



Fuel Economy Policy Impact Tool Case Study One- Kenya.

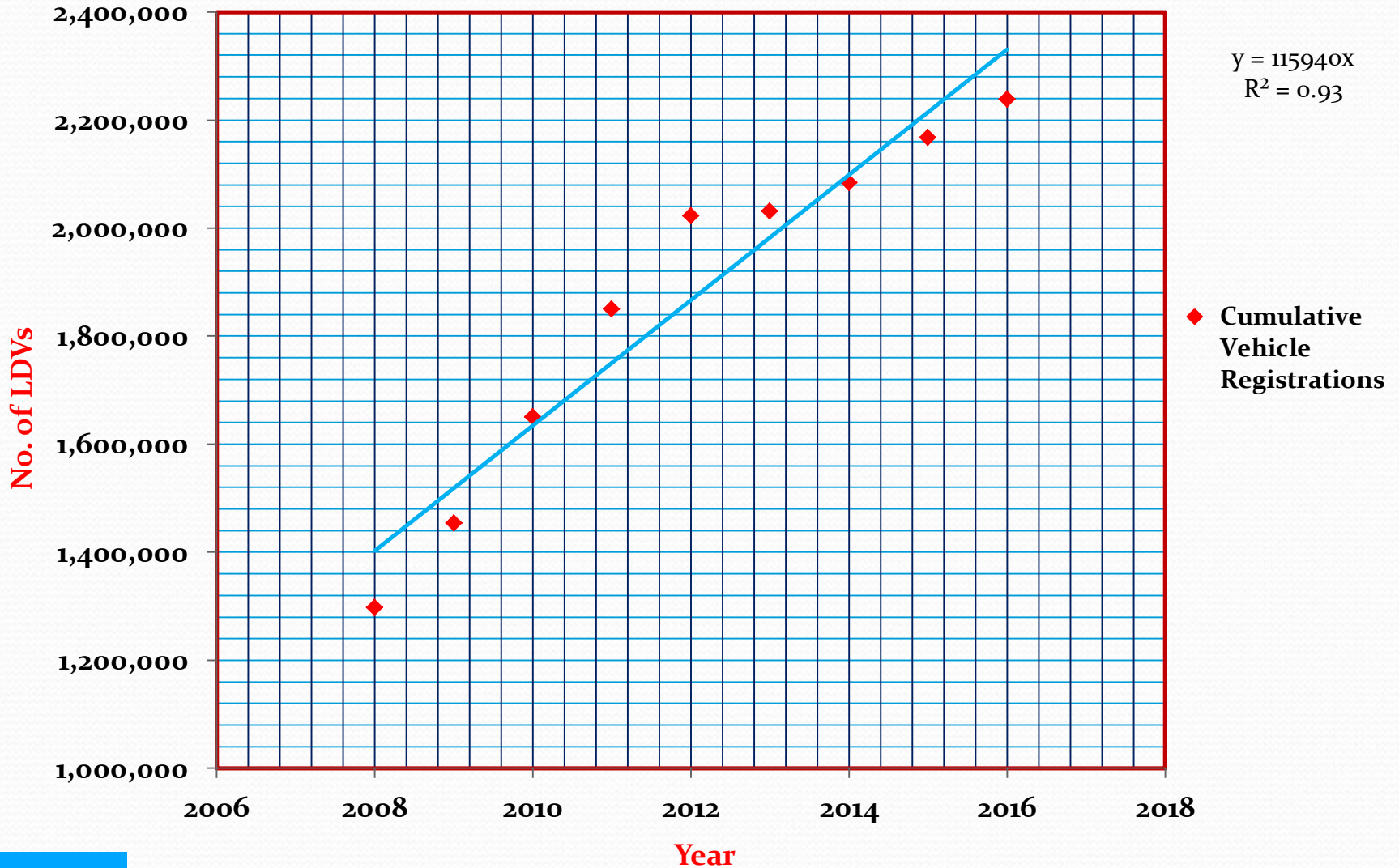
James A. Nyang'aya

13th March 2018

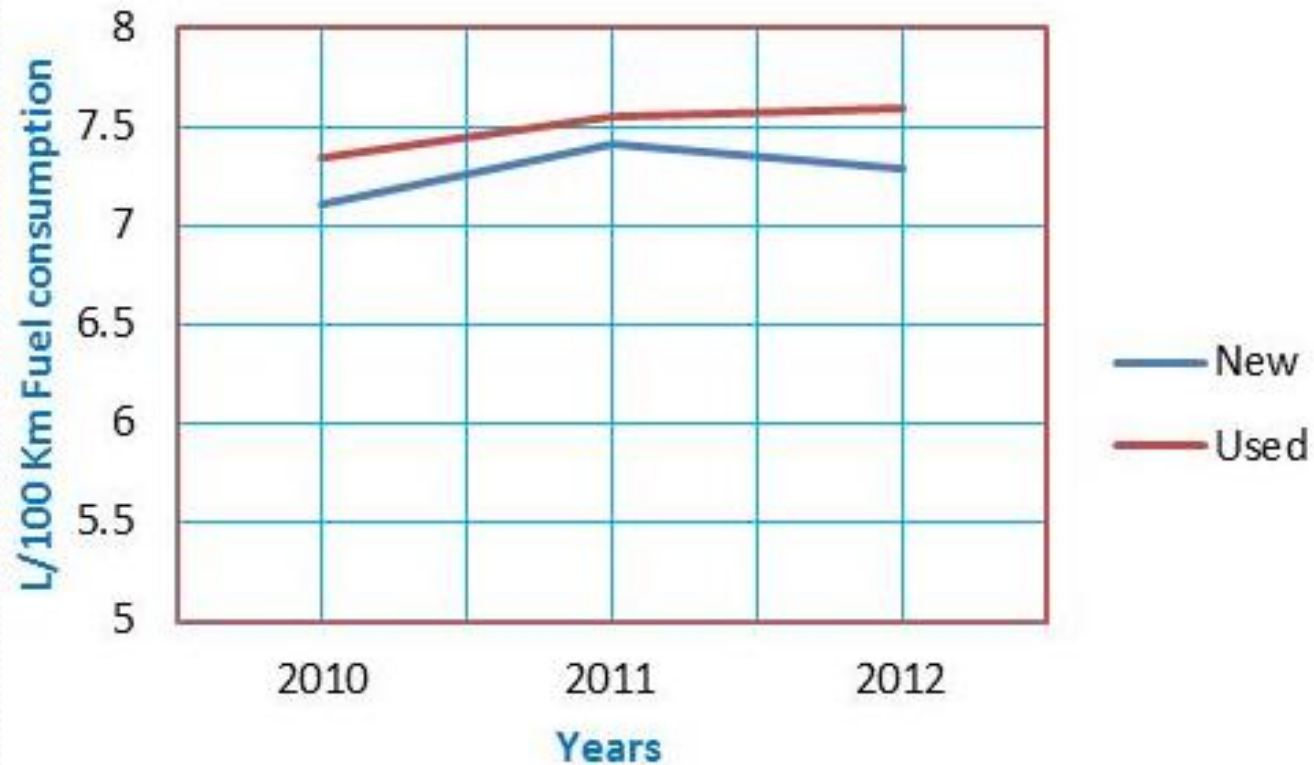
Background

- July 2013- Global Fuel Economy Initiative (GFEI), UN Environment and Energy Regulatory Commission of Kenya (ERC) launched project with University of Nairobi Enterprises and Services Limited (UNES) to highlight:
 - National inventory of vehicles
 - Average fuel economy
 - Average carbon dioxide emissions.
 - Regulations governing transport
 - Period under study: 2010-2012
 - Light Duty Vehicles (Less than 3500 kg tare weight)

Cumulative Total Vehicle registrations In Kenya



Trends in Fuel Economy



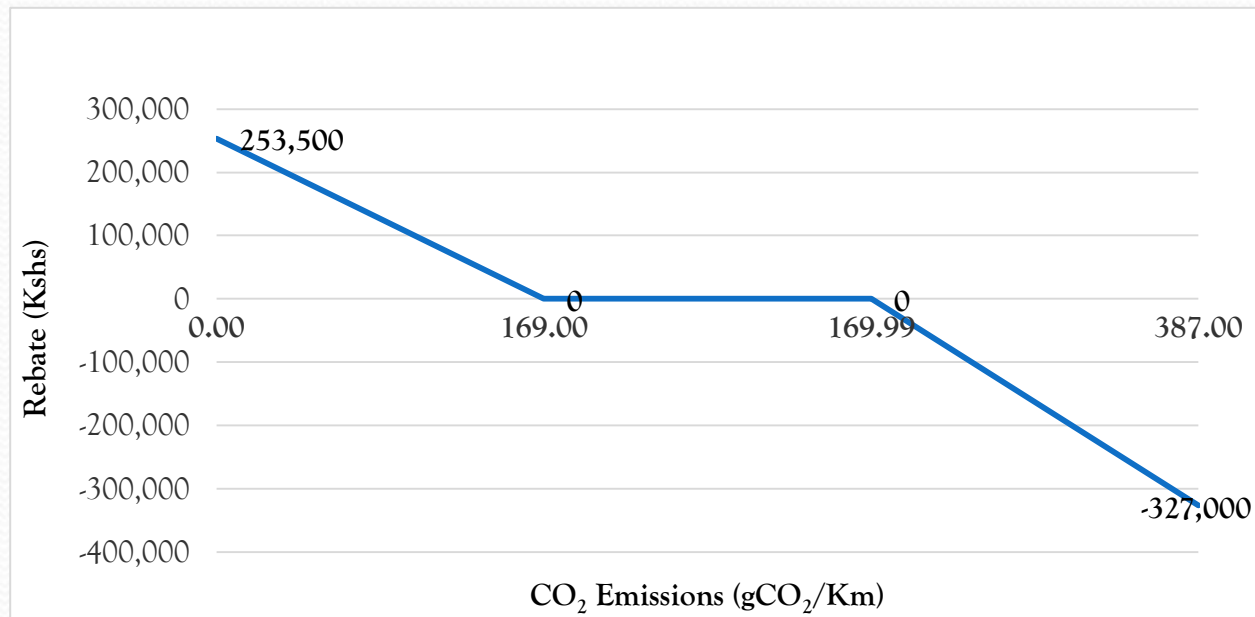
Recommendations of 2010-2012 study

- Enhanced inspection of all vehicles
- Establishment of mass transport
- Carry out health surveillance of air pollution related illnesses
- Feebate/Rebate to encourage more efficient/low emission vehicles
- Improve fuel standards

Feebate/Rebate

- June 2016, GFEI, UN Environment and ERC engaged UNES to develop Fuel Economy Labeling and Feebate Programme for LDV Fleet.
- Outcome was a recommendation of a non-continuous feebate with a benchmark at 169-169.99 g/CO₂/km
- A single rate parameter of \$15 per g CO₂/km was determined for both feebate and rebate for revenue neutrality

Proposed Feebate System for Kenya



Fuel Economy Labeling

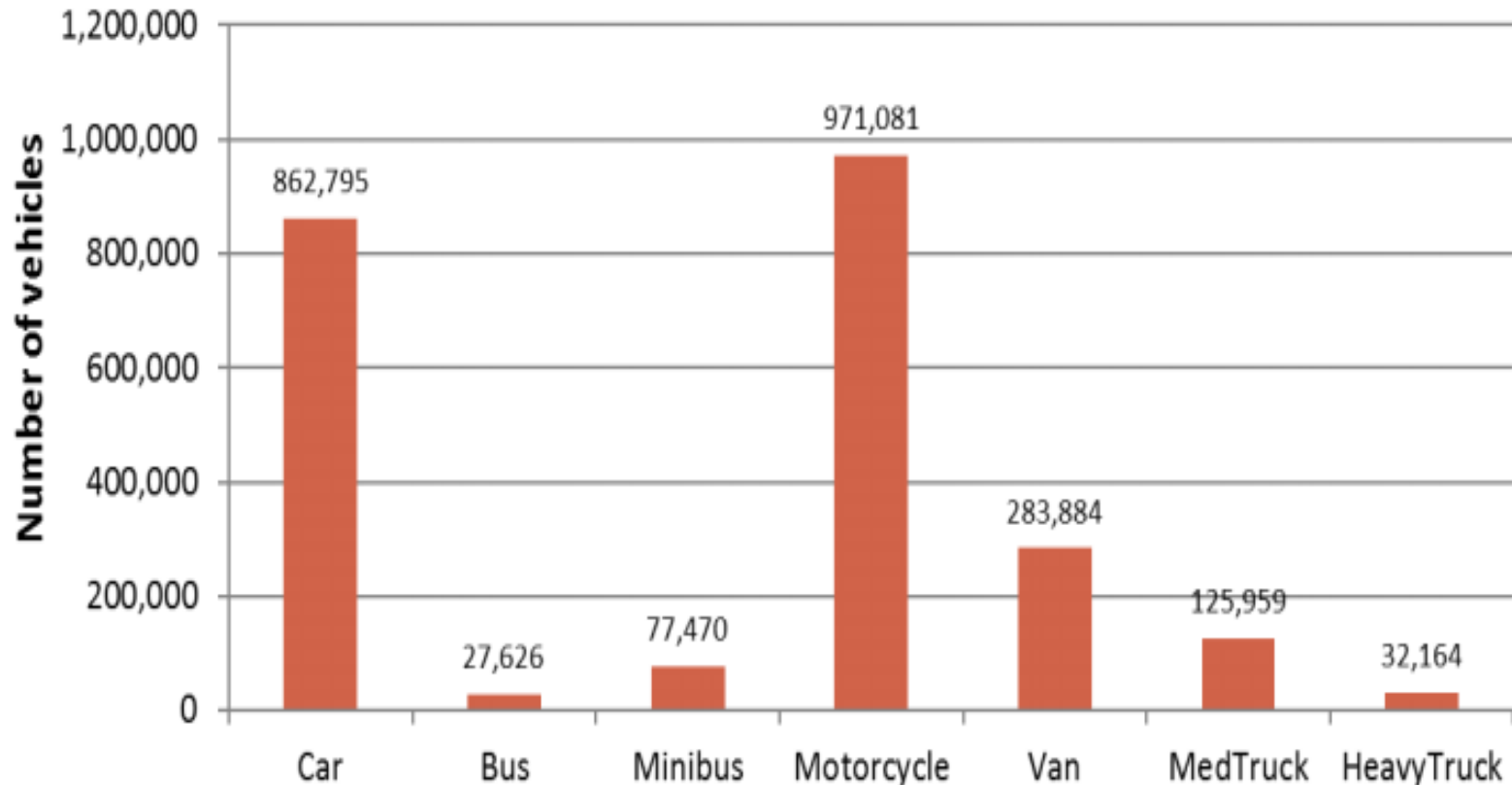
- The strategy functions through ‘Education and Information’ to encourage voluntary response.
- Fuel labels indicating the absolute fuel economy and CO₂ emission of vehicle were developed.

Update assessment of Trends

- July 2017, update study was carried out to assess trends in characteristics and performance for the period 2010-2016.
- Cumulative registration
- Fleet profile
- Age profile
- Average Fuel Economy

Current Fleet Profile

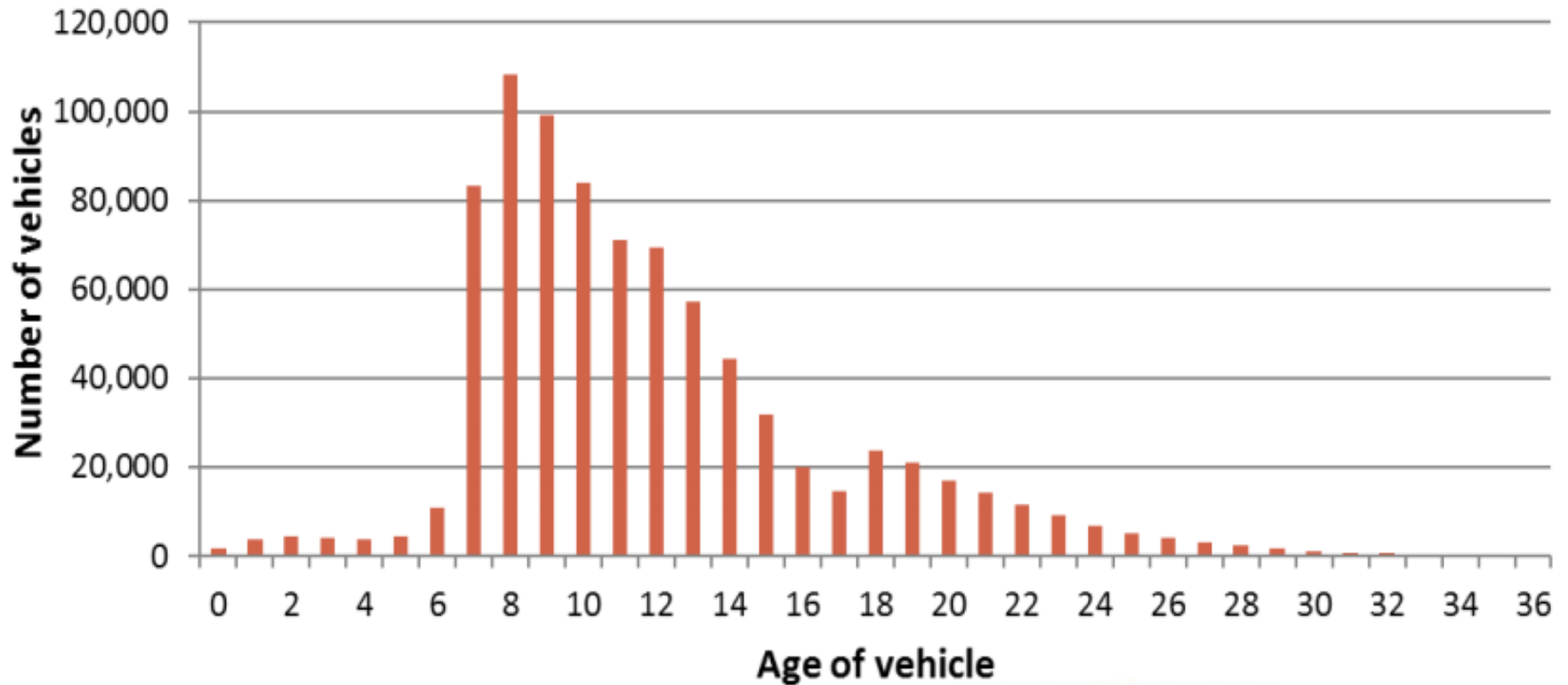
Number of vehicles by type (2016)



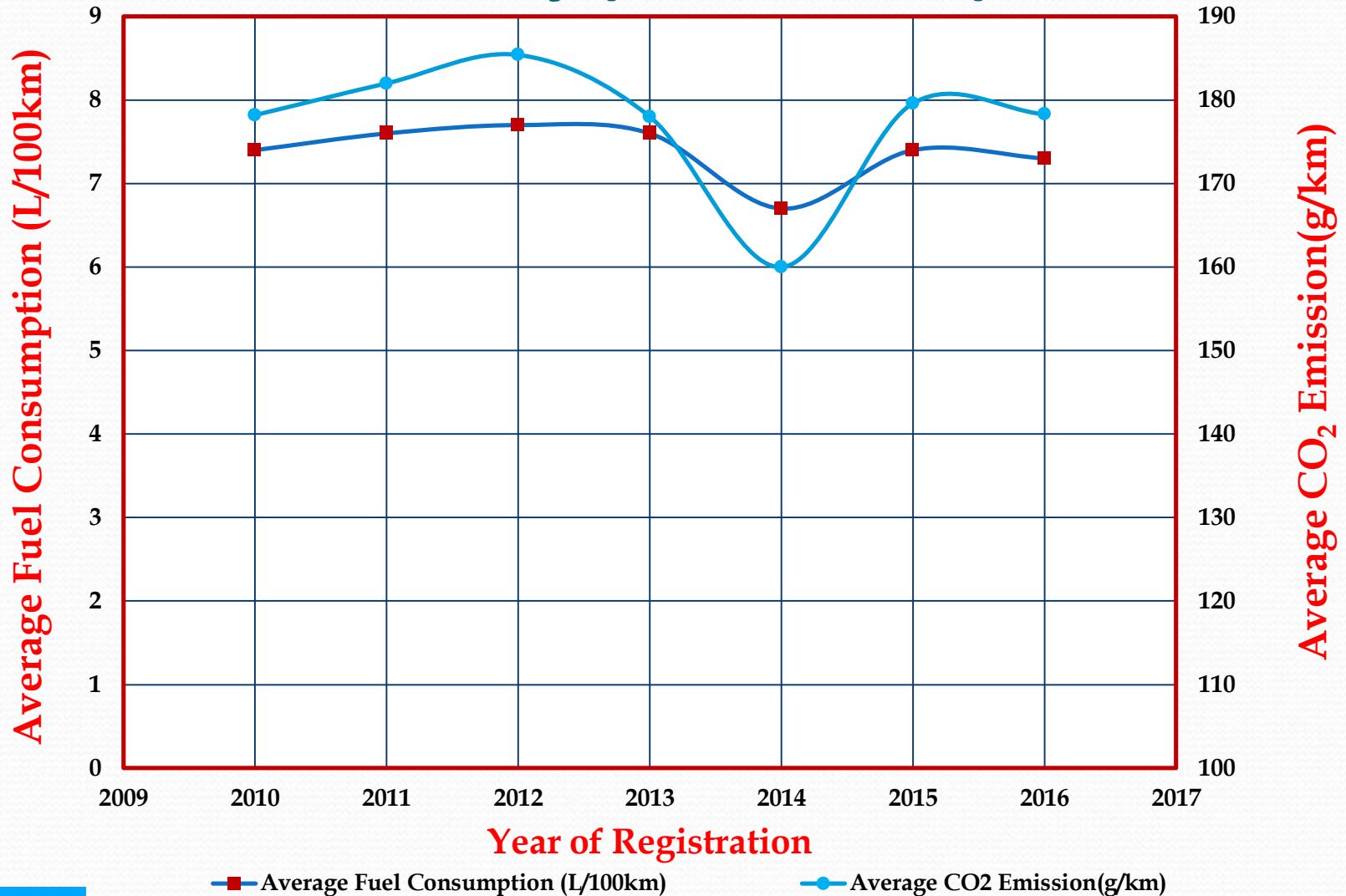
Average Private car Age

Average private car age is 11 years

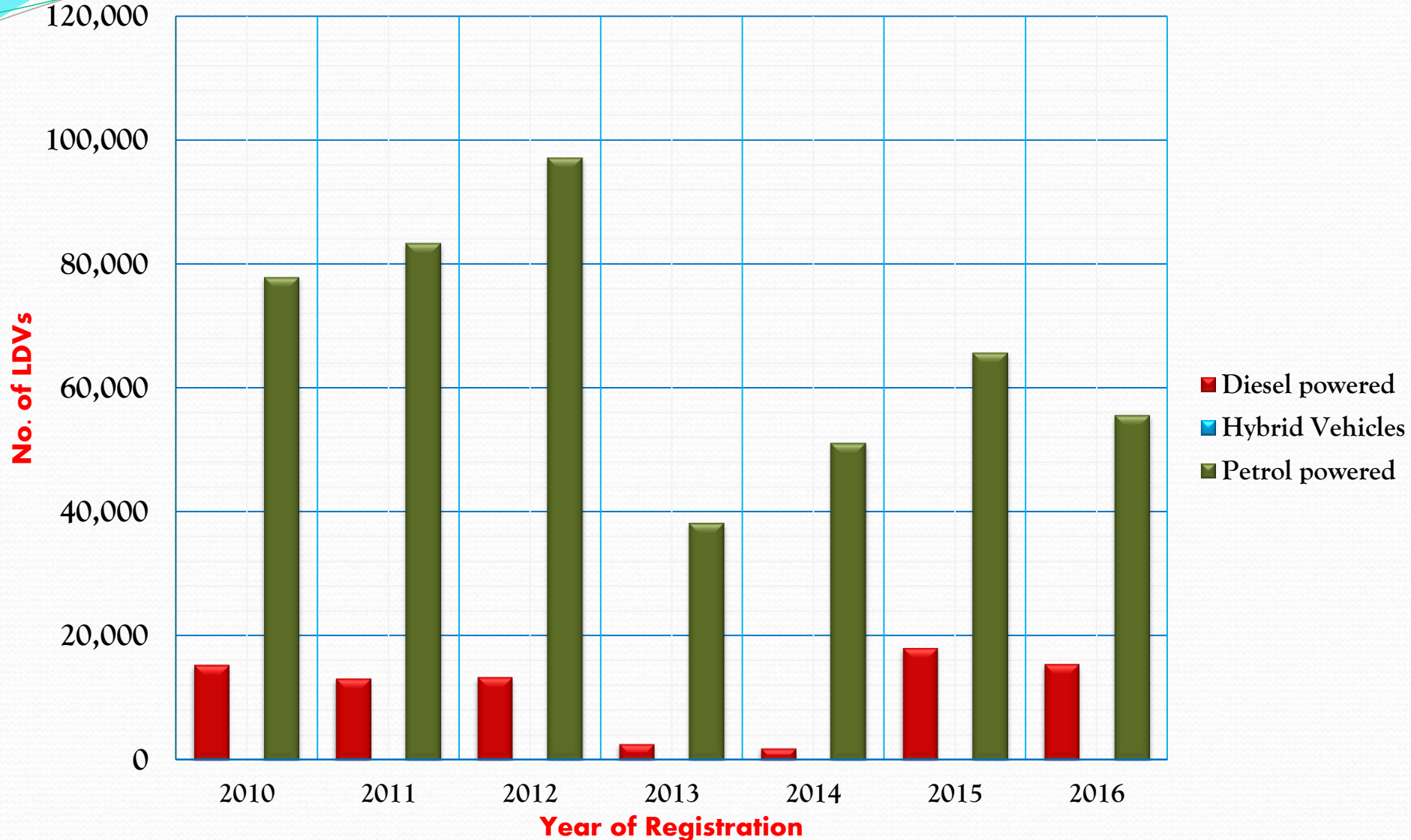
Age Profile of Cars in 2016



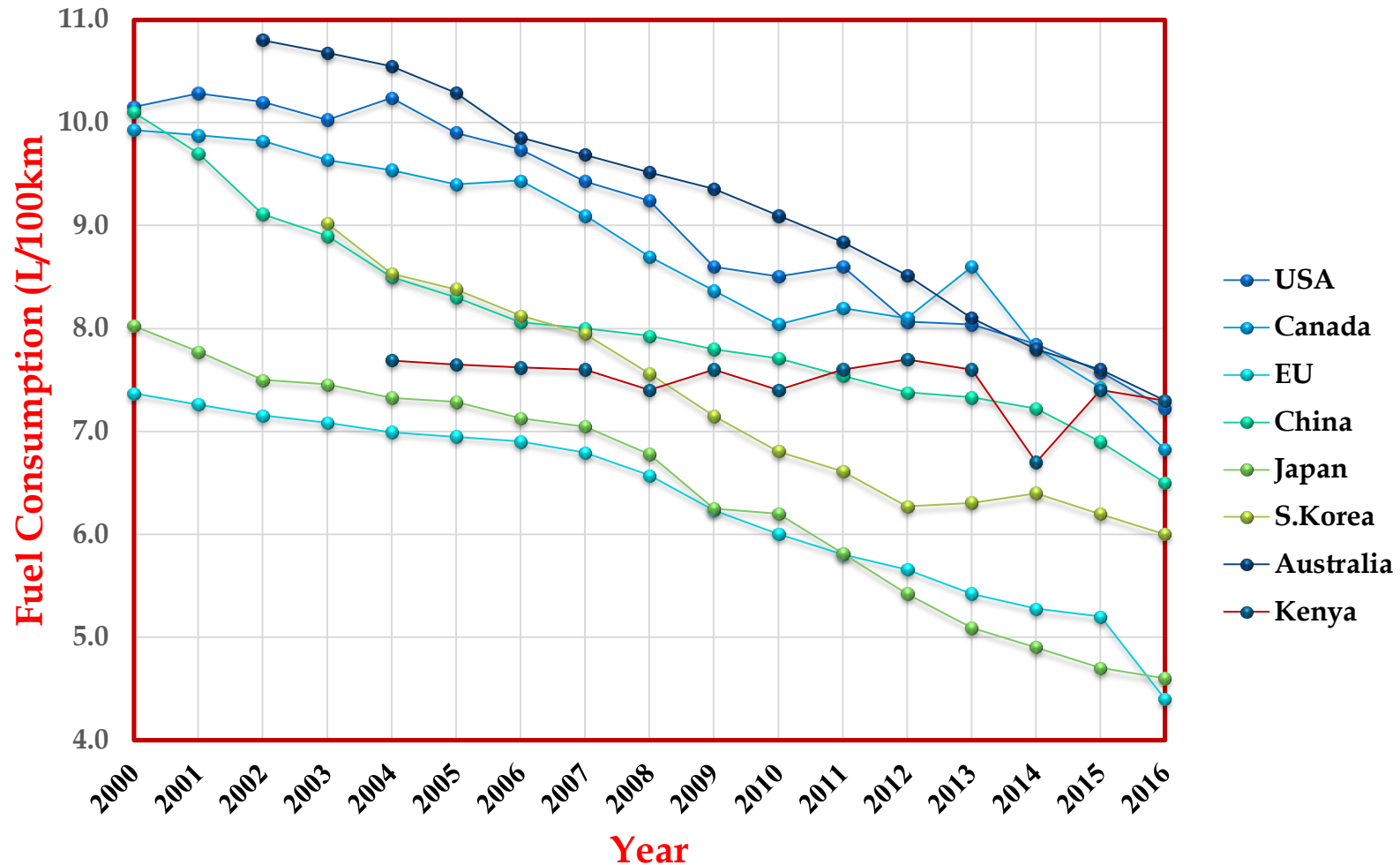
Trends in CO₂ Emission and Average Fuel Economy (2010-2016)



Registration of LDV by Fuel Type



Comparison of Average Fuel Economy (L/100km) with selected countries



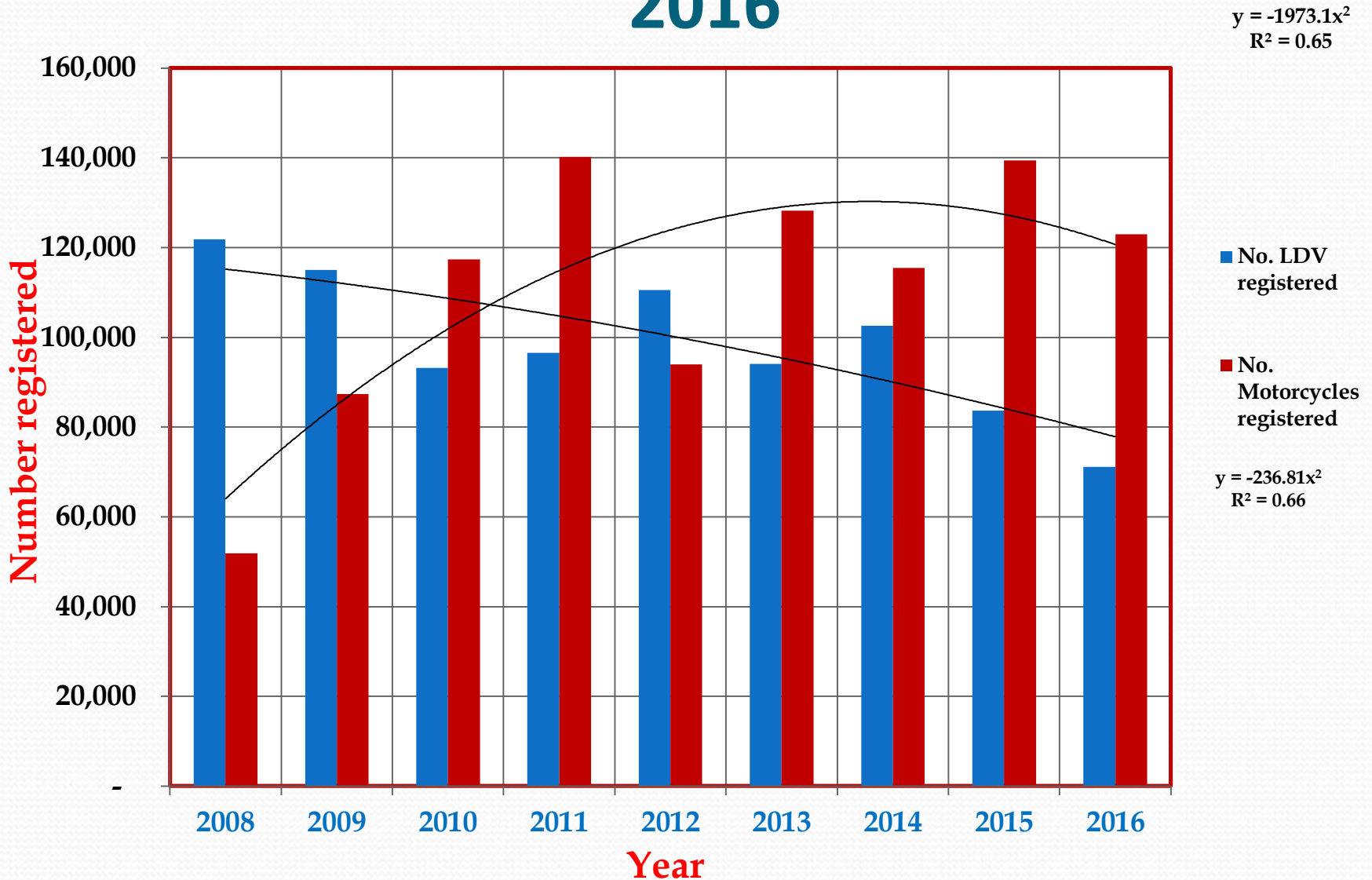
Impacts on fuel economy

- Policy scenarios considered:
 - Past trend
 - Average fuel economy target (GFEI global fuel economy target)
 - Fuel taxation

Outcome of scenarios

- For base year 2016 and projection year 2030
 - Hybrid electric cars will be 0.1% from negligible percentage in base year..
 - LDVs with fuel economy of 5-6.2 lge/100 km increases from 31.7% to 41.3%
 - Average fuel economy will decrease from 7.37 lge/100 km in base year to 6.2 lge/100 km by year 2030.

Registration of Motorcycles and LDV 2008-2016



High Motorcycle Registration

- Attributed to their convenience and accessibility as motorized transport.
- **Social cost concerns:**
 - Significant source of particulate emissions, hydrocarbons and carbon monoxide.
 - Prominent contributor to increased number of accidents.

The end

- **Thank you**