Russian Federation

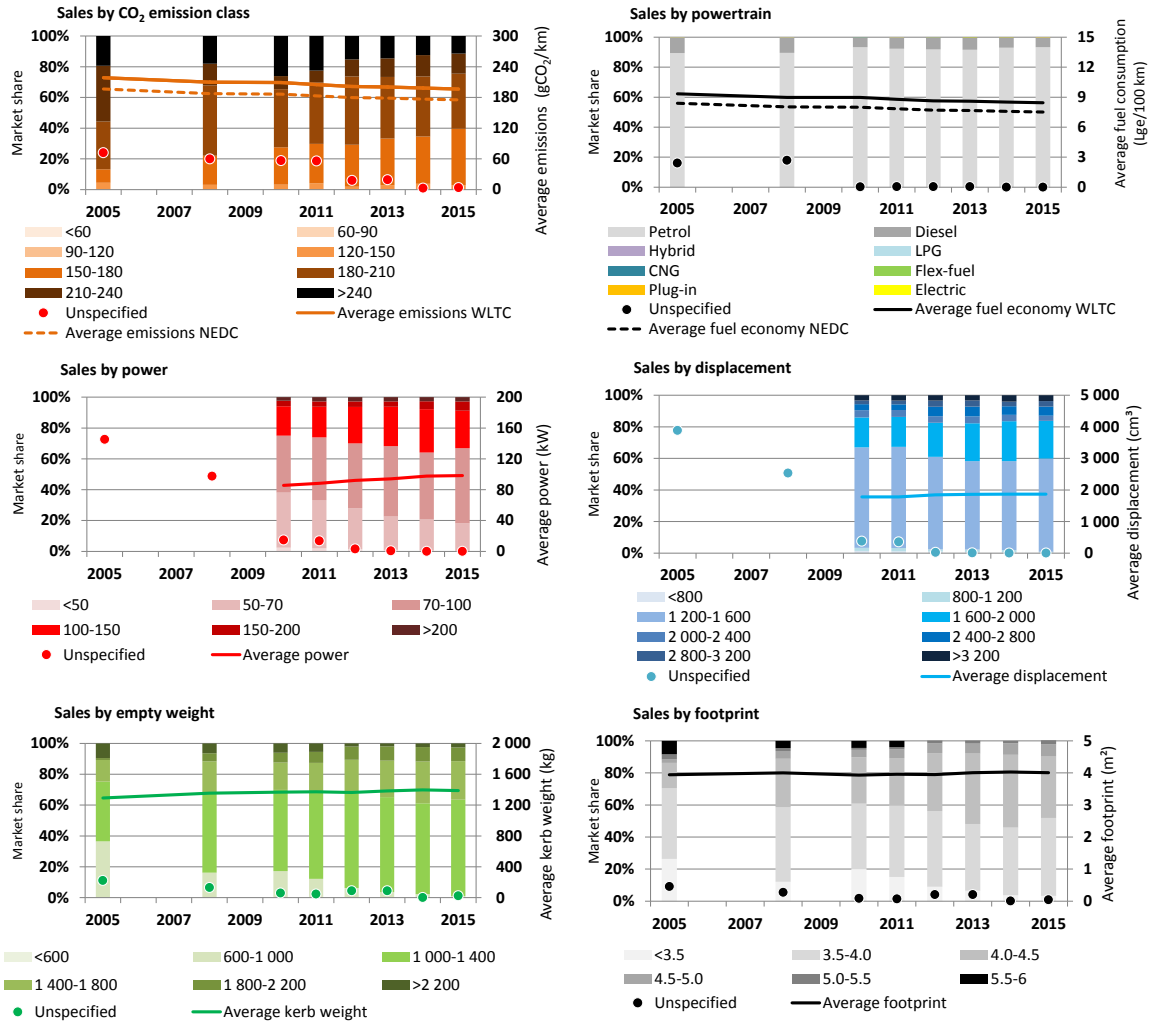
Country spotlight

Population (million) (World Bank, 2016a):	144
Urban population (% of total) (World Bank, 2016b):	74%
GDP per capita (2014 USD/year) (World Bank, 2016c):	9 100
Average price gasoline and diesel (USD cent per L, 2014) (GIZ, 2015):	75; 81

Fuel tax class (2014) (GIZ, 2015): subsidised fuel price for petroleum fuels

In 2015, new LDV registrations in the Russian Federation totalled about 3 million (IHS Markit, 2016). The on-road stock of LDVs is estimated at 34 million in the same year (IEA, 2016a). LDV ownership attained nearly 0.24 LDVs per capita, which is much higher than the average for other countries with comparable levels of personal income. Fuel economy is not regulated in the Russian Federation. However, the Russian Federation levies an annual circulation tax on vehicle owners, which increases progressively with vehicle power (Ernst & Young, 2010).

Figure 1 ● LDV market by g CO_2/km, powertrain, power, displacement, weight and footprint, Russian Federation, 2005-15



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

This summary is taken from GFEI Working Paper 15. For more complete information and references, see https://www.globalfueleconomy.org/data-and-research/publications/gfei-working-paper-15

Market profile and vehicle characteristics

The Russian Federation faced economic difficulties after 2012, which were also reflected in the LDV market. In 2013, more than 2.7 million new vehicles were registered, close to the 2008 record of 3 million vehicles (IHS Markit, 2016). In 2015, registrations dropped to fewer than 1.5 million, which represented a contraction of more than 40% in just two years. LDV production also fell by 27% to 1.3 million vehicles between 2014 and 2015 (OICA, 2016). For the first time, Lada did not have the largest market share, which was taken over by Hyundai Kia.

Average CO_2 emissions of newly registered LDVs have slowly decreased, falling to 175 g CO_2/km in 2015. The market share of the 150-180 g CO_2/km segment increased by 50% in five years, while that of high-emission vehicles (>240 g CO_2 per vehicle) halved during the same period. Gasoline engines have been the main powertrain in the Russian LDV market. In 2015, 93% of new LDV registrations were powered by a gasoline-fuelled engine.

Between 2010 and 2015, new LDV engines became 15% more powerful, a trend that decelerated in the last year. High-power engines (more than 150 kW) increased their market share at the expense of smaller 50-70 kW engines. During the same period, average engine displacement grew by 5%. By contrast, European Union countries saw growing engine power at the same time as downsizing engine displacement.

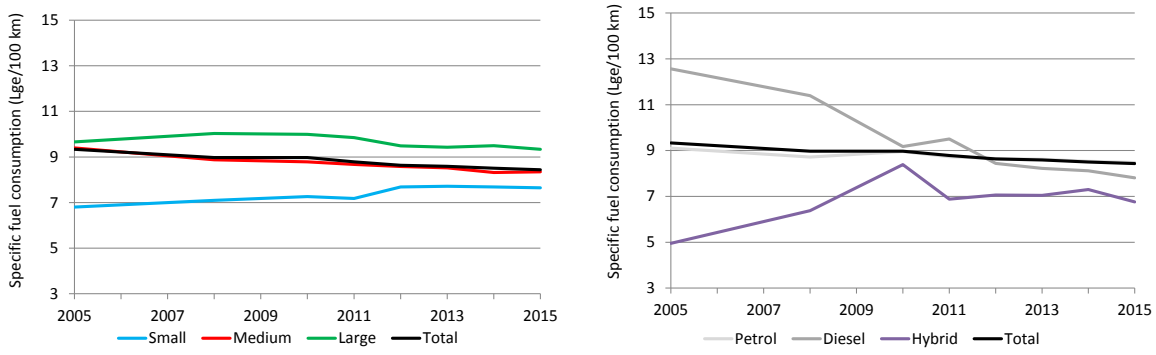
Average vehicle weight in the Russian LDV market fluctuated between 1 350 kg and 1 400 kg, which was higher than most non-OECD countries. The average LDV footprint hovered at around 4 m^2. Market share data indicate a movement towards the middle segment, with less than 10% outside 3.5-4.5 m^2.

Analysis of fuel economy trends

From 2010, large vehicles experienced improving specific fuel consumption, with stagnation between 2012 and 2015 (Figure 2, left). Medium-sized LDVs have seen a continuous decrease in specific fuel consumption since 2005, in line with the total average fuel economy. Newly registered small LDVs saw a deteriorating average fuel economy for most of the years since 2005. However, from 2012 onward this trend reversed, with a minor move towards improvement.

Specific fuel consumption by powertrain also demonstrated contradicting trends (Figure 2, right). While diesels saw improving fuel economy, hybrid vehicles worsened. The trend seen in gasoline LDVs was reflected in total specific fuel consumption due to their high market share.

Figure 2 ● Average new LDV fuel consumption per km by vehicle segment and powertrain, Russian Federation, 2005-15

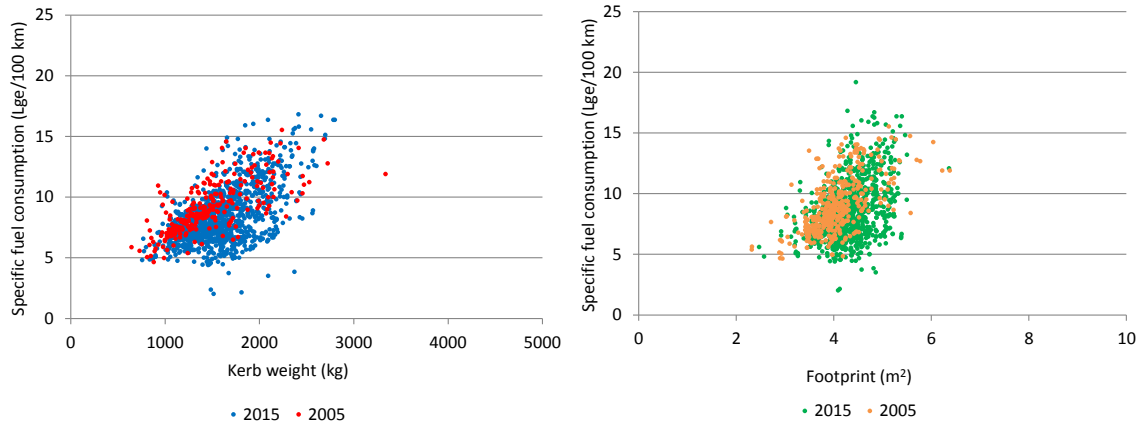


Source: IEA elaboration and enhancement for broader coverage of IHS Markit database.

Despite a slowdown in the improvement of average fuel consumption, clear improvement is evident in specific fuel consumption of vehicle models with the same weight between 2005 and 2015. The

graph comparing LDV footprint with specific fuel consumption shows LDV models with a larger footprint experiencing limited specific fuel consumption improvement in 2015 compared with 2005.

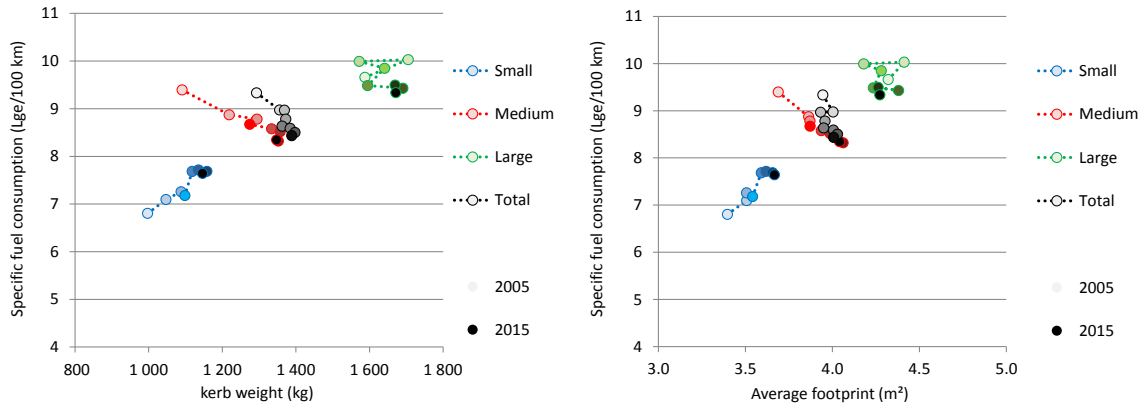
Figure 3 ● Fuel consumption per km of new LDVs plotted against vehicle weight and footprint, Russian Federation, 2005 and 2015



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

The contradicting trends described above are evident in different vehicle segments (Figure 4, left). Since 2010, all vehicle types gained weight, and small LDVs experienced deteriorating specific fuel consumption, while medium LDVs saw improving average fuel economy. Newly registered large LDVs gained some weight between 2010 and 2015, but average fuel economy did not change. The absence of fuel economy regulations is consistent with contradicting trends in the Russian LDV market.

Figure 4 ● Average new LDV fuel consumption per km by segment plotted against vehicle weight and footprint, Russian Federation, 2005-15



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

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This summary is taken from GFEI Working Paper 15. For more complete information and references, see https://www.globalfueleconomy.org/data-and-research/publications/gfei-working-paper-15

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