

## Indonesia

### Country spotlight

Population (million) (World Bank, 2016a):	258
Urban population (% of total) (World Bank, 2016b):	54%
GDP per capita (2014 USD/year) (World Bank, 2016c):	3 300
Average price gasoline and diesel (USD cent per L, 2014) (GIZ, 2015):	93; 80
Fuel tax class (2014) (GIZ, 2015):	taxed fuel price for petroleum fuels

Page | 1

In 2015, about 960 000 LDVs were sold in Indonesia (IHS Markit, 2016). The on-road LDV stock totalled more than 9 million vehicles (IEA, 2016a). LDV ownership was 0.034 per capita. This is higher than India's ownership level, but still more than ten times lower than the average European ownership level. In 2015, fuel price subsidies were abolished in Indonesia (The Economist, 2015). The low crude oil price masked the impact on fuel prices at the filling station. As a result, prices for diesel in 2015 were even lower than the year before, when diesel was still subsidised. Indonesia has no fuel economy regulations to date.

### Market profile and vehicle characteristics

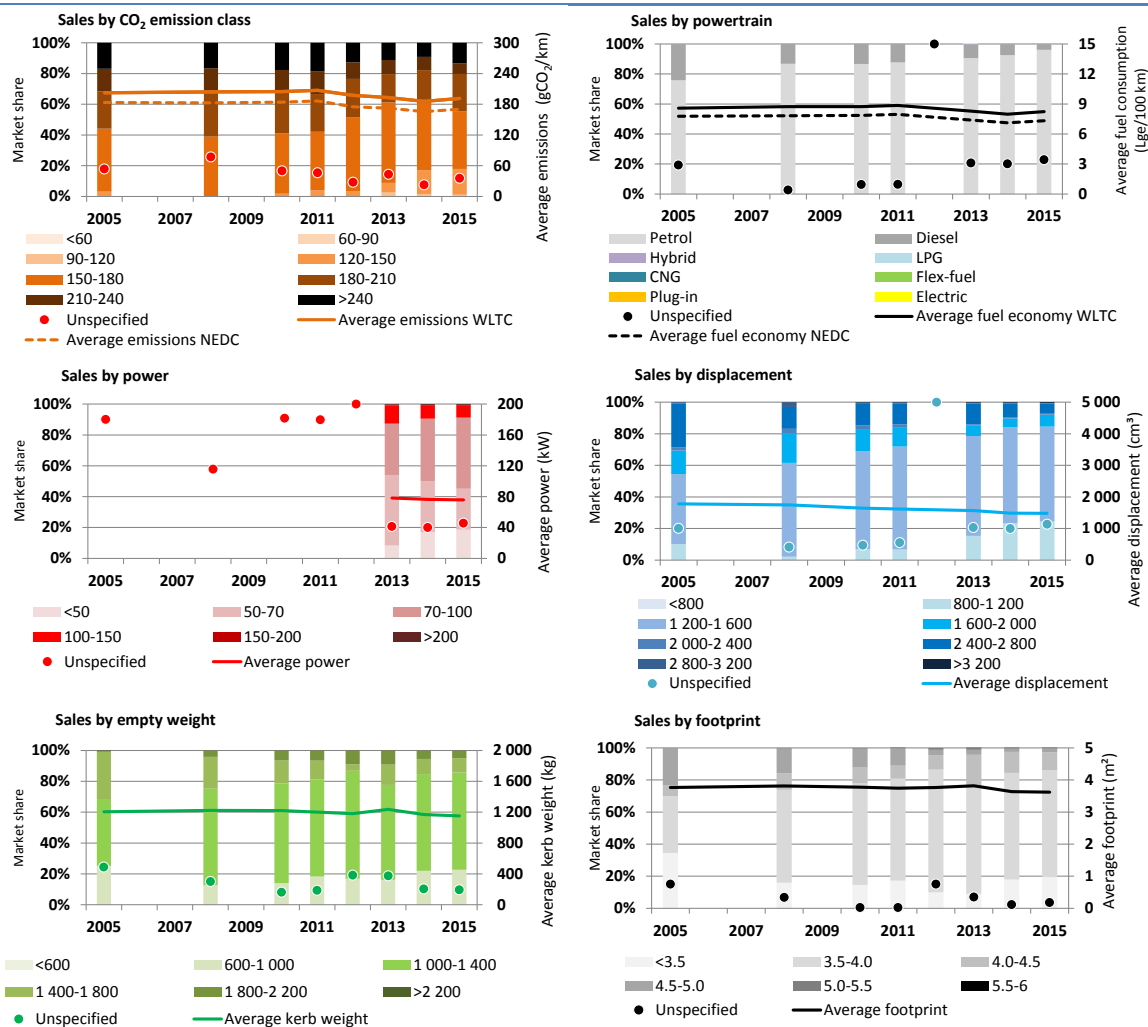
After significant growth in Indonesia's LDV market up to 2013, almost 20% fewer LDVs were registered in 2015 compared with 2013, amounting to 960 000 vehicles registered (IHS Markit, 2016). In the same year, Indonesia's LDV production fell by almost 15% to 1 million vehicles (OICA, 2016). Japanese OEMs, such as Toyota, Daihatsu and Honda, represented the major part of Indonesia-produced LDVs through 2015.

Average specific CO<sub>2</sub> emissions for new LDVs increased between 2014 and 2015 to 190 g CO<sub>2</sub>/km, after a downward trend between 2011 and 2013. The market diverged, with higher market shares for vehicles emitting 120-150 g CO<sub>2</sub>/km and heavy emitters (vehicles that emit more than 180 g CO<sub>2</sub>/km). In 2015, average fuel economy experienced the same trend reversal as CO<sub>2</sub> emissions. The Indonesian LDV market has been dominated by gasoline-fuelled vehicles. After 2012, the market share of diesel gradually began to erode. The lack of policy action is consistent with little signs of a market growth for more advanced powertrains.

New data for the most recent years enable insights into the market share by average power and displacement in the Indonesian LDV market. As opposed to most other countries in this study, average power declined between 2013 and 2015, to 76 kW. Nonetheless, average power in Indonesia was still around 25% higher than the average of newly registered LDVs in India. The share of low-powered engines (less than 50 kW) rose, while engines with 100 kW are gaining market shares. Average displacement also declined, falling to 1.5 L in 2015. Furthermore, smaller engines (0.8-1.2 L) are on the rise, while engines of more than 1.6 L are losing market share. A reason for this shift could be the greater affordability of smaller vehicles for a larger group of people.

After a small peak in 2013, the average weight of newly registered Indonesian LDVs dropped to below 1 200 kg per vehicle. Heavy LDVs lost market share, while medium weight (1 000-1 400 kg) LDVs became gained market share. The average footprint also fell after 2013 to 3.6 m<sup>2</sup> in 2015.

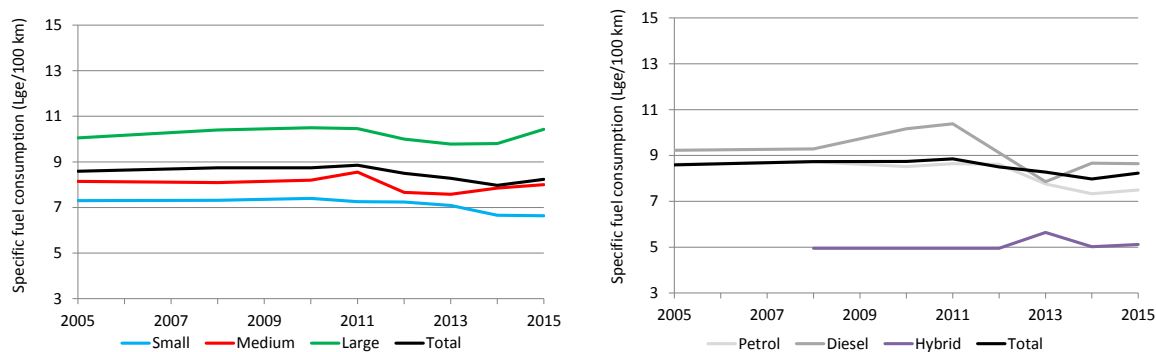
Figure 1 • LDV market by g CO<sub>2</sub>/km, powertrain, power, displacement, weight and footprint, Indonesia, 2005-15



Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

### Analysis of fuel economy trends

Figure 2 • Average new LDV fuel consumption per km by vehicle segment and powertrain, Indonesia, 2005-15



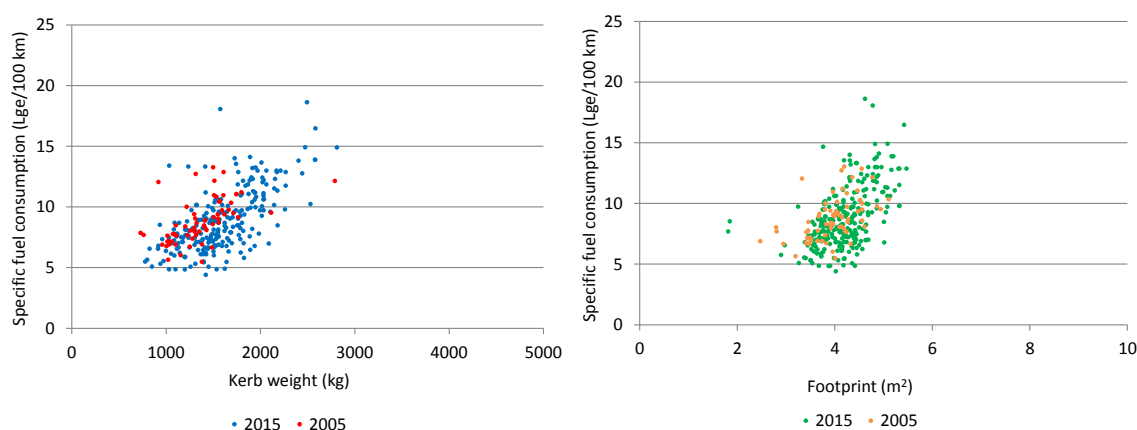
Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

The worsening of average fuel economy in 2015 can be attributed to developments in the medium and large vehicle segments (Figure 2, left). Small LDVs saw an improving average fuel economy after This summary is taken from GFEI Working Paper 15. For more complete information and references, see <https://www.globalfuelconomy.org/data-and-research/publications/gfei-working-paper-15>

2010, although the improvement rate was modest between 2014 and 2015. The fuel economy of hybrids was far ahead of that of the conventional fuel types (Figure 2, right), and the volatility of average fuel economy in diesels was a result of very low market shares in all years.

As in India, the number of LDV models shown in the graphs of specific fuel consumption as a function of weight or footprint (Figure 3) was much lower for Indonesia than for OECD countries or China. Indonesia showed a slight vertical movement, corresponding to improvements in fuel economy, between 2005 and 2015, but this trend is less clear than for India. No clear trend is observed on the right-hand side of Figure 3, implying limited uptake of efficient technology over time.

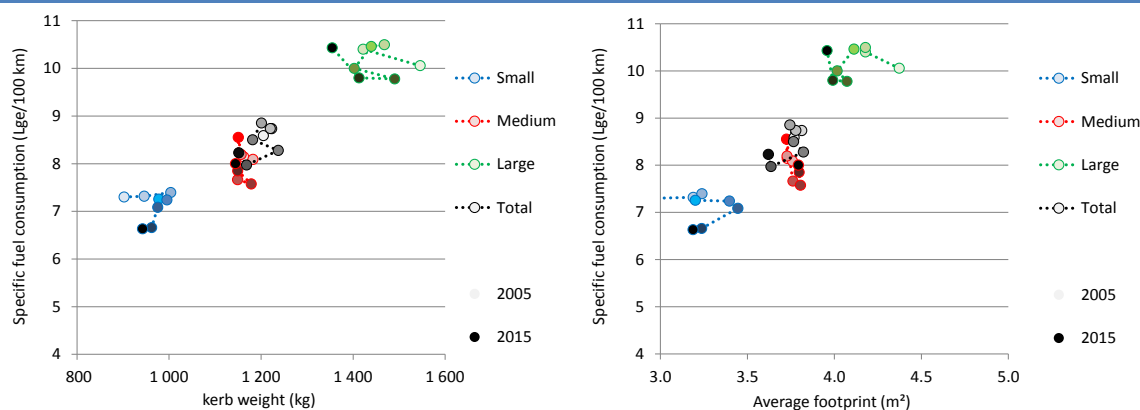
**Figure 3 • Fuel consumption per km of new LDVs plotted against vehicle weight and footprint, Indonesia, 2005 and 2015**



Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

The absence of a fuel economy standard generates stagnating or erratic trends of vehicle fuel economy developments against weight and footprint (Figure 4).

**Figure 4 • Average new LDV fuel consumption per km by segment plotted against vehicle weight and footprint, Indonesia, 2005-15**



Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

## References

GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) (2015), *International Fuel Prices 2014 – Data Preview*, [www.giz.de/expertise/downloads/giz-2015-en-ifp2014.pdf](http://www.giz.de/expertise/downloads/giz-2015-en-ifp2014.pdf).

IEA (International Energy Agency) (2016a), “Technology and policy drivers of the fuel economy of new light-duty vehicles: comparative analysis across selected automotive markets”, GFEI Working

paper 12, OECD/IEA, Paris, [www.globalfueleconomy.org/data-and-research/publications/gfei-working-paper-12](http://www.globalfueleconomy.org/data-and-research/publications/gfei-working-paper-12).

IHS Markit (2016), *Vehicle Registrations and Other Characteristics at Model Level* (database), IHS Markit.

OICA (International Organization of Motor Vehicle Manufacturers) (2016), *World Motor Vehicle Production*, [www.oica.net/category/production-statistics](http://www.oica.net/category/production-statistics).

The Economist (2015), “Indonesia’s economy: A good scrap – As Jokowi abandons wasteful fuel subsidies, fiscal prospects brighten”, The Economist, January, [www.economist.com/news/asia/21638179-jokowi-abandons-wasteful-fuel-subsidies-fiscal-prospects-brighten-good-scrap](http://www.economist.com/news/asia/21638179-jokowi-abandons-wasteful-fuel-subsidies-fiscal-prospects-brighten-good-scrap)

World Bank (2016a), *World Bank Open Data, World Development Indicators: Population Dynamics*, <http://databank.worldbank.org/data/reports.aspx?source=health-nutrition-and-population-statistics>.

World Bank (2016b), *World Bank Open Data, Urban population (% of total)*, <http://databank.worldbank.org/data/reports.aspx?source=health-nutrition-and-population-statistics>.

World Bank (2016c), *World Bank Open Data, GDP per capita (current USD)*, [http://databank.worldbank.org/data/reports.aspx?Code=NY.GDP.PCAP.CD&id=af3ce82b&report\\_name=Popular\\_indicators&populartype=series](http://databank.worldbank.org/data/reports.aspx?Code=NY.GDP.PCAP.CD&id=af3ce82b&report_name=Popular_indicators&populartype=series).