INDONESIA

EE382/381 Economics of Transportation
Semester 1 Year 2015

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COUNTRY OVERVIEW

Geography

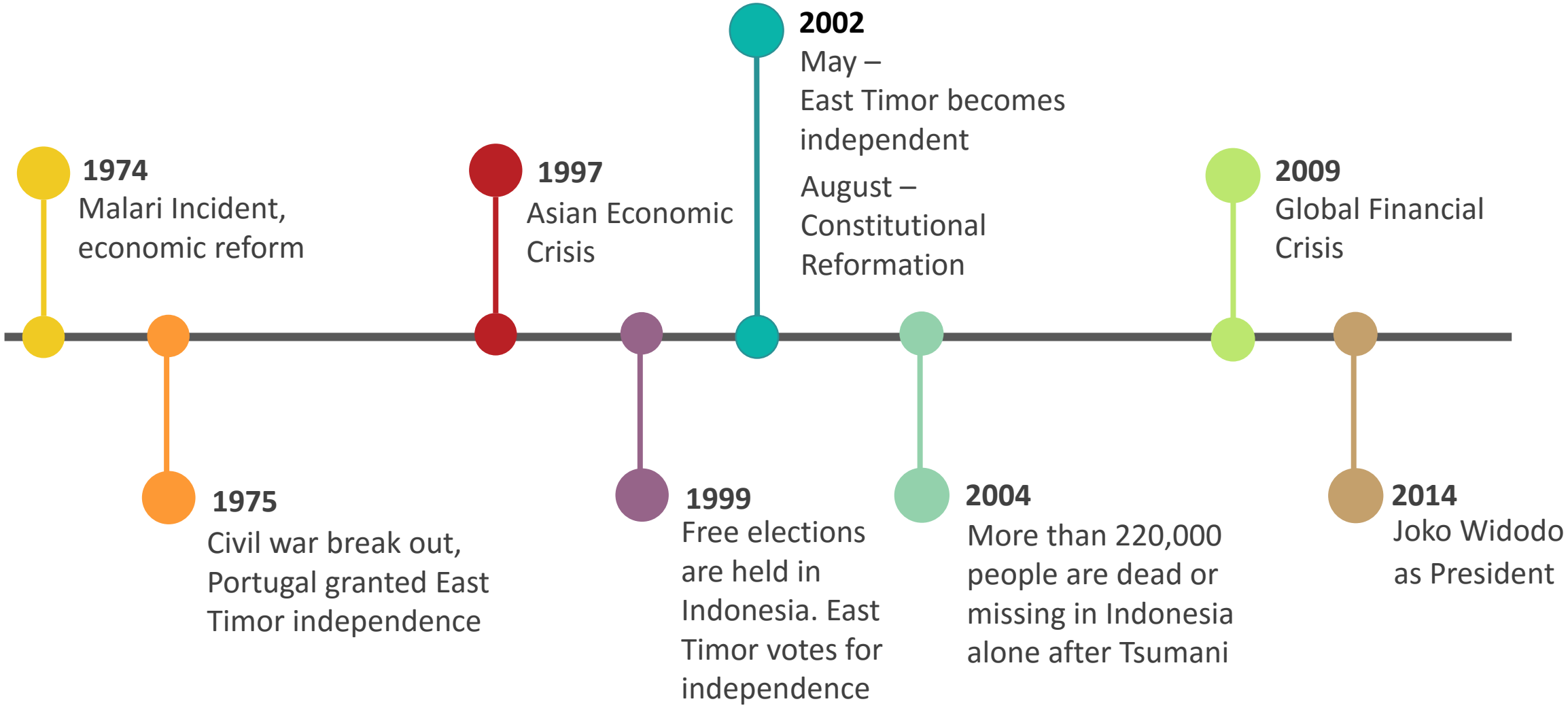
1,904,569
square kilometres

33
Regions

17,508
Islands

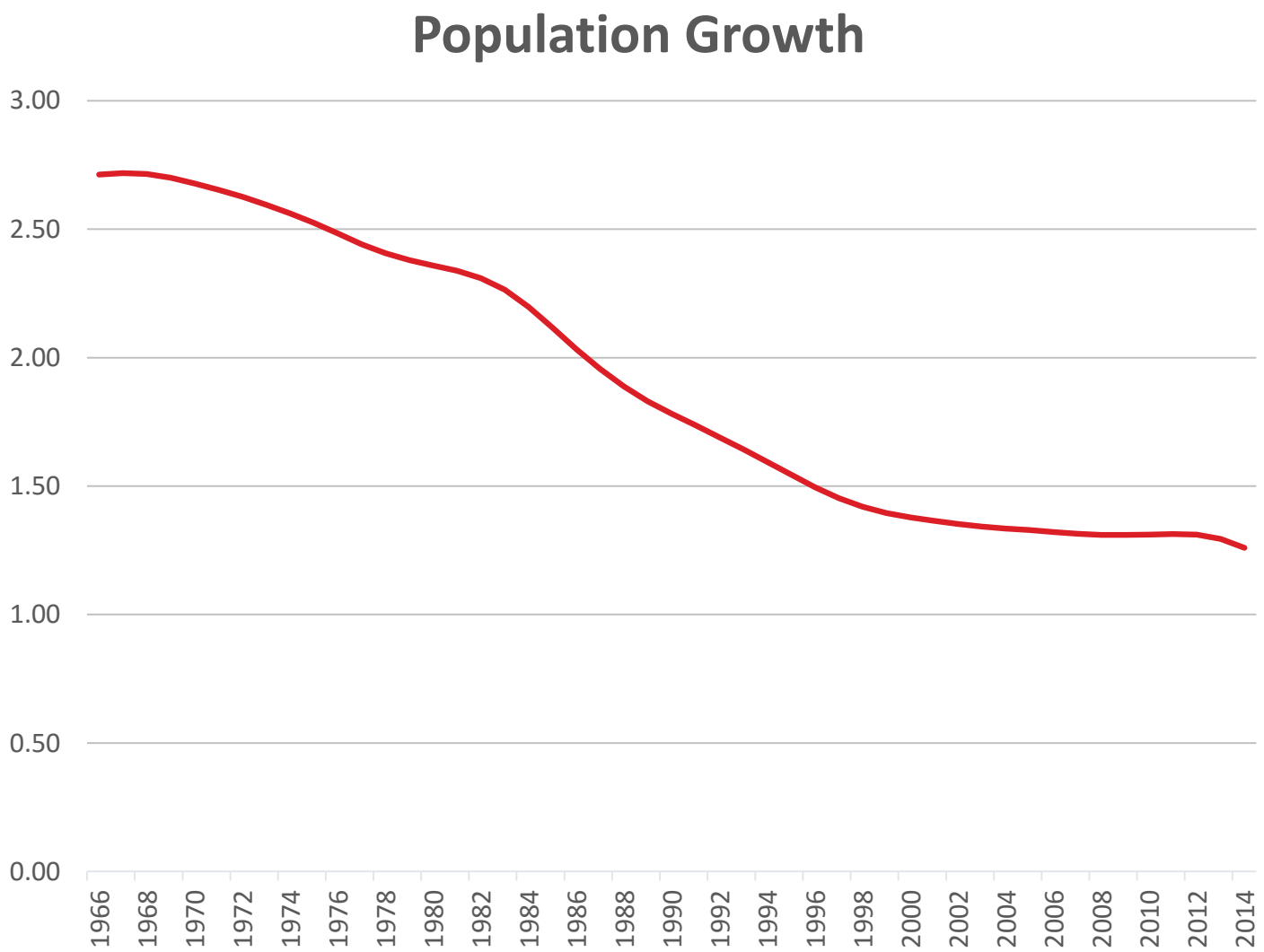
Source: CIA's world factbook

Timeline



Source: BBC world

Population



254.45mn

Total population in 2014

~1.30%

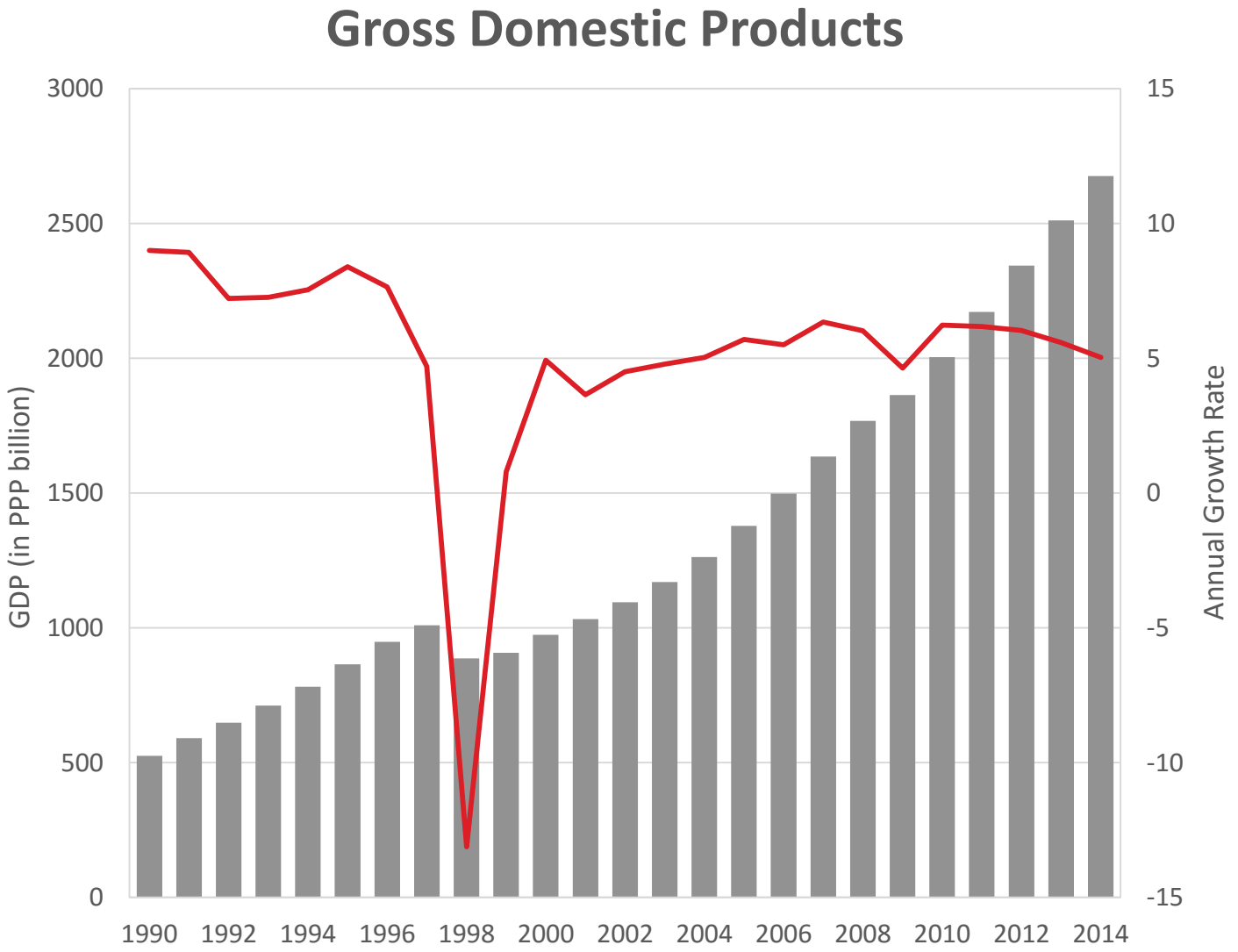
The growth has been constant for the past 15 years

88%

are Islamic. The rests are Protestant, Catholic, Hindu, and Buddhist.

Source: World Bank

Economy



In 2014

2,676.1bn

GDP at PPP

8th

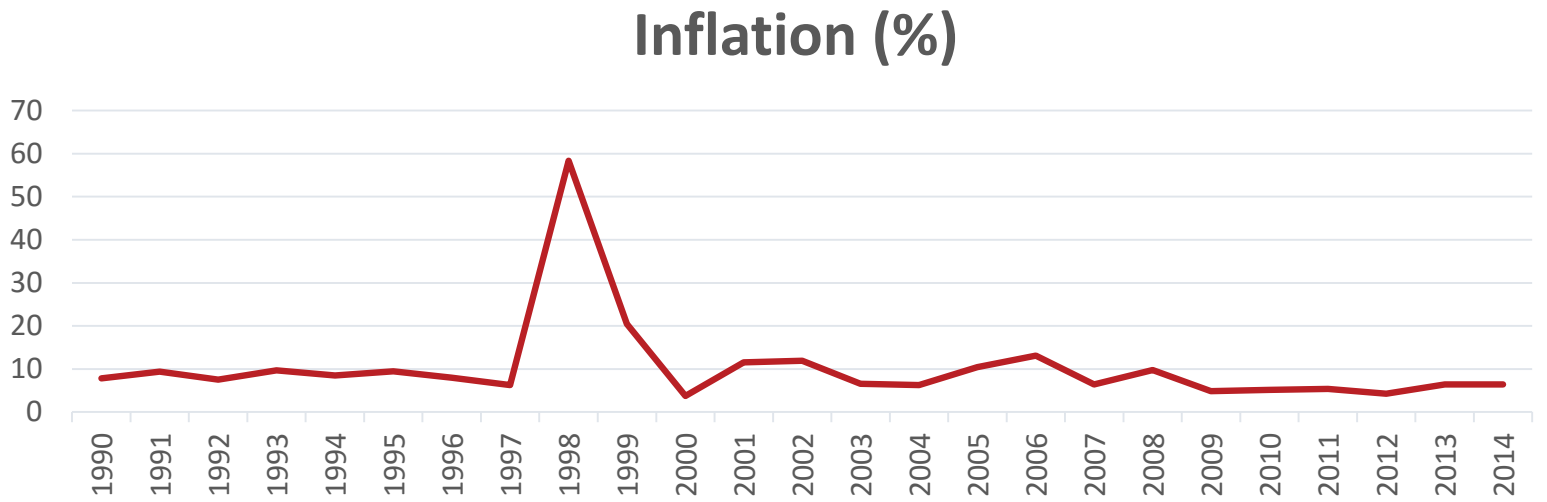
Largest economy of the world

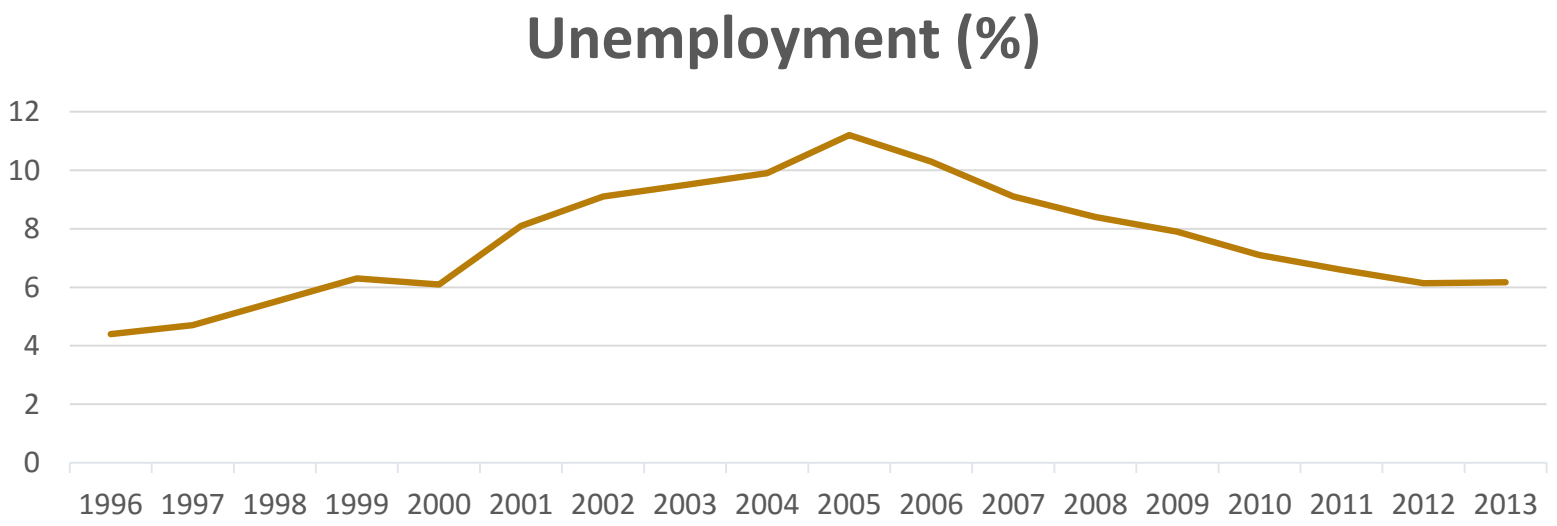
10,517

GDP per capita at PPP

Source: World Bank

Economy





In 2014

6.39%

Inflation Annual Rate

6.17%

Unemployment Rate (in 2013)

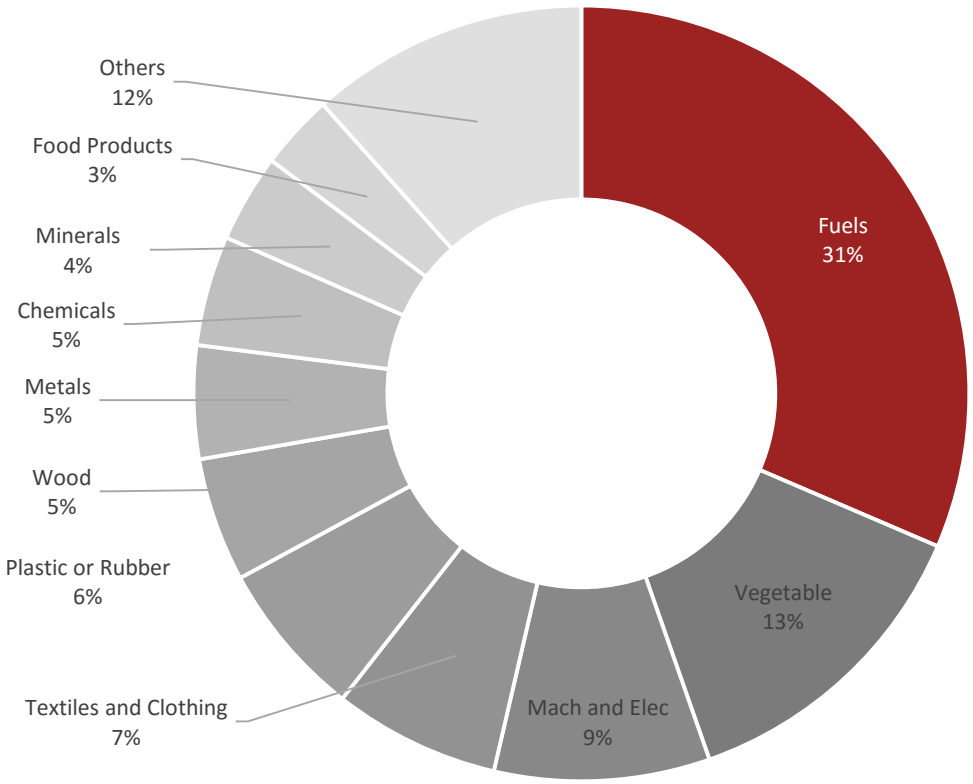
2.48-6.09

Minimum daily wage (USD)

Source: World Bank

Trade

Exports



48.20%

of GDP are from trades(exports and imports)

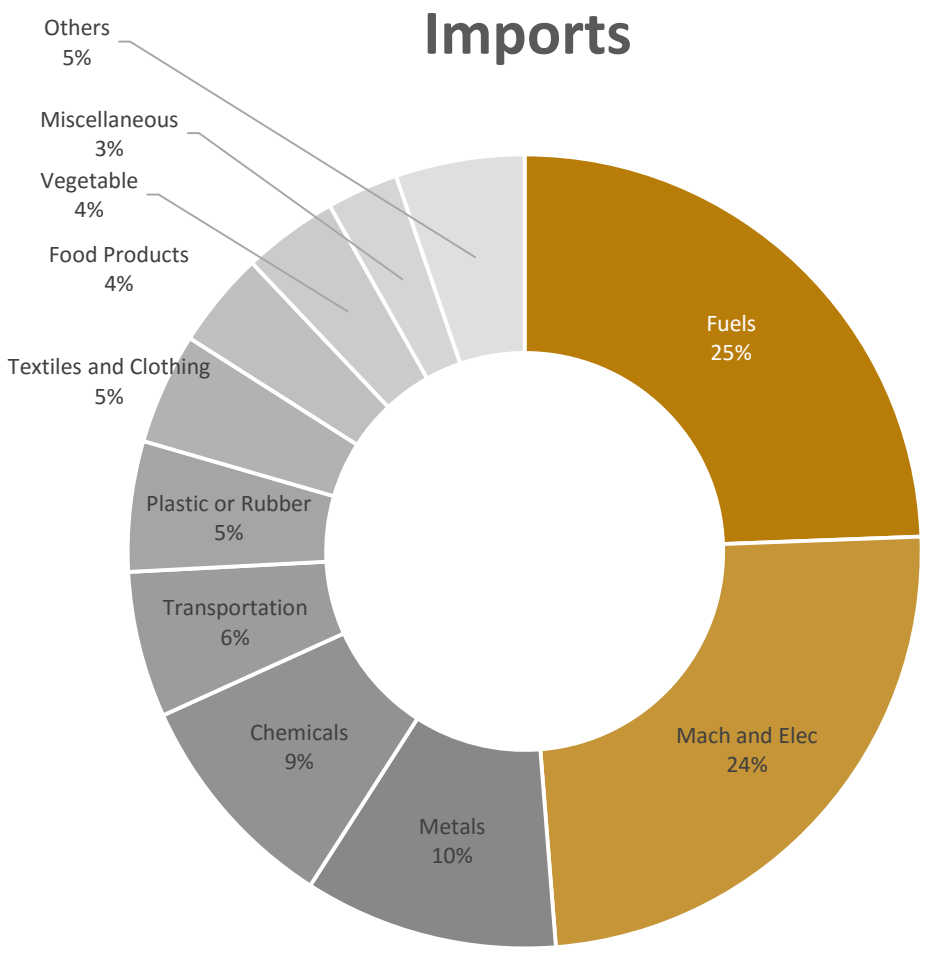
176,036mn

Export values (USD) in 2014

Partners	Product Share (%)
Japan	13.14
China	10.00
Singapore	9.52
United States	9.41
India	6.96

Source: WITS, World Bank

Trade



178,179mn

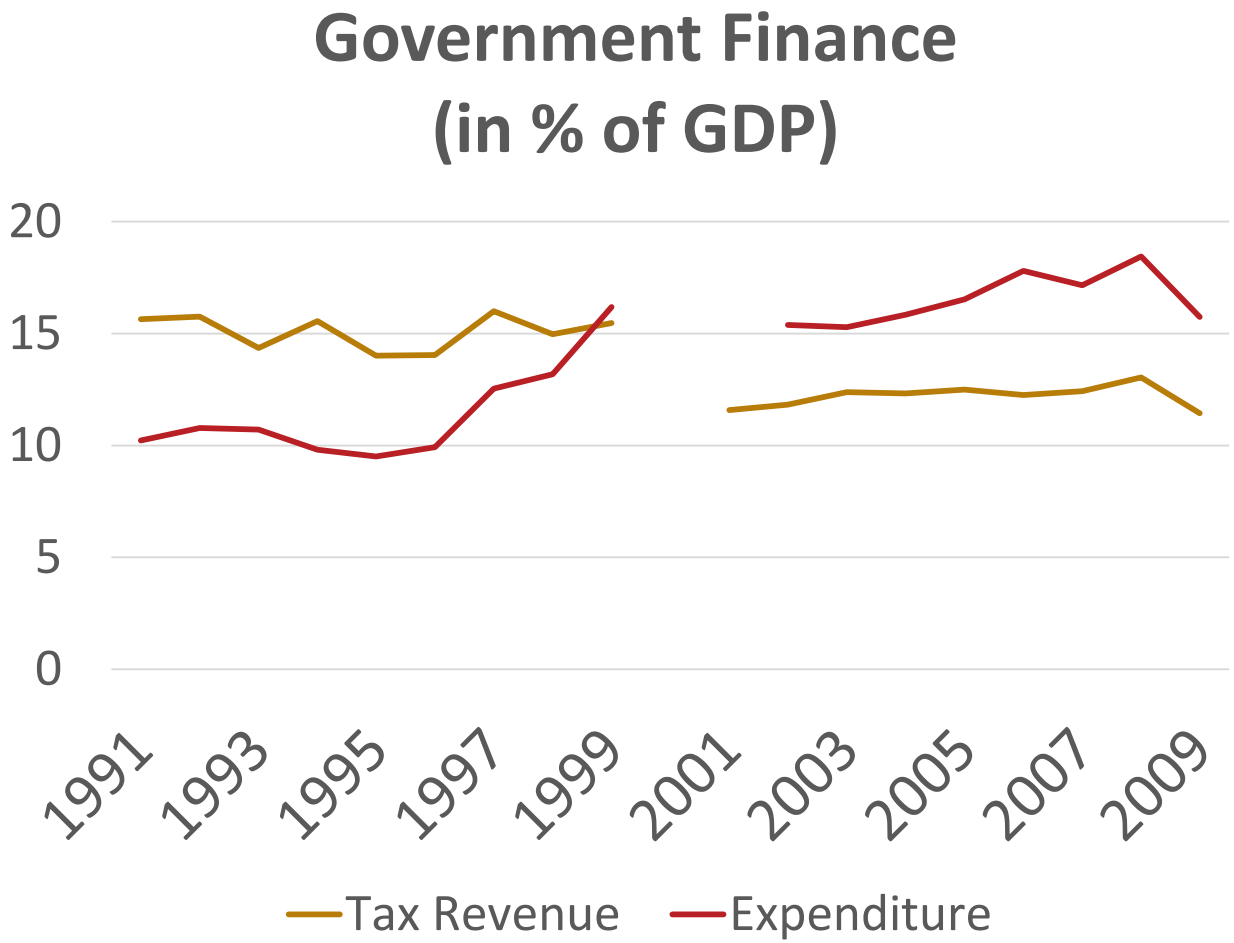
Import values (USD)
in 2014

Partners	Product Share (%)
China	17.19
Singapore	14.14
Japan	9.55
South Korea	6.65
Malaysia	6.09

Source: WITS, World Bank

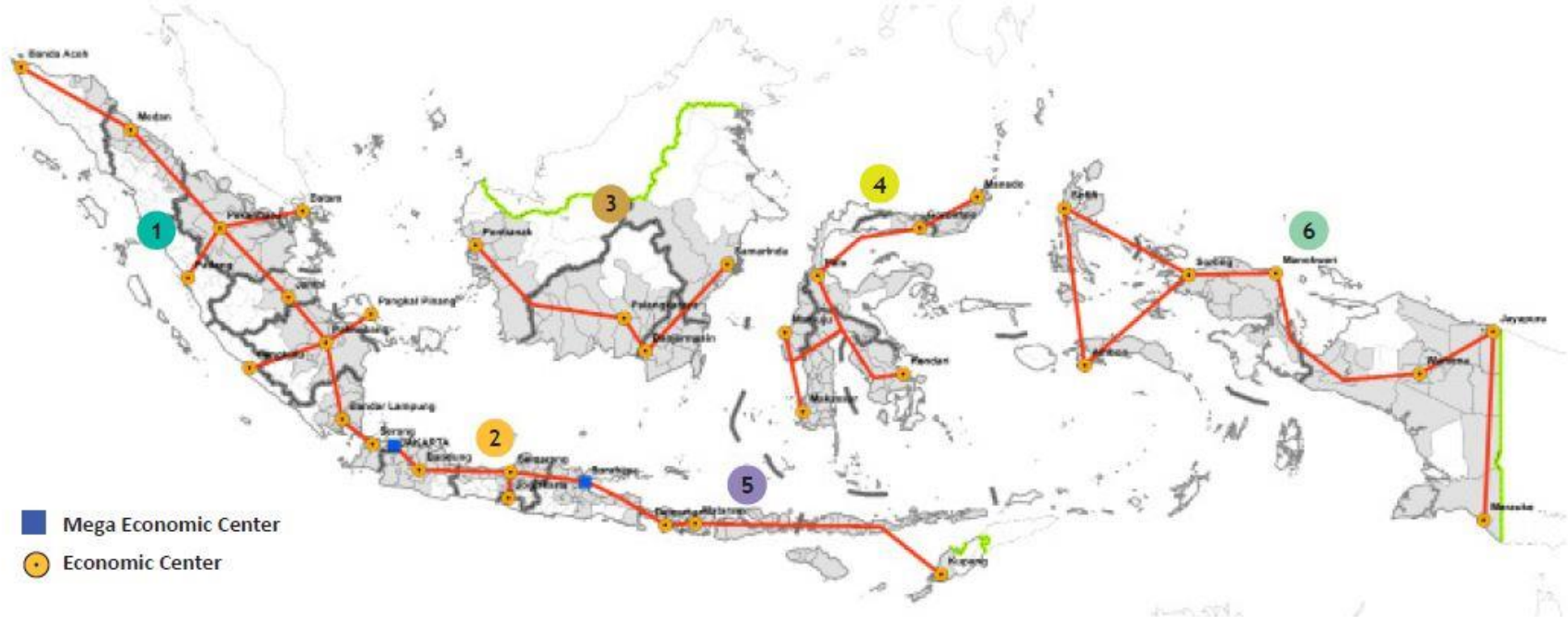
Governing System

Joko Widodo (2014 – present)



Source: World Bank

Government Masterplan 2011 – 2025



1 Sumatra: Centre for production and processing of natural resources and as nation's energy reserves

2 Java: Driver for national industry and service provision

3 Kalimantan: Centre for production and processing of national mining and energy reserves

4 Sulawesi: Centre for production and processing of national agricultural, plantation, fishery, oil & gas, and mining

5 Bali: Gateway for tourism and national food support

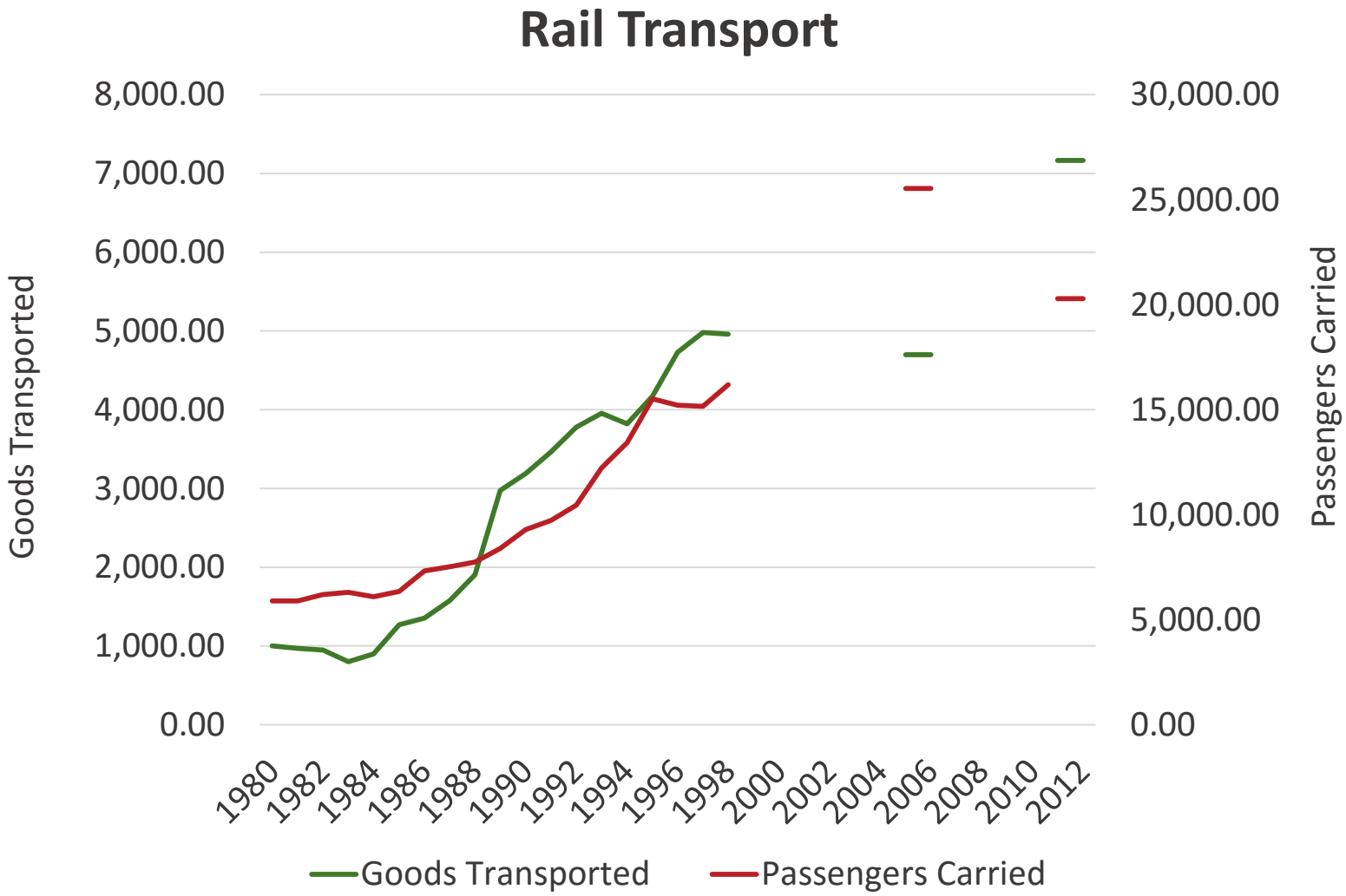
6 Papua: Centre for development of food, fisheries, energy, and national mining

Source: World Bank

TRANSPORT SYSTEM

Transport Categories

Rail



2 types

- High speed rail
- Railway

20,283mn

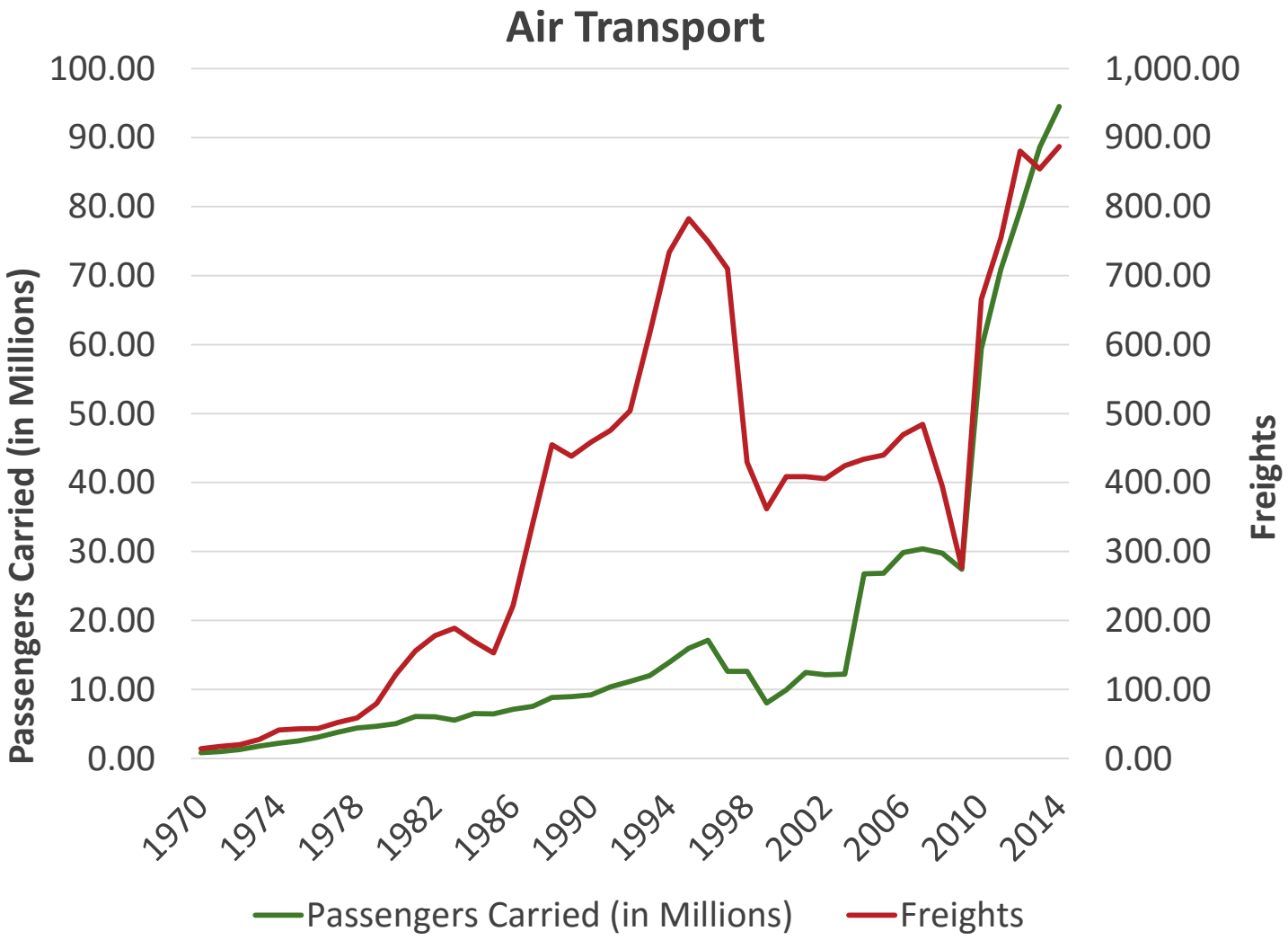
Tons of goods transported per kilometre (in 2012)

7,166mn

Passengers carried per kilometre (in 2012)

Source: CEIC data, BPS

Air



In 2014

94.5mn
Passengers Carried

886.85
Freights

INDONESIA AIR
National airline

676
airports
68 hubs airport
90 spoke airports

Source: CEIC data

Road

In 2014

496,607km

The total length of roads

283,102km

paved roads

213,505km

unpaved roads (in 2012)

Source: CIA

Road: Highways

AH25

Main highways (in Sumatra), for example

373,573km

Total length of highways (in 2004)

508,986km

Total length of highways (in 2013)

Source: Worldhighway

Sea: Inland waterway

From 2004 until 2011

21,579km

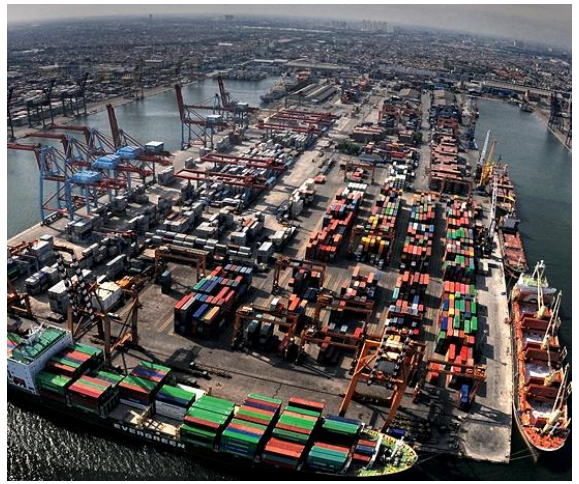
Number of waterway

10,000km

Navigable waterways

Source: BPS

Sea: Ports



Important Ports

- Jakarta
- Belawa
- Surabaya
- Ujung Pandang

Activities

- Unloading Cargo
- Uploading Cargo

In 2014

340 public ports

Unloading cargo

324 public ports

Uploading cargo

Source: BPS

Sea: Shipping

Types of inter-island shipping services

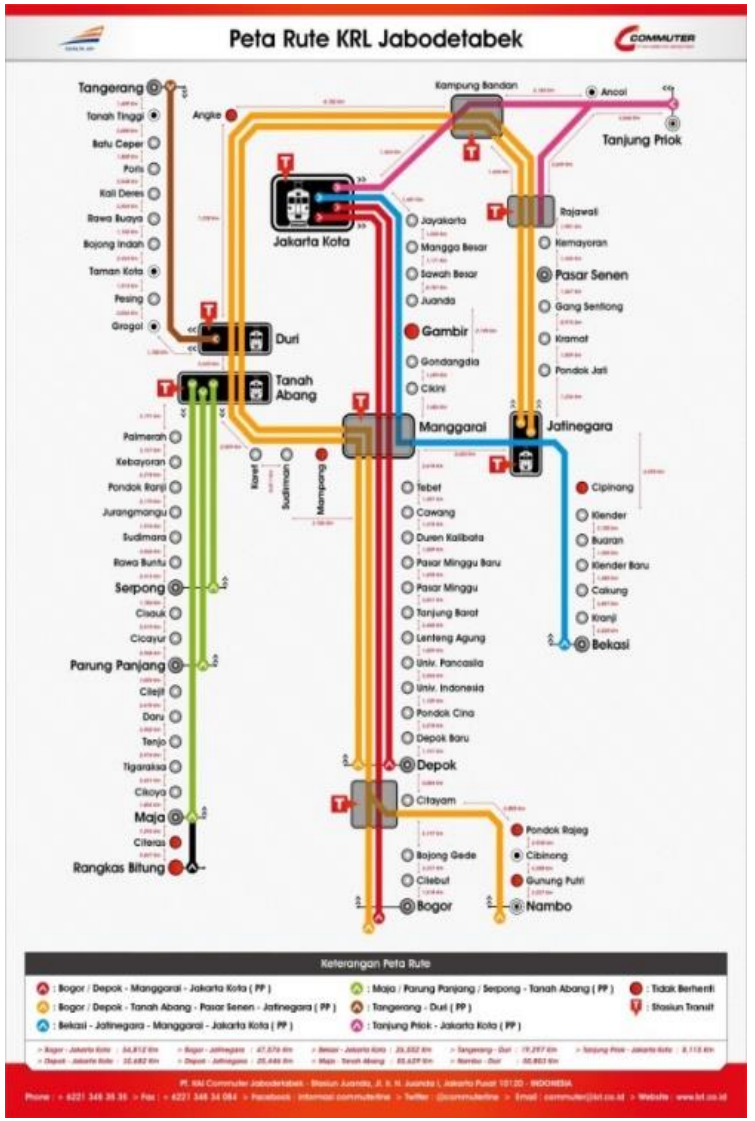
- Ferry services
- Shipping services

14mn

passengers per year traveling by inter-island shipping

Source: BPS

Urban: Commuter train



6 lines of commuter train

Source: Lonely Planet

Urban: Large buses and medium-sized uses

Bus companies operating in Jakarta

APTB

BKTB

Patas

Kopaja

Source: Lonely Planet

Urban: Taxi and Motorcycle

Bluebird Taxi

The best way to get around in Jarkata

Ojek

The best choice for passenger in a rush hour or when traffic jams

Source: Lonely Planet

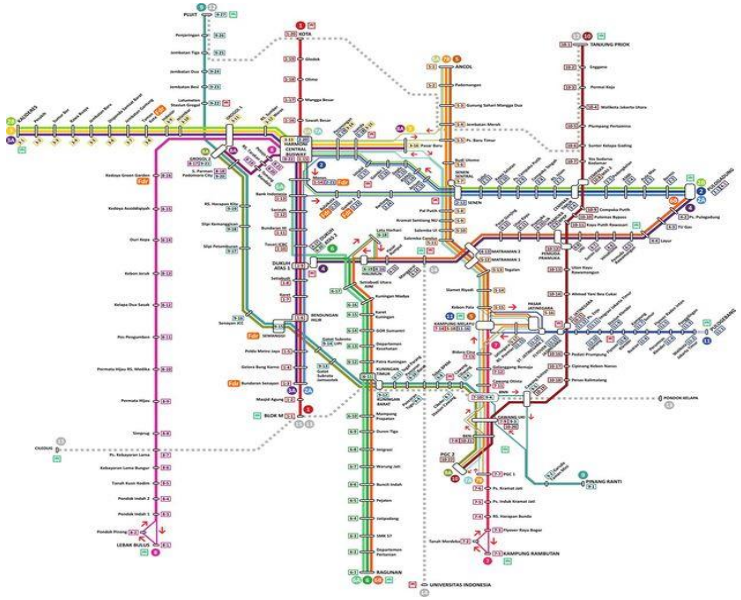
Urban: BRT TransJakarta

560buses

in 12 corridors

180km

Length of BRT operating roads with 206 stations



Source: Lonely Planet

BRT TransJakarta
Policy Analysis

Main Problems

- Traffic congestion
- Pollution and worsened health
- Lack of pedestrian facilities
- Unintegrated public transport system
- Lack of confidence and safety
- Growing individualism because lack of interaction

14,462

People per square km in Jakarta (2014)

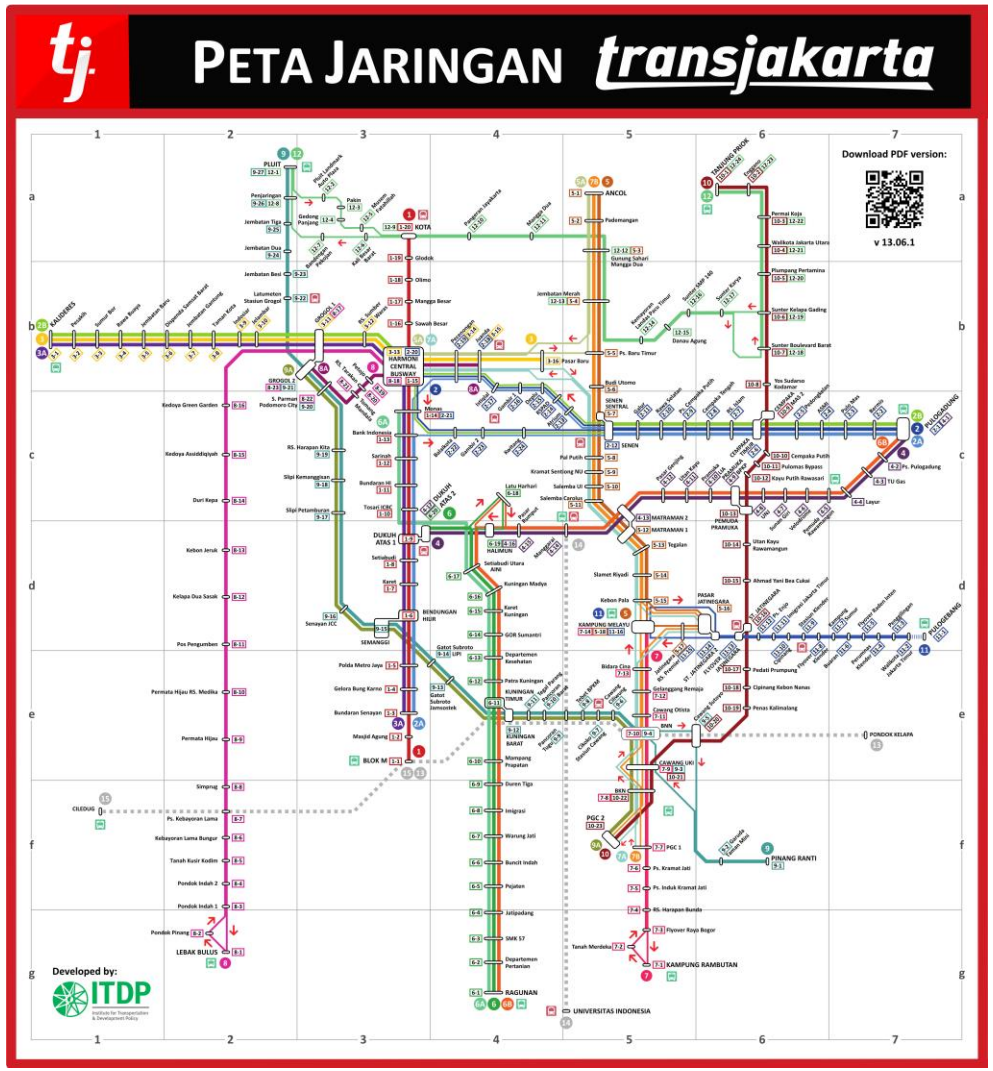
Source: New York City Global Partner, "Best Practice: Bus Rapid Transit (BRT) System," 2012

TransJakarta System

- **1st pioneer** BRT system in Southern and Southeast Asia
- Started in 2004 by the city administration of Jakarta
- designed to provide the citizens of Jakarta with a fast public transportation system to help reduce rush hour traffic
- It was physically separated bus-only lanes, at-level boarding platforms and pre-paid ticketing.

Source: New York City Global Partner, "Best Practice: Bus Rapid Transit (BRT) System," 2012

Implementations



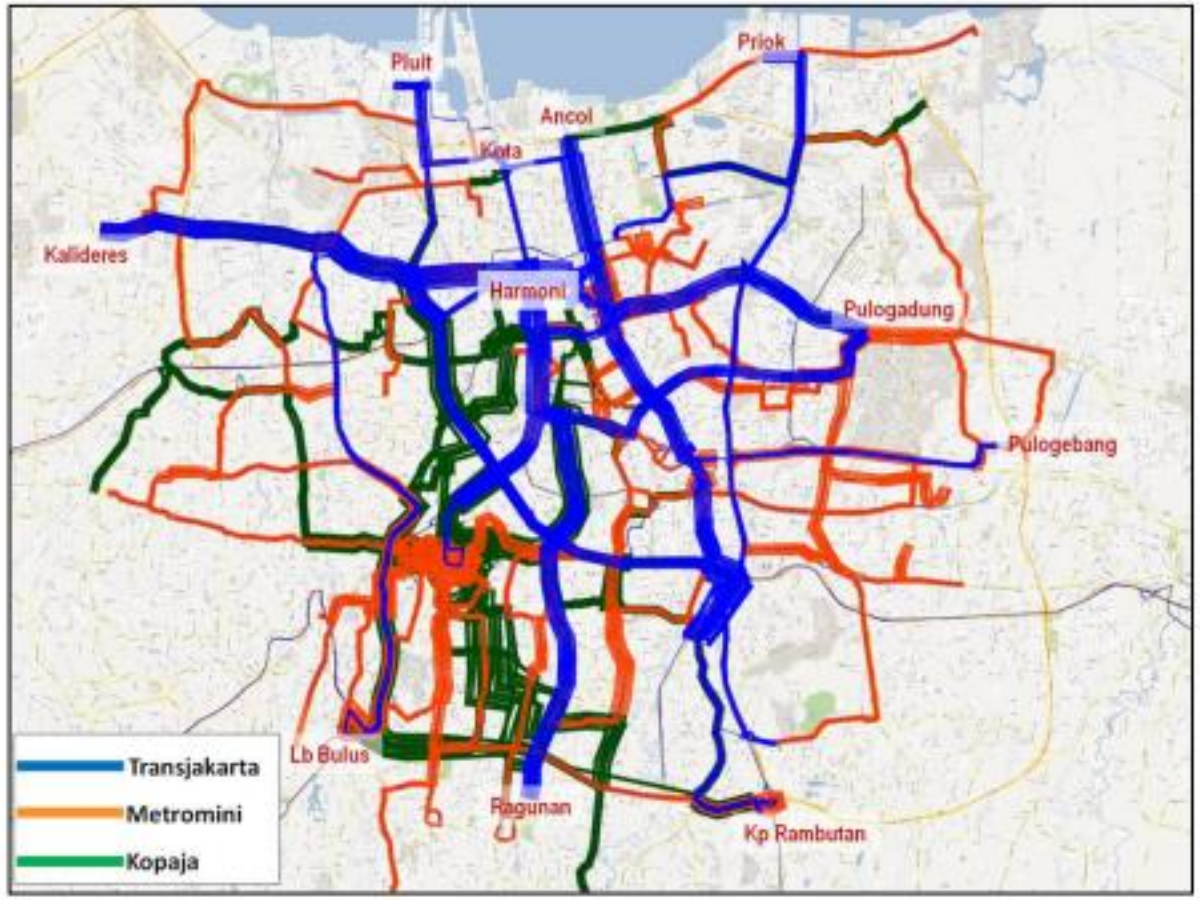
- The corridor passes through Jakarta's city center and along two of Jakarta's most congested roads.
- The BRT was constructed in an unprecedented 9 months, at a cost of some $2 million USD.
- Following the success of the BRT in the first corridor, two additional corridors were constructed, which became fully operational in April 2006

Source: New York City Global Partner, "Best Practice: Bus Rapid Transit (BRT) System," 2012

Implementations

Direct Service

- To minimize transfer for passengers from the feeder to trunk service.
- To transfer time at terminal can be eliminated
- Allowed other bus company to enter TransJakarta lane and stop at the TransJakarta station.



Source: ITDP, "Direction Service Polot Project Evaluation," 2013

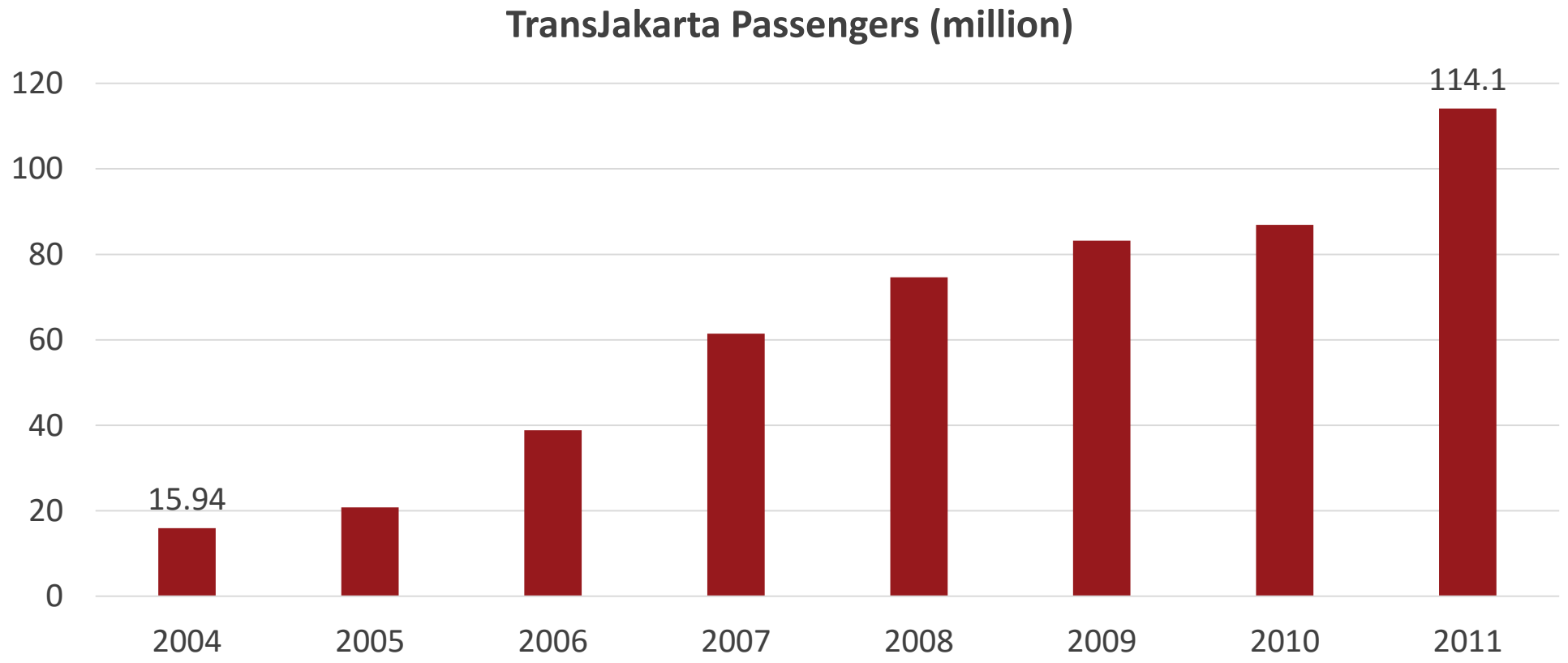
Main Objectives

- To reduce greenhouse gas emissions from urban transportation
- To provide a way for Jakarta's citizens to get through the City
- To maximize the effectiveness of Jakarta's Bus Rapid Transit system

Source: New York City Global Partner, "Best Practice: Bus Rapid Transit (BRT) System," 2012

Actual Outcomes

- Increasing number of passengers using TransJakarta



Source: New York City Global Partner, "Best Practice: Bus Rapid Transit (BRT) System," 2012

Actual Outcomes

- Shorter journey duration

Route	Journey length pre-BRT	Journey length on BRT	% Reduction
Blok M - Kota	1 hours 37 mins	45 mins	54%
Kota - Blok M	1 hours 37 mins	45 mins	54%
Pulo Gadung - Harmoni	1 hours 27 mins	40 mins	54%
Harmoni - Pulo Gadung	1 hours 02 mins	35 mins	44%
Kalideres - Harmoni	1 hours 41 mins	55 mins	46%
Harmoni - Kalideres	1 hours 20 mins	45 mins	44%

Source: “Documentation of BRT Experience: Lagos, Johannesburg and Jakarta,” final report, World Bank, February 2011

Actual Outcomes

- CO_2 Reduction

- Reduced CO_2 by 37,000 tons in 2009 (equivalent to the removal of 6,800 cars from road)
- And, if finished corridor 11-13, it is estimated to reduce CO_2 by 20,000 tons.

Source: Breakthrough Technologies Institute, "Energy and Environmental Impacts of BRT in APEC Economies,"

Actual Outcomes

HOWEVER!

- Still traffic congestion
  - Increasing number of passengers does not mean to people change from using their own/other public vehicles to using BRT
  - Persons who already have a private motor are not likely to change their travelling style. → still, 20% changed it!
  - Increasing passenger number can be caused from higher population in Jakarta
    - From more population in Jakarta
    - From more migrations due to rapid urbanisation

Source: Kumar et al., "The Soft Side of BRT: Lessons from Five Developing Cities," 2012.

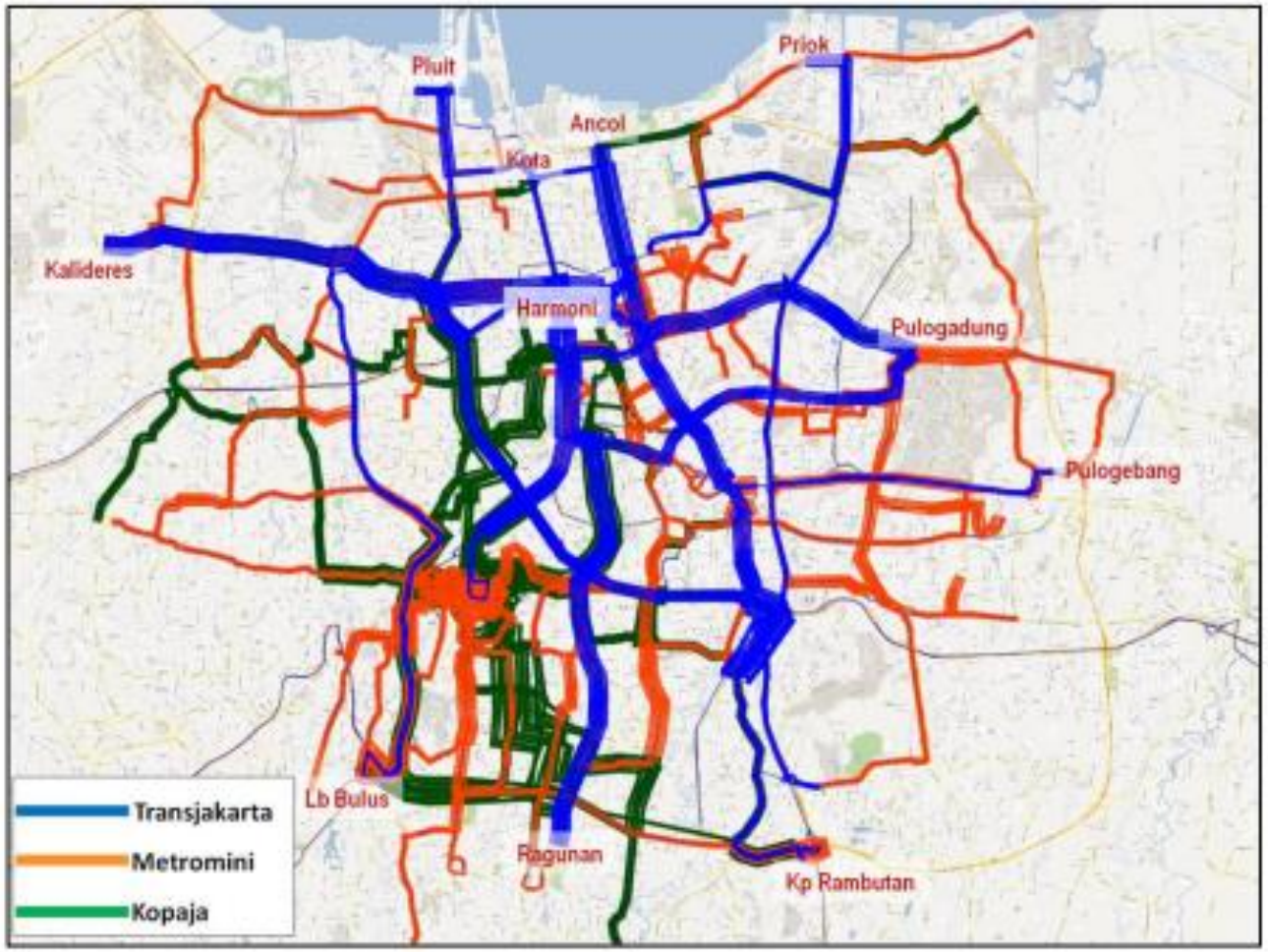
Actual Outcomes

- Still traffic congestion
  - It still causes traffic congestion since BRT requires its own roads so the available roads for other types of transporters are lessened.
  - Also, BRT has to face the same traffic light as the other vehicles. Congestion, still.
  - The number of BRT supplies is still small, compared with the normal buses, implying there is small provision of such service.

Source: New York City Global Partner, "Best Practice: Bus Rapid Transit (BRT) System," 2012

Actual Outcomes

- Lower numbers of BRT than normal buses



- People still have to transfer at the end of the station since the BRT is not available for all the areas in Jakarta.

Source: New York City Global Partner, "Best Practice: Bus Rapid Transit (BRT) System," 2012

Actual Outcomes

- Air pollution is still a concern
  - Using fewer diesel, which lead to reducing the pollution in Jakarta. And BRT are supposed to use Compressed Natural Gas (CNG).
  - There are 560 buses, 480 of which run on CNG while the rest still use diesel because of the **scarcity of CNG**.
  - The CO2 reduction is not so effective as expected.

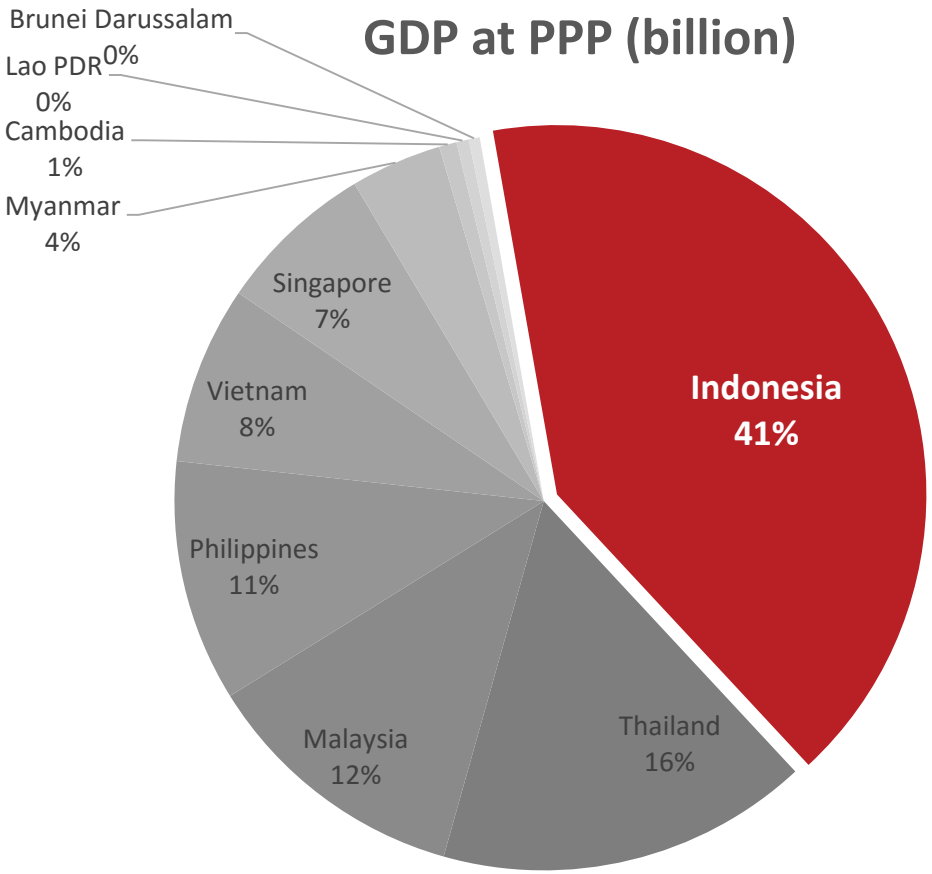
Source: ITDP

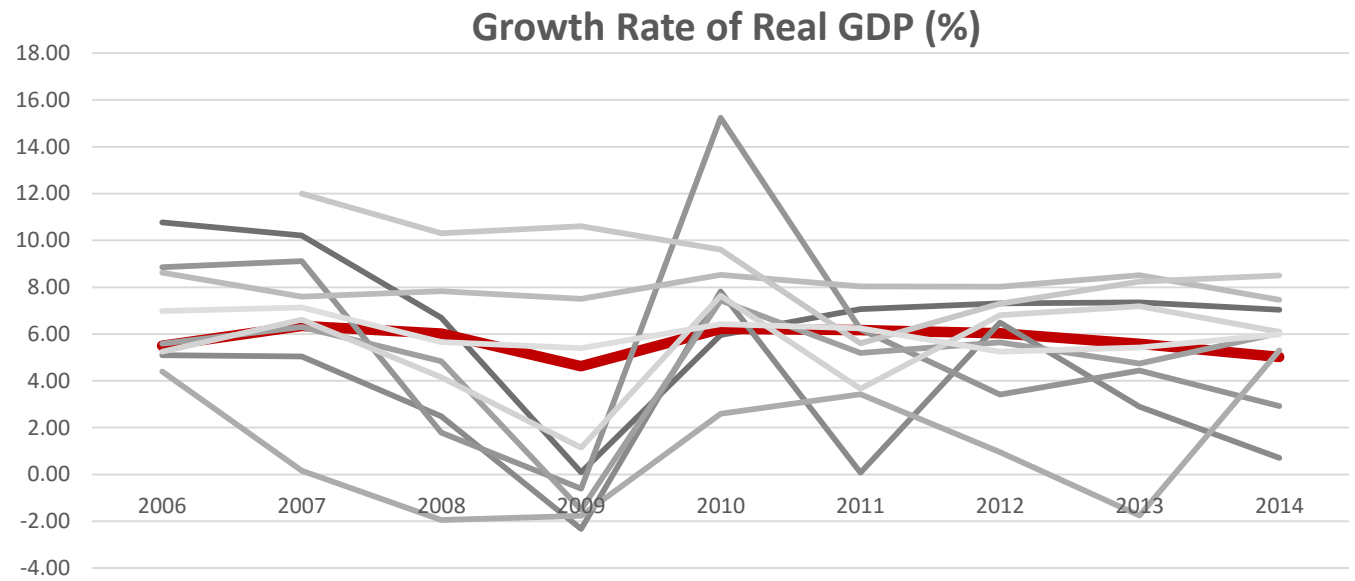
Suggestions

- More supplies of BRT to absorb more people in Jakarta
- Better management and facilities to induce more demand
- Improvement of infrastructure e.g. expanding roads
- Finding or producing more CNG so that the targeted amount of CO2 reduction is achieved.

TOWARDS AEC

Performance in AEC





In AEC

6,550.11bn

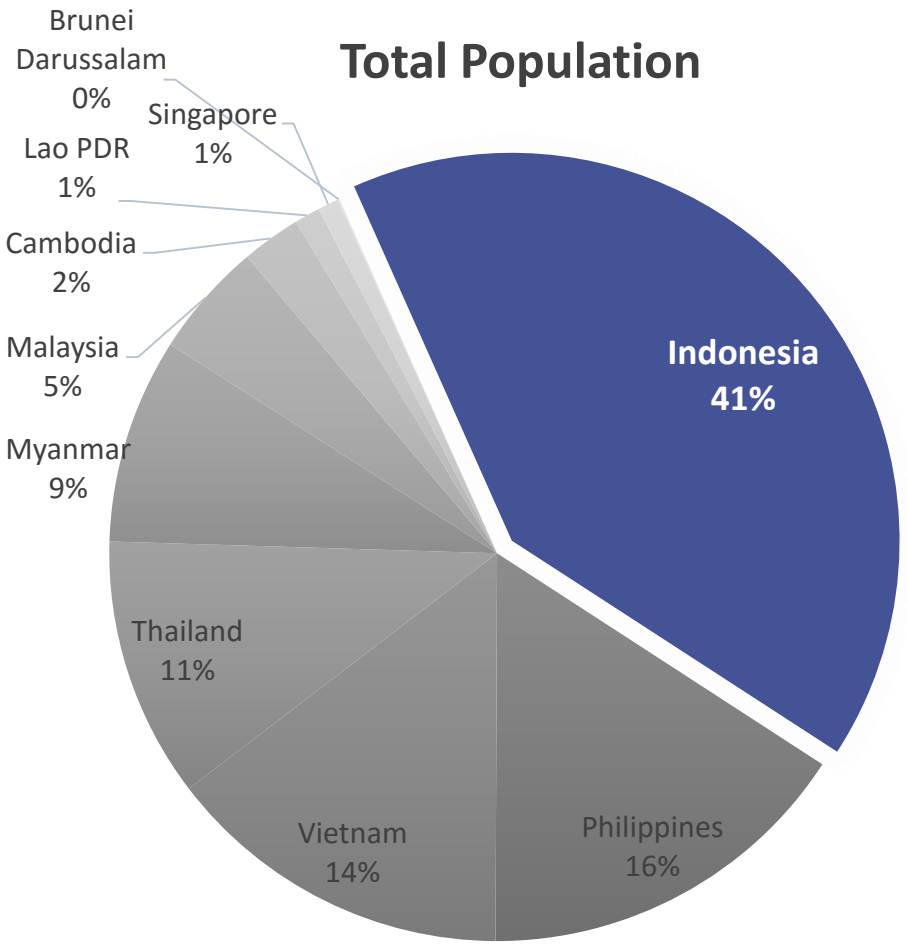
GDP at PPP
(in 2014)

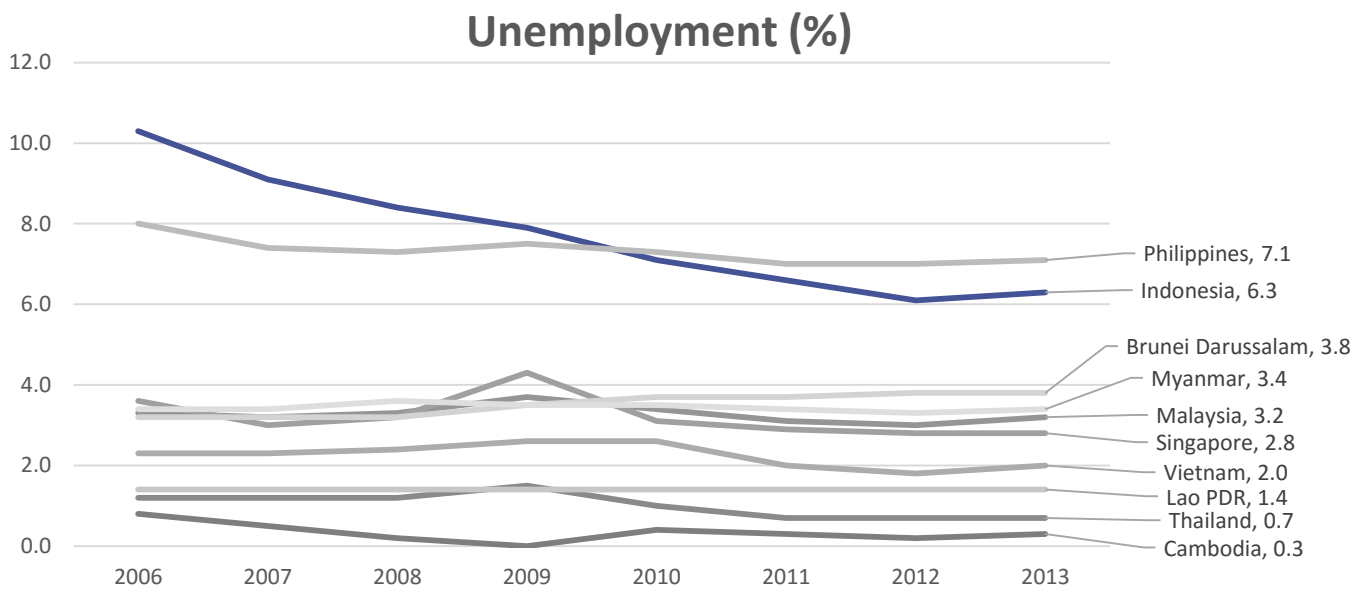
5.2%

Annual growth rate
(in 2013)

Source: ADB, World Bank, ASEAN Statistics

Performance in AEC





In AEC

623.29mn

Total population (in 2014)

4.5%

Unemployment Rate (in 2013)

Source: ADB, World Bank, ILO

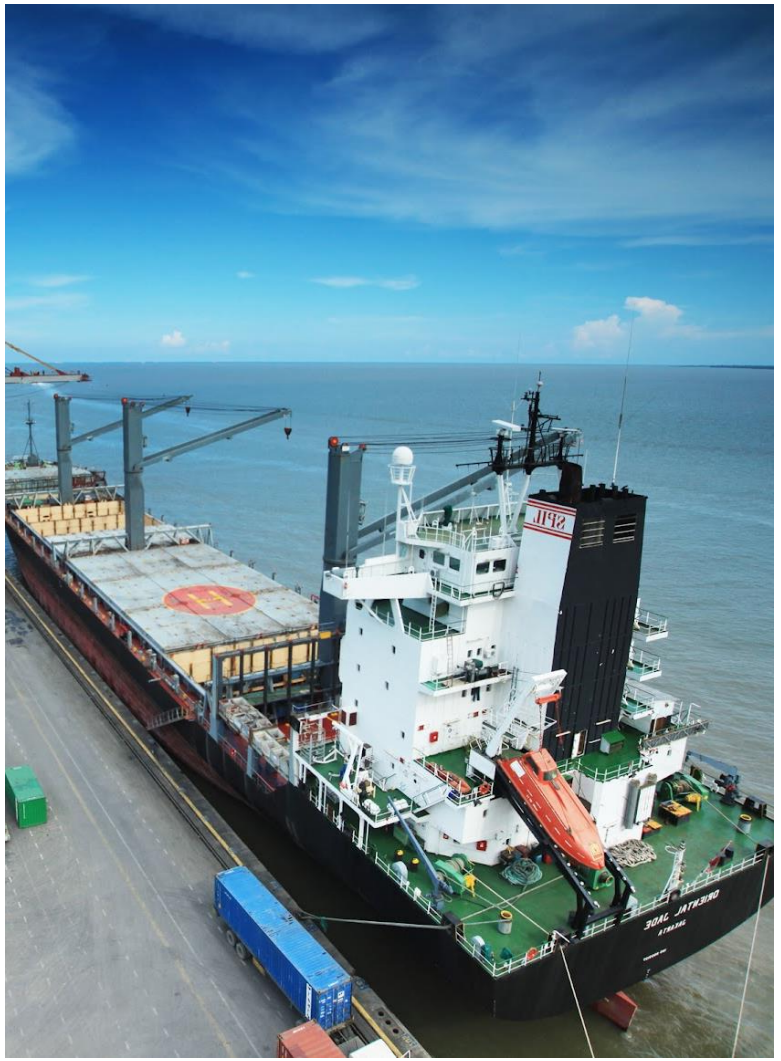
AEC's Transport Plans

"Transport system is the main factor to improve the competitiveness and to facilitate the integration with the global economy of the AEC."

Source: ASEAN Secretariat

AEC's Transport Plans: Maritime

- **47 seaports built across ASEAN by 2015**
  - With 16 ports will be built in Indonesia
  - Good points:
    - Government starts to improve the ports
    - Possibility of long-term expansion
  - Bad points:
    - Uncompetitive rate (due to extra fuel charge)
    - Poor supporting infrastructure and unreliable power supply



Source: Muhammad Asrofi, "2015 ASEAN connectivity and its implication for Indonesian ports and logistics infrastructure," 2011

AEC's Transport Plans: Air

- **ASEAN Open Skies policy in 2015**
  - Liberise the aviation market in ASEAN region
  - Good point: gain more passengers into countries
  - Bad point: Lack of infrastructure capacity

Source: Saraswati and Hanaoka, "Aviation Policy in Indonesia and Its Relation to ASEAN Single Aviation Market," 2013.

Remarkable Note

- **Lack of adequate infrastructure**
- Major bottleneck for private investment
- Not enough government finance to fund the infrastructure investment

Source: Master Plan on ASEAN Connectivity


Terima kasih