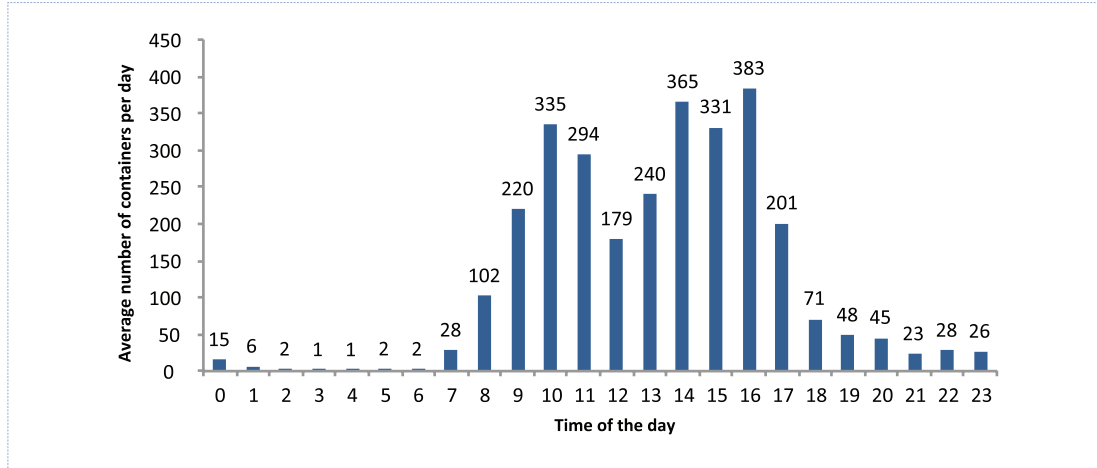
Sources: Customs 2012

Note: Figure 5.4 explains the daily average number of containers cleared by Customs. The data indicate that there are small numbers of containers (8%) cleared beyond normal working time.

Figure 5.5 24 hours operations of loading and unloading Containers at JICT terminal
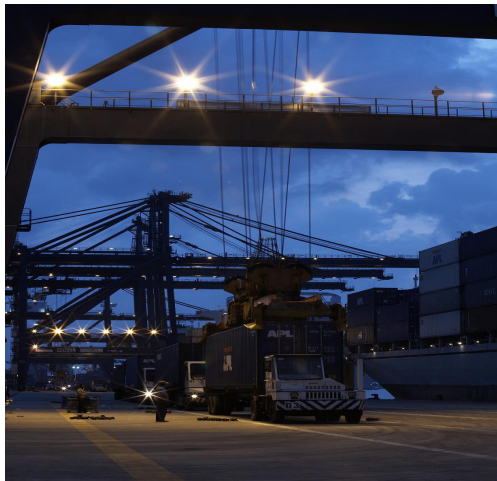
Source: JICT

What has the government done so far?

Currently, the Indonesia Port Corporation (IPC) is working on the development of an i-care system. The i-care and auto gate system, which connect bank – terminal operator – freight forwarder are expected to give a better solution to alleviate the problem of the 24/7 program. I-care and auto gate system have the ability to process online payment using internet. Cash payments on container terminal premises have been abolished and replaced with ATM transactions.

Currently, the system has been in trial/test phase on the KOJA terminal, with one MITA importer, a shipping line and a freight forwarder. The challenge is to implement the new system effectively and to include all other relevant users and stakeholders including terminals operators, freight forwarders, importers, shipping liners and the Government agencies.

What is still missing?

Many government agencies and private sector companies argued that operating 24/7 is too costly and not many importers demand the late night services or weekend services. The government should consider using incentives to attract more demand from the users for the implementation of 24/7. For example, the incentives can be a terminal handling charge discount given to importers or freight forwarders that use 24/7 services.

At the same time, the Government needs to provide consistent 24/7 operations for all agencies and coordination among government agencies and stakeholders, which still are missing. This can be done not only by providing extra staff for night shift but also sharing information by means of using better Information Technology for efficient staff scheduling to reduce costs of 24/7 operations.

6. Development of Dry Ports in Indonesia - Case Study of Cikarang Dry Port

6.1   Background

Cikarang Dry Port is located in the heart of the largest manufacturing zone of Indonesia along the Bekasi-Cikampek corridor, which lies east of Greater Jakarta. Cikarang Dry Port is owned by Jababeka, a private company and land developer of industrial areas in Cikarang. Cikarang Dry Port is situated 50 km from Tanjung Priok Port and is accessible via highway and a railway system. Jababeka Industrial Estate hosts over 2,500 manufacturing companies, and, together with neighbouring industrial estates along the Bekasi-Cikampek toll road corridor, it contributes up to 62% to Tanjung Prioks throughput (Figure 6.1).

Figure 6.1   Cikarang Dry Port Concepts as Spoke of Tanjung Priok
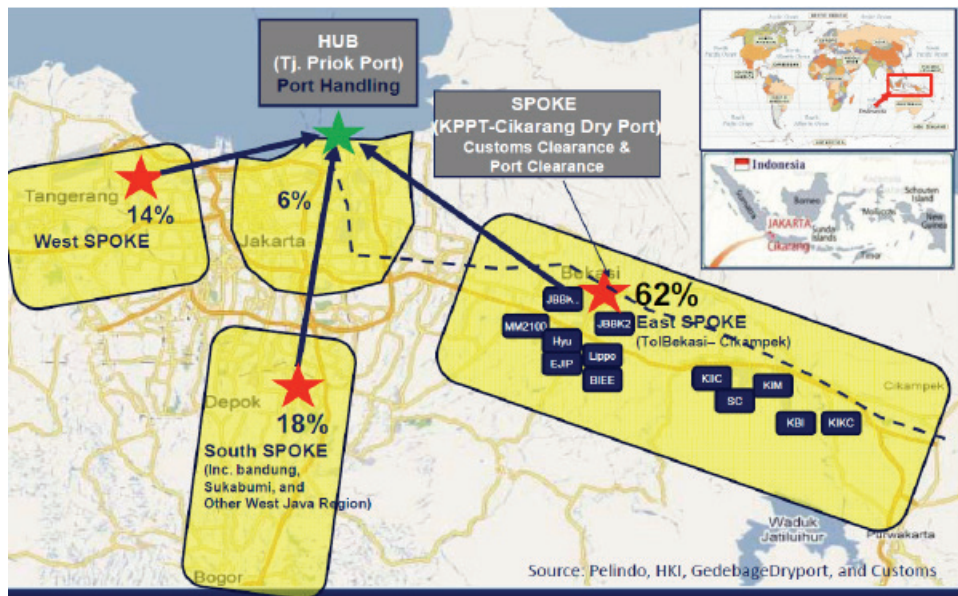
Source: Cikarang Dry Port (2011)

In the past few years Tanjung Priok Port has been growing rapidly (Figure 6.2). One of the main drivers for the development of Cikarang Dry Port was to reduce delay time and extra costs associated with the congestion at Tanjung Priok Port. The idea behind development of Cikarang Dry Port (CDP) was to have integrated logistics facilities and services that handle import and export as well as domesti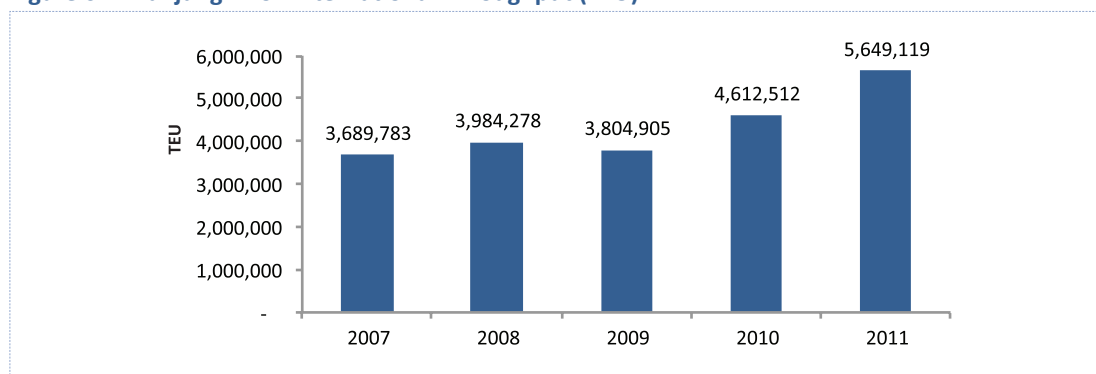c shipments to support Tanjung Priok Port. Thus, Cikarang Dry Port would serve as an extension of Tanjung Priok Port, or hub and spoke (Figure 6.1).

Figure 6.2   Tanjung Priok International Throughput (TEU)

Source: Indonesia Port Corporation, IPC (2012)

Cikarang Dry Port started its operations in 2010 allowing goods to be shipped directly to Cikarang Dry Port. Development of Cikarang Dry Port has not been smooth; it took more than 5 years until it became fully operational. Mainly because Cikarang Dry Port is a new concept, systems for regulations and licenses needed to be established by the government agencies from scratch. For smooth operation some of regulations that have been approved by the government agencies are listed below:

- Land Usage Permit from the Local Government (District of Bekasi and the Governor of West Java).

- Inland Container Port Location (2004), Construction (2006) and subsequently Operation (2009) permits from the Ministry of Transportation.

- Customs approval in implementation of Customs Advanced Tracking System in conjunction with the Temporary Storage (Customs Bonded - TPS) status granted to the Inland Container Port (2010).

- Ministry Of Finance decree KepMen Keu No. 232/ Desember 2009 in establishing Integrated Customs Service Area, and subsequently granted the status to the inland port (2010)[11].

- UNCTAD registered Cikarang Dry Port as International Sea Port under ID-JBK location code (2010).

---

[11] Integrated Customs Service Area (Kawasan Pelayanan Pabean Terpadu – KPPT) never existed before. KPPT is a special area inside an industrial area which integrates Customs Temporary Storage Area (TPS), Customs Bonded Storage Area (TPB), Export Goods Consolidation Area, and other supporting facilities.

6.2   The Current State of Cikarang Dry Port

In 2012, the Cikarang Dry Port development has been supported and endorsed by the govern-ment in such a way that the action plan for the implementation of SISLOGNAS mentions the need for optimization and increase of efficiency of Cikarang Dry Port. However, at the end of 2012, the throughput was still very low; only eight companies had applied for using dry ports with total throughput of about 3,500 TEU from January 2012 to August 2012. Table 6.1 illus-trates briefly the current situation of Cikarang Dry Port.

Table 6.1   Current State of Cikarang Dry Port (as of August 2012)

Criteria	Current Conditions
Throughput	3,500 TEU (January – August 2012)
Shipping Line	11 shipping lines (Maersk Line group, APL, MOL, NYK, CMA-CGM, MSC, OCCL)
Empty Container Depot	2 companies
Truck Depot	1 company (Iron Bird)
Transportation mode	Truck and railways (operating domestic shipment to Sura-baya since July 2012)
Government Agencies	• Office and physical inspection facility for customs • Office for quarantine; physical inspection facility for quarantine (under development); quarantine information systems is online • Office for BPOM (under development) • Office for Port Authority
Operations time	24/7
Lead time of container arrive at CDP	Max 24 hours after container arrive in Tanjung Priok
Number of users	8 companies

Source: Compiled by the World Bank staff based on information from Cikarang Dry Port

Recently, the World Bank and Bappenas have commissioned a study to evaluate the actual situation of Cikarang Dry Port and to find answers to the main question of why Cikarang Dry Port was not working optimally as it was planned. The study also looks at the comparison be-tween Tanjung Priok Port and Cikarang Dry Port (Table 6.2 Key comparison and Table 6.3 Costs comparison breakdown).

Table 6.2   Key Comparisons Tanjung Priok Port and Cikarang Dry Port

	Tanjung Priok Port	**Cikarang Dry Port**
Dwell time	Congestion in Tanjung Priok causes dwell time of an average of 6 days.	Not congested. Service level agreement is that the container after arrival in Tanjung Priok will be available in Cikarang Dry Port. Average dwell time is 3 days.
Trucking Costs	Depending on the location, customers, located in Cikarang area, situated away from the trucking pool and container depot in Marunda and Cilincing, would pay a higher price.	Depending on the location, customers, located in Cikarang area would benefit from short distance to Cikarang Dry Port and also short distance to empty container depot in Cikarang Dry Port. However, there will be only one single trucking company serving Tanjung Priok - Cikarang Dry Port (no option to choose other trucking company). Price control by Cikarang Dry Port.
Traceability	Not available.	Using GPS for tracing container movement from Tanjung Priok to Cikarang Dry Port. Monitoring by Customs and CDP.
Additional charges	May incur costs for 'overbrengen'. Customers reported that bribery still exists to some extent	No additional costs
Handling fee	One-time handing fee at terminal	Double-handling fee at terminal in Tanjung Priok and at CDP

Source: Compiled by the World Bank staff based on information from Cikarang Dry Port

Table 6.3   Estimated cost comparison for using Cikarang Dry Port and Tanjung Priok Port[12] (Rp)

COST OF IMPORTING A CONTAINER FROM TANJUNG PRIOK TO FACTORY IN CIKARANG	**20'Full Container load PRIOK COST**	**20'Full Container load CDP COST**
Bill of loading fee to shipping lines	89,000	89,000
Terminal handling charges	845,500	845,500
Lift-off Tanjung Priok CV	375,000	-
Lift-on/Lift-off CDP	-	375,000
Storage (in TPP and CDP)*	-	-
Import customs (414,000 IDR/TEU)	414,00	414,000

---

[12] Bappenas (Indonesia Planning Agency) and the World Bank.
*Assume avg dwell time 6 days, storage time avg 1.16 days after SPPB (No storage fee)
**Cost components include bonded trucking and physical inspection fee
***Cost componnent: Trucking, Gate out TPP, PNBP x2, LO/LO terminal tg. Priok, Admin terminal tg. Priok, Repo MT container
****Assume one time container shifting (conservative). Most likely container shifting at TPP will be higher because of avg YOR above 90%.
*****Estimated avg overbrengen cost in TPP

Inspection Process (red lane)**	1,962,000	1,015,000
Escort fee (by police)	200,000	-
Tanjung Priok to Cikarang Dry Port***	-	1,410,000
Container shifting ****	319,600	370,000
Gate out TPP	200,000	-
Trucking from discharging Port toFactory	1,500,000	600,000
Warehouse stripping costs	1,294,000	1,294,000
Over Brengen related cost *****	3,500,000	-

RED LANE - IDR	**Rp 7,199,100**	**Rp 6,412,500**
GREEN LANE - IDR	**Rp 5,237,100**	**Rp 5,397,500**

OBX RED LANE - IDR	**Rp 10,699,100**	**Rp 6,412,500**
OBX GREEN LANE - IDR	**Rp 8,737,100**	**Rp 5,397,500**

Source: BAPPENAS and World Bank

Some of the main findings from this study are list below.

- Cost saving for using Cikarang Dry Port is mostly significant for importers that use the customs red channel. For the green channel, the costs are about the same as Tanjung Priok (Table 6.1 for cost comparison).

- Cikarang Dry Port can prevent extra costs incurred from 'overbrengen'[13]. About 10–15% of containers suffer from extra costs because of 'overbrengen'.

- Most of the importers located in Cikarang – Bekasi area have customs channel of 'MITA prioritas' (priority channel). This explains that they do not need to use Cikarang Dry Port since most of them already have their own customs bonded area.

- Lack of rail infrastructure that connect the terminal operator in the port to Cikarang Dry Port. Rail services have started since July 2012, but there still is a missing rail link in Tanjung Priok resulting in the need to transfer the container to the truck.

- Direct competition with existing freight forwarders and road transport companies. Freight forwarder operating trucks to/from Tanjung Priok and the Cikarang and Bekasi area would not recommend using Cikarang Dry Port to their customers as they want to transport the containers themselves.

- There is a relatively limited number of shipping liners operating in Cikarang Dry Port. The study found that the Cikarang Dry port will need to increase the number of shipping liners in order to create a competitive rate.

---

[13] To transfer container from terminal operator yard to another place in the port area when the terminal operator container yard is already full.

6.3   Impact of Dwell Time in Tanjung Priok

One of the options that can be reviewed further in reducing dwell time at Tanjung Priok is to perform optimization of Cikarang Dry Port. Based on analysis, the usage of CDP can reduce the dwell time in Tanjung Priok up to 3 days (52% reduction)[14]. There is a great potential to utilize CDP as part of the solution to reduce dwell time in Tanjung Priok. Assuming that the import throughput at Tanjung Priok amounts 70.000 TEU / month and the dwell time at Tanjung Priok is 6.2 days, the estimated reduction in dwell time due to the container being transported to the CDP is as depicted in Figure 6.3.

Figure 6.3   Impact of Dwell Time in Tanjung Priok
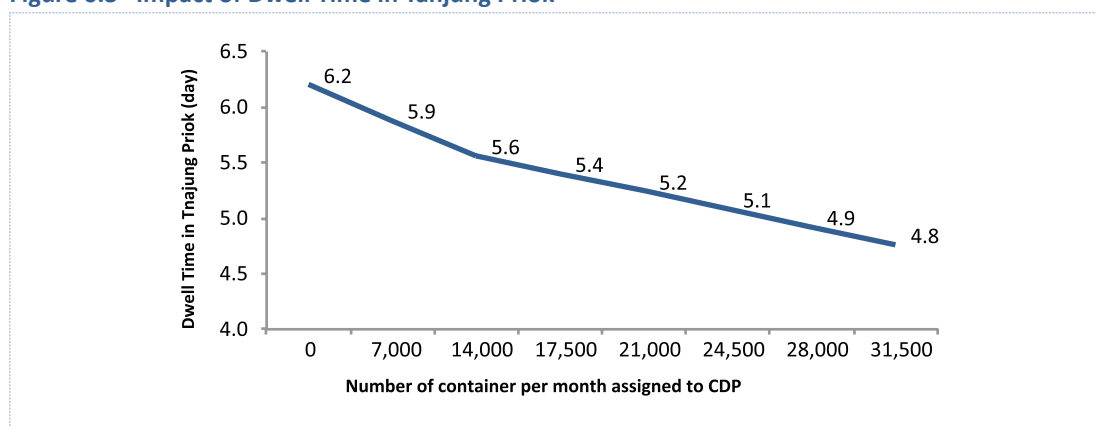
Source: Estimated by World Bank staff

Figure 6.3 shows that the more Cikarang Dry Port will be utilized, the more reduction of dwell time in Tanjung Priok can be achieved. However, as mentioned previously, still limited utilization is being made of Cikarang Dry Port. This is partly because of the fact that there is no regulation and mechanism allowing 'overbrengen' to outside port of Tanjung Priok if it is not indicated on the bill of lading. As Cikarang Dry Port is relatively new, it will need some time to mature, resolve some of the issues previously mentioned, and convince the market that using Cikarang Dry Port can have the benefits of shorter dwell time and reducing costs.

---

[14] Cikarang Dry Port 2012

7. Capacity Development in Logistics in Indonesia

7.1   Background

The global industry trend shows that the role of supply chain management and logistics management is increasingly more important in maintaining the companies' sustainability. The business of logistics and supply chain management has been growing rapidly after the financial crisis of the 1990's, which, at the same time, has been accompanied by an increasing demand for qualified professionals in supply chain management and logistics management. The growth, however, has not been coupled with sufficient growth in professional human resources. In general, human resources currently working in logistics and supply chain "accidentally" enter the field to fill the company's vacancy rather than build their competency from the beginning. The profession in logistics and supply chain has yet gained popularity in the world of education and fresh graduates.

The shortage of professional logistics managers and experts in Indonesia is both in number and in quality; meanwhile, the need for logistics experts in Indonesia grows at least equal to the national economic growth rate. Some contributing factors are the national policy that allows multinational companies operating in Indonesia to bring logistics professionals from their home country or to recruit logistics professionals on the international labour market even for operational logistics jobs. This condition also encouraged the Ministry of National Education Policy (until 22nd March 2013) to acknowledge logistics as an integrated academic discipline as both science and professional expertise. Most of the Indonesian business community is still not fully aware of the fact that in the globalization era, they need more and more integrated qualified logistics expertise.

It is a fact that scarcity of logistics experts, specialists and professionals at the managerial and operational levels in both the private and public sectors is prevalent in Indonesia. Further, the existing human resources have poor competencies. Thus, in terms of human resources capacity in logistics, the challenges are: to increase logistics workforce and to improve the quality and competencies of existing resources. Training and education institutions play an important role in addressing these issues.

Another problem is the wide gap between the subjects offered at the existing educational and training programs in higher education institutions with the needs from the labour market. The existing education and training is provided on ad hoc basis by logistics companies and is still not standardized. As a result, capacity building of human resources in logistics remains unsatisfactory and their competency level low. In order to support the current growth of businesses and economies, education and training institutions are required to produce graduates with basic knowledge directly needed by the corresponding industries.

In Indonesia, logistics related curricula are commonly taught as part of Industrial Engineering or Economics study programs rather than a separate discipline. Moreover, education providers have yet to recognize that supply chain and logistics management are programs of increasing popular interest. At present, Logistics Management and Supply Chain Management (SCM) as fields of study with Bachelor (S1) and/or Master (S2) degrees are offered by Trisakti College of Transport Management, University of Gajah Mada, University of Indonesia, Technological Institute of Bandung, Technological Institute of Sepuluh Nopember, University of Widyatama, and University of Andalas. Their curricula are adoptive to the dynamics of logistics and SCM development.

In other countries, study programs of Supply Chain Management with a degree or Professional Certificate is offered widely. The absence of such formal certified program in Indonesia is because the authorized profession certification body for Supply Chain & Logistics Management has not been established. Thus far, offered programs are mostly limited to periodic training, seminars and workshops by PPM, INFA Institute, Asperindo, ALI and KADIN, in collaboration with some universities in Indonesia.

Thus, the capacity building of logistics human resources is very critical to the development of logistics related business in Indonesia. It is expected that demand for logistic professionals will increase significantly in the future. Although no survey has been conducted, all parties agree that, unless prepared early, Indonesian human resources capacity may become an obstacle to developing an efficient logistics system.

7.2   Government Policy, Strategy and Program

SISLOGNAS has identified the development of human resources in logistics as one of the main drivers for improvement of the national logistics system in Indonesia, to reduce logistics costs, to make the country more competitive internationally, and to improve domestic connectivity. There is an increasing demand for qualified professionals as well as operators in transport, logistics and supply chain management. The adopted strategy is to develop international standard logistics competencies and to achieve the strategic goal, e.g. to make competent logistics professionals at operational, managerial and strategic level available on the Indonesian market, fulfilling the national demand of the national logistics system. This goal is actualized through the following programs and road map (Table 7.1):

Table 7.1 Roadmap and Action Plan

Short term I 2011-2015	Medium term II 2016-2020	Long term 2021-2025
Organized and implemented national logistics professional education and training system according to international standards	Most logistics workers in Indonesia hold international-standard national logistics certificates or hold certificates related to logistics from accredited institutions	All logistics workers in Indonesia hold international-standard national logistics certificates or hold certificates related to logistics from accredited institutions

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

1. Development of competencies for professionals in the field of logistics

- Logistics science, expertise and profession planning through recognizing and establishing logistics as a science and profession needed, organized and developed in a formal way in Indonesia, and preparing classifications and levels of logistics competencies and profession, and planning an educational and training system for national logistics profession.

- Organizing professional education and training in logistics through providing nationally certified education and training for government staff and logistics practitioners and service providers.

2   Improved role of education and training institutions

- Development of professional education and training institutions in logistics through establishing academic and applied logistics study programs, development of an accreditation and certification agency for the logistics profession, establishment of logistics professional training institutions, improved support of the government for developing such education and training institutions, and development and improvement of cooperation networks between public and private education and training institutions and cooperation with foreign partners.

- Development of international standard education and training facilities through development of international standard academic education facilities and development of international standard applied education facilities.

7.3   Logistics Education System and Profession

The SISLOGNAS team has adopted a strategy to provide reliable professional logistics human resources at the operational, managerial and strategic levels to meet the national needs. For this purpose, the team found it necessary to classify and grade the logistics profession and establish logistics education institutions at academic, vocational and professional levels. In general, the goal to be secured is the availability of competent logistics professionals. To achieve this, it is necessary to establish classification and structure of the logistics profession and to establish logistics education institutions in academic, vocational and professional modes.
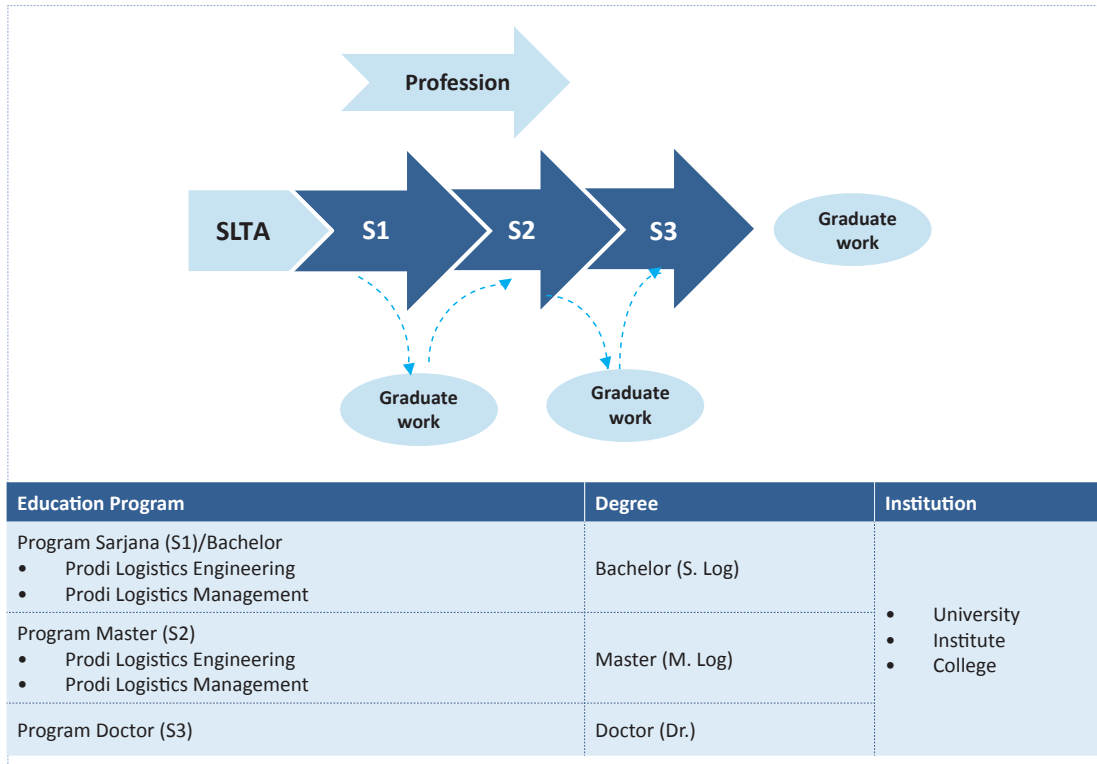
The framework for the establishment, classification and structure of the logistics professions has to take into account both existing relevant laws and regulations as well as professional educational references and standards. The relevant laws and regulations in this respect are (1) Higher Education Regulations No. 12/2012, (2) Presidential Regulation No. 8/2012: Framework of Indonesian National Qualification (Kerangka Kualifikasi Nasional Indonesia/KKNI), (3) Presidential Regulation No. 26/2012: Blueprint of National Logistics System (SISLOGNAS), and Letter of Recognition of the Minister of National Education No. March 2013. Some professional educational references and standards are: (1) Logistics Body of Knowledge, (2) Competence Standards of ELA, (3) Benchmarks of educational institutes such as Politechnic Hongkong, STC Rotterdam NL, etc. Based on those references, the national education system in general is depicted in Table 7.2, the academic logistics education is presented in Figure 7.1, and vocational education in Figure 7.2.

Table 7.2 National Educational Program

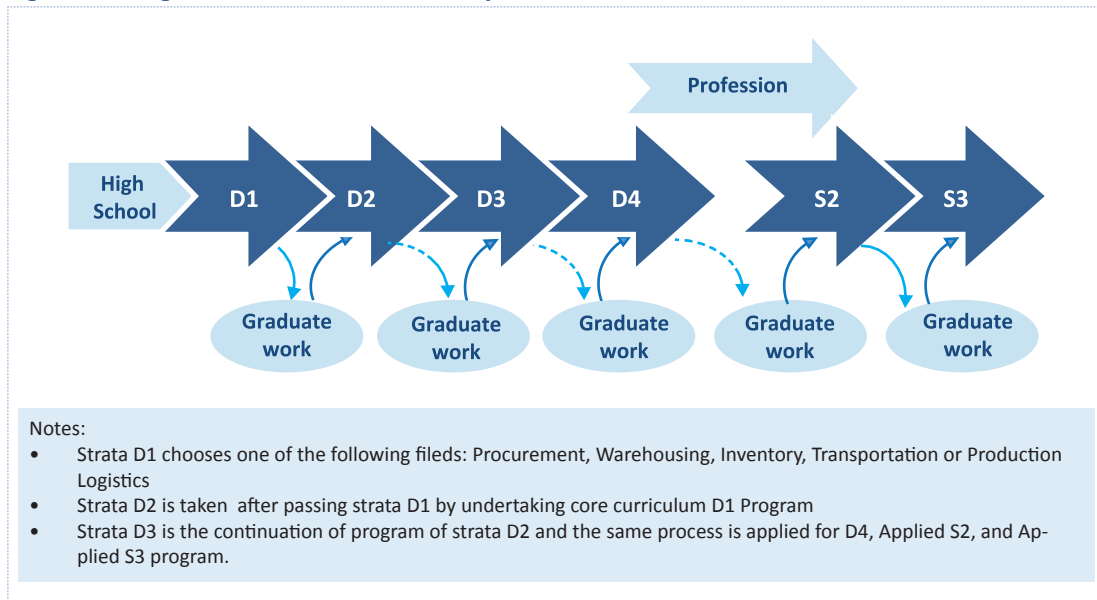| Type of Education	Educational program	Degree	Institution
Academic education	Bachelor program	Bachelor (S.)	University (4), Institute (3), College (1)
	Master program	Master (M.)	
	Doctor program	Doctor (Dr.	
Professional education	Professional program	Name of Profession	HE Institution Cooperate with related and professional insttution
	Specialist program	Name of Specialist	
Vocational education	Non Degree program	Operator	YHS (1) & SHS/SMK (2)
	Diploma Program		
	D1	Ahli Pratama	Community College, Academy, Politechnic, University (4), Institute (3), College (1)
	D2	Ahli Muda	
	D3	Ahli Madya	
	D4	Sarjana Sains Terapan (S.S.T)	Academy, Politechnic, University (4), Institute (3), College (1)
	Applied Master program	Master (M.)	University (4), Institute (3), College (1), Politechnic.
	Applied Doctor program	Doctor (Dr.)	

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

Figure 7.1   Logistics Academic Education System

Education Program	Degree	Institution
Program Sarjana (S1)/Bachelor • Prodi Logistics Engineering • Prodi Logistics Management	Bachelor (S. Log)	• University • Institute • College
Program Master (S2) • Prodi Logistics Engineering • Prodi Logistics Management	Master (M. Log)	
Program Doctor (S3)	Doctor (Dr.)	

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

Figure 7.2   Logistics Vocational Education System

Notes:
• Strata D1 chooses one of the following fileds: Procurement, Warehousing, Inventory, Transportation or Production Logistics
• Strata D2 is taken after passing strata D1 by undertaking core curriculum D1 Program
• Strata D3 is the continuation of program of strata D2 and the same process is applied for D4, Applied S2, and Applied S3 program.

Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

Related to logistics professional education, logistics related associations (such as ALI, ALFI and ORGANDA) cooperate with the National Agency for Professional Certification (BNSP) and other educational institutions to create a logistics profession accreditation agency and an assessor agency to educate and issue professional certificates. The SISLOGNAS team has used the principles of international standards for education and training in logistics management from the European Logistics Association (Figure 7.3) as a basis to formulate professional competencies as presented on Table 7.4 at the various levels of the National Qualification Framework.

Figure 7.3   ELA Competencies in Logistics at Three Management Level
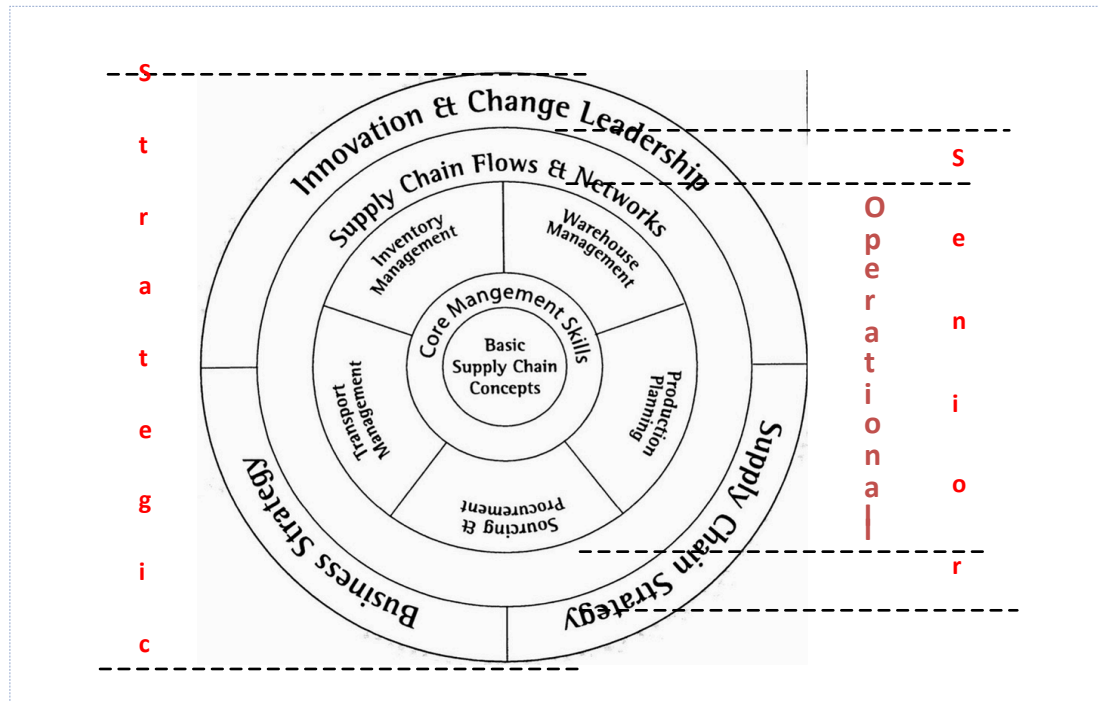
Source: Center for Logistics and Supply Chain Studies, Institut Teknologi Bandung (ITB)

The three levels of logistics management of ELA are operational/supervisory; senior; and strategic. The ELA operational level corresponds with the levels 1-6 of the National Qualification Framework; in fact the ELA operational level comes close to the KKNI levels 4-6 (supervisory, D1-D3) as the ELA levels refer basically to levels of management. The ELA senior level corresponds with the levels 7-8 (D4/S1, S2). The ELA strategic level with KKNI level 9 (S3).

Table 7.4   KKNI and ELA Classification of Competencies in Logistics

KKNI		ELA			
		Operational		Senior	Strategic
Profession	Level of Competence	Operator	Supervisor		
Operator	1	*YHS			
	2	*SHS			
	3	*D1			
Technician/ Analyst	4		*D2		
	5		*D3		
	6			*D4/S1	
Expert/ Specialists	7			*Sp	
	8				*S2
	9				*S3
Community College: Only for D1 &D2					

Source: CloCS Progress Report; Senator Nur Bahagia; January 2013.

7.4   Current Progress

The SISLOGNAS Team is currently cooperating with the private sector to provide training on introductory supply chain management to local government officials as they are also the stakeholders of the national logistics policies. Training of trainers programs are also being planned to prepare for the seed of logistics training by the local government educational communities.

In August 2012, Law No. 12/2012 on Higher Education was issued. This law puts heavy emphasize on the establishment of applied sciences programs in tertiary education level. Learning value of education is prioritized and the community college (with one to two years program) is among the specified higher learning institutions which establishment is to be encouraged particularly at local governments (regencies and municipalities) with specific potential and needs. The provisions of the Law provide for cooperation between local government, central government and the private sector. The SISLOGNAS team is currently working together with the private sector and the local government toward establishment of logistics community colleges.

The Asosiasi Logistik Indonesia (ALI) has been granted a certification license for the competencies of Transportation, Warehousing and Procurement in December 2012. ALI has become member of the European Logistics Association and intends to become the certifying authority for ELA certified training in logistics management. The Indonesian Logistics and Forwarders Association (ALFI) is in the certification process at the National Professional Certification Body (BNSP) for the competency of 'Maritime Transport Cargo Handling'.

In March 21-23, 2012, ORGANDA has organized a special pilot Eco-Driving Training Programme for Safety & Efficiency, which was delivered by Panteia/NEA in Indonesia in Bogor. The main objective was to transfer knowledge and experiences with regards to the training of professional bus and truck drivers to the Indonesian National Road Transport Operators Association. Three groups have been trained: one group of bus drivers; one group of truck drivers; one group of managers. The Eco-Driving Training Programme showed that it is possible to save at least 20% of fuel by applying new driving techniques and better trip preparation, which can be learned in a two-day training programme. Also the maintenance costs of the vehicle will decrease substantially when applying eco-driving principles. Finally, road safety records will be improved by the fact that less accidents will occur. ORGANDA is now in the process to become the certifying authority at BNSP for the competencies of professional truck and bus drivers, terminal operators and total quality management.

7.5   Closing Remark

Well-educated logistics professionals is a must to achieve an effective and efficient National Logistics System. Indonesia still lacks well-educated logistics professionals both in quantity and quality, as well as appropriate formal national education and training institutions, which do have the capacity and capability to offer these programs. Steps, however, already have been taken to overcome this situation.

The framework for new education and training curricula in logistics should be based on international standards considering national requirements.

References

Arvis, J.F., Musta, M.A., Panzer, J., Ojala, L., dan Naula, T. (2007): *Connecting to Compete, Trade Logistics in the Global Economy: The Logistics Performance Index and its Indicators*, World Bank.

Arvis, J.F., Musta, M.A., Panzer, J., Ojala, L., dan Naula, T. (2010): *Connecting to Compete, Trade Logistics in the Global Economy: The Logistics Performance Index and its Indicators*, World Bank.

Arvis, J.F., Musta, M.A., Panzer, J., Ojala, L., dan Naula, T. (2012): *Connecting to Compete, Trade Logistics in the Global Economy: The Logistics Performance Index and its Indicators*, World Bank.

Ballou, R.H. (1999): *Business Logistics Management*, Prentice Hall, USA.

Pishvaee, M., Saman, Basiri, Hadi, and Sajadieh, M. Sheikh (2009): *Supply Chain and Logistics in National, International and Governmental Environment (Concepts and Models)*, Springer-Verlag Berlin Heidelberg.

Wajszczuk, K. (2005): *Logistics Costs Analysis as an Assisting Tool to Achieve Competitive Advantage for Agricultural Enterprises*, In: The XIth International Congress of the EAAE.

Zeng, AZ. dan Rossetti, C (2003): Developing a Framework for Evaluating the Logistics Costs in Global Sourcing Processes, *International Journal Physical Distribution Logistics Management* 33(9):785–803.

Presiden RI (2012), *Cetak Biru Pengembangan Sistem Logistik Nasional*, Jakarta