DEVELOPMENT OF FREIGHT TRANSPORT IN INDONESIA: TOWARDS SUSTAINABILITY

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1. TREND IN LOGISTIC
2. MP3EI
3. ENERGY EFFICIENCY - EMISSION REDUCTION POLICY
TREND IN LOGISTIC
Human Development Index 1980-2011 (HDI)

- INDONESIA’S ECONOMIC GROWTH HAS UPGRADED PER CAPITA INCOME AND
  HUMAN DEVELOPMENT INDEX (HDI).
- IN THE YEAR 1980 TO 2011, HDI HAS INCREASED FROM 0.422 TO 0.629

Source: CIA World Factbook, 2013
UNDP, 2013

<table>
<thead>
<tr>
<th>KEY INDICATORS</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Population 2013 (m)</td>
<td>251.16</td>
</tr>
<tr>
<td>Population growth rate (%)</td>
<td>1.03</td>
</tr>
<tr>
<td>GDP growth 2012 (%)</td>
<td>6</td>
</tr>
<tr>
<td>GDP per capita 2012 (US$)</td>
<td>5000</td>
</tr>
<tr>
<td>Unemployment rate 2012 (%)</td>
<td>6.10</td>
</tr>
<tr>
<td>Poverty Rate 2012</td>
<td>11.7</td>
</tr>
<tr>
<td>HDI (2011)</td>
<td>0.717</td>
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## Comparison of Logistics Performance Index (LPI) (from 155 countries)

<table>
<thead>
<tr>
<th>ASEAN Country</th>
<th>LPI Rank</th>
<th>LPI Score</th>
<th>Custom Rank</th>
<th>Custom Score</th>
<th>Infrastructure Rank</th>
<th>Infrastructure Score</th>
<th>International Shipment Rank</th>
<th>International Shipment Score</th>
<th>Competence Rank</th>
<th>Competence Score</th>
<th>Tracking &amp; Tracing Rank</th>
<th>Tracking &amp; Tracing Score</th>
<th>Timelines Rank</th>
<th>Timelines Score</th>
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<tbody>
<tr>
<td>Singapore</td>
<td>1</td>
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<td>1</td>
<td>4.10</td>
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<td>4.07</td>
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<tr>
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<td>2.98</td>
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<tr>
<td>Vietnam</td>
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<tr>
<td>Indonesia</td>
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<td>3.12</td>
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<td>3.61</td>
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<tr>
<td>Rata-Rata Score</td>
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<td>3.03</td>
<td></td>
<td>3.11</td>
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<td></td>
<td></td>
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<td>3.20</td>
<td>3.40</td>
<td></td>
<td></td>
<td></td>
<td>3.74</td>
</tr>
</tbody>
</table>

Source: World Bank
FOCUS ON DEVELOPMENT OF ROADS

DEPENDANCE ON ROAD VEHICLE

NUMBERS OF MOTORIZED VEHICLE AND ROAD VEHICLE RISING UNCONTROLLABLY

RAIL NETWORK AND SEA TRANSPORT IS NEGLECTED

TODAY’S PARADIGM
Trucking is a preferred mode of transportation within Java and between Java and Sumatra given the fact that sea transportation is at least 30-40% cheaper. Flexibility and lead time are two key criteria for shippers/consignees to choose their mode of transportation.

<table>
<thead>
<tr>
<th>MODE OF TRANSPORTATION COMPARISON WITHIN JAVA</th>
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<tbody>
<tr>
<td><strong>TRUCKING</strong></td>
</tr>
<tr>
<td>Price (Rp.) per TEU</td>
</tr>
<tr>
<td>Lead Time</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Service Frequency</td>
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</tbody>
</table>
Transport Cost: Indonesia's logistics costs are very high compared to other countries, which the average logistics costs in Indonesia approach to 14.08% Production Cost.

Congestion that occurs in the Jakarta city resulted trucks can only do one trip in a day from industrial location to the port.

- The shipping cost of container from Padang to Jakarta Rp 5, 4 million, while the shipping cost of the same container from Jakarta to Singapore only Rp 1, 8 million.
- The price of cement in Papua's twenty times higher than the price of cement in Jakarta, because the shipping cost is expensive.
LOGISTIC COSTS FROM THE INDUSTRIAL AREA TO THE PORT IN INDONESIA IS HIGHER THAN MALAYSIA

CIKARANG TO PORT OF TANJUNG PRIOK (INDONESIA)

Mileage of Truck: 55.4 km
Logistics cost: 750 U.S. Dollar

PASIR GUDANG TO PORT OF TANJUNG PELEPAS (MALAYSIA)

Mileage of Truck: 56.4 km
Logistics cost: 450 U.S. Dollar

Source: World Bank, Investing in Indonesia’s Institution
MP3EI
THE MASTER PLAN FOR ACCELERATION AND EXPANSION OF INDONESIA ECONOMIC DEVELOPMENT (Presidential Regulation No. 32/2011)
PLANS FOR INDONESIA GDP

STRONG ECONOMIC GROWTH IS PROJECTED, THUS REQUIRES MORE DEVELOPMENT OF BASIC INFRASTRUCTURE

In the next 15 years, Indonesian economy is expected to be more than 5 times of 2010

2010
- GDP: ~USD 700 billion
- Income per capita USD 3,000

In 2025
- GDP: ~USD 4.0 – 4.5 trill
- Income per capita is predicted to be around ~US$ 14,250 – 15,500 (classified as a high income country)

In 2045
- GDP: ~USD 15.0 – 17.5 trill
- Income per capita would be around ~USD 44,500 – 49,000

Source: MP3EI
ECONOMICAL GROWTH

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GREENHOUSE GAS EMISSION

Environmental Impact
- Pollution and Environmental Degradation
- Natural Resource and Biodiversity Degradation
- Natural Disasters Caused by Climate Change
- Social welfare degradation
The vision for Indonesia’s Acceleration and Expansion of Economic Development is: “To create a self-sufficient, advanced, just and Prosperous Indonesia.

Sustainability spirit based in every development activities.
HOW TO ACCELERATE ECONOMIC TRANSFORMATION:

The 2025 vision is expected to be achieved by focusing on 3 main goals:

1. Increase value adding and expanding value chain for industrial production processes, and increase the efficiency of the distribution network.

2. Encourage efficiency in production and improve marketing efforts to further integrate domestic markets in order to push for competitiveness and strengthen the national economy.

3. To push for the strengthening of the national innovation system in the areas of production, process, and marketing with a focus on the overall strengthening of sustainable global competitiveness towards an innovation-driven economy.
MP3EI Connectivity Vision 2025:
Locally Integrated, Globally Connected

- Improved accessibility
- Ambitions for Modal split → Multi modal
- Increasing sustainable energy use/production
- High-end port activities, innovation
- Strengthening partnerships : PPP
ENERGY EFFICIENCY-EMISSION REDUCTION POLICY
LOGISTICS AND FREIGHT-RELATED ACTIVITIES MAY ACCOUNT FOR UP TO 15 PERCENT OF HUMAN CARBON DIOXIDE EMISSIONS, IN PART BECAUSE OF FOSSIL FUELS (WORLD BANK).
BETTER LOGISTICS  
EMISSION REDUCTION

More *fuel-efficient vehicles and cleaner* practices mean better logistics. It may be possible for logistics to diminish its carbon footprint with *higher load factors or fewer trips*. But emissions can be reduced the most through a shift away from *higher emission transport modes*—that is, if lower emission modes (which in many cases are also slower) can be made more attractive through better service delivery and predictability.
Net GHG Emission of Indonesia is Predicted to Rise from 1.38 GtCO₂e (Th 2000) up to 2.95 GtCO₂e (2020)

**BAU – Business as Usual**

- 26% (Local Government Funds)
- 15% (With Foreign Donors)

**Emission Reduction**

41%
Strategy on Multimodal TRANSPORT

“... the carriage of goods by at least two different modes of transport on the basis of a multimodal transport contract

AIM: To create one stop service (3 S’s), i.e. single operator, single tariff and single document for cargo transport

1. Infrastructure Network Integration
2. Integration of Services Network
3. Improvement of Multimodal Transportation Company/HRD
1. Transportation movements still dominated by road transport (80%). Road transport have the lowest cost function for short distances (<500km), however, the cost rises quickly, when i>1500km \(\rightarrow\) maritime transport have the lowest cost. Between 500-1500km, trips using rail transport have the lowest cost function.

2. Indonesian Government has implemented policies in order to reduce traffic load in roads \(\rightarrow\) redirected and balanced using other modes of transportation such as rail and short-sea shipping \(\rightarrow\) Improve MULTI MODAL.
POLICY TRENDS IN RAIL TRANSPORT

• Development of rail road networks to/from seaports/dryports and industrial/logistic centers.
  - To speed up the development of double rail tracks in Southern – Northern Java and Southern Sumatra.
    - Double track rail road, 727 km will connect two biggest cities in Indonesia, Jakarta – Surabaya with 21 and 7 million inhabitants respectively.

• Development of freight rail road in Southern Sumatra and Kalimantan by also involving local governments and the private sector.

• Development of dry ports in Jababeka/Cikarang, Cirebon, Pelabuhan Panjang (Lampung).

• Building the trans-Sumatra rail road.
  - Providing more infrastructures/trains for freight cars by PT KA (100 unit locomotives and 1200 unit of freight cars).

POLICY TRENDS IN AIR TRANSPORT

• Setting up airport as an hub international.
• Optimize the role of existing airports to serve as cargo airport.
• Optimization of port capacity and interconnection development with hinterland and the hub international.
• Improve integration of network infrastructure on air transport node.
• Improving the performance of cargo services on airport that handles cargo flow.

POLICY TRENDS IN SEA TRANSPORT

• Enforcement of Cabotage Principle for domestic sea freight.
• Enhances the accessibility of goods transport in rural and density/congested areas.
• Improving the performance of services on the strategic port that handle most of goods flow (Banten, Tanjung Priok, Tanjung Emas and Tanjung Perak).
• To socialize laws about environmental protection, especially international laws which are ratified nationally.
• Screening Indonesia/foreign ships in order to comply with pollution prevention laws.
<table>
<thead>
<tr>
<th>CONCLUDING REMARKS</th>
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</thead>
<tbody>
<tr>
<td><strong>Freight transport</strong> is a big issue in Indonesia and it is crucial to be improved, especially to achieve MP3EI target.</td>
</tr>
<tr>
<td>Better transport management $\rightarrow$ efficient $\rightarrow$ reduce emission.</td>
</tr>
<tr>
<td><strong>Sustainability transport</strong> as the basic spirit in all transport development $\rightarrow$ regulated.</td>
</tr>
<tr>
<td>Towards green freight transport $\rightarrow$ cooperation $\rightarrow$ agreement.</td>
</tr>
</tbody>
</table>
Thank You