

The Role of Vehicle-kilometer (VKM) in Road Safety

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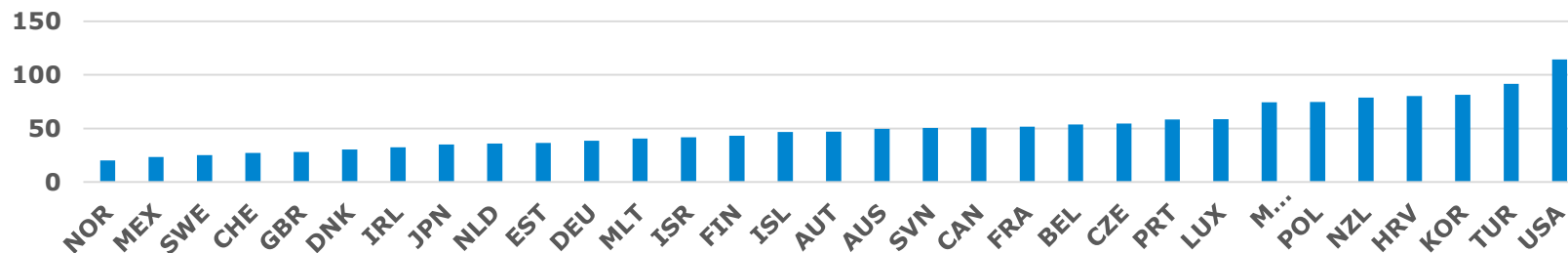
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<https://www.itf-oecd.org/>

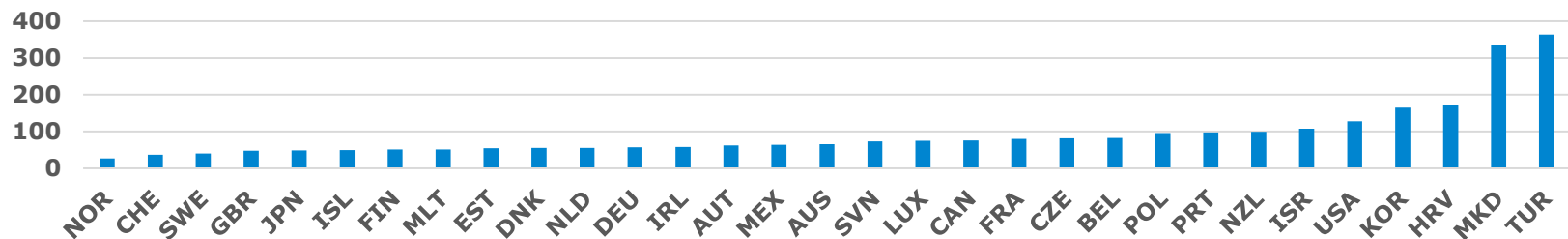
Risk Exposure measurement

A traffic accident exposure indicator is defined as the number of opportunities to cause accidents.

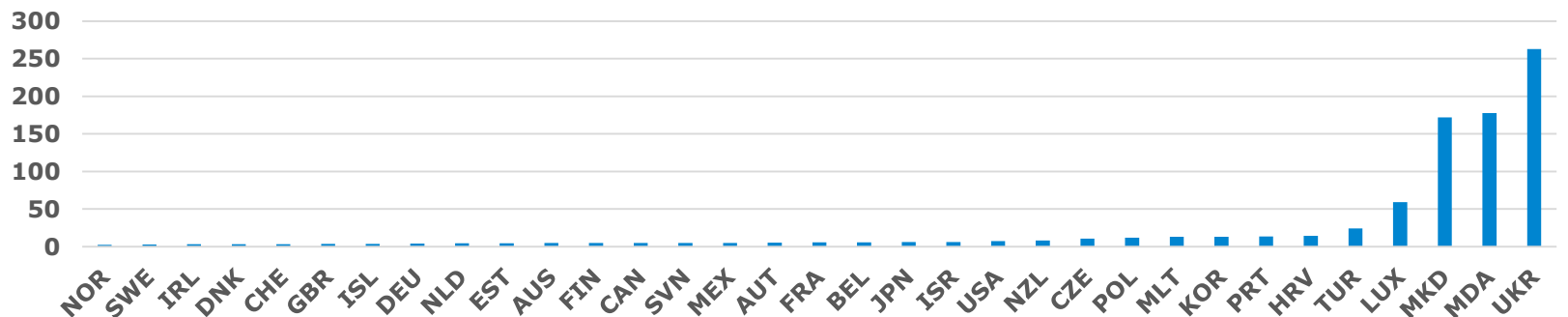
Killed/million Inhabitants



Killed /million Vehicles



Killed/million Vkm



Pros and Cons


Use of population figures

- largely available and relatively accurate, disaggregated age and gender.
- Migration, foreign visitors, etc., not always included in population censuses.

Use of number of vehicles

- Largely available but motorization levels vary according to countries
- If not on the road they represent less risks.
- Influences of foreign vehicle fleets may have to be considered.

Use of vehicles-kilometers

- Significant level of disaggregation: time, vehicle type, road type, driver...
 - Analyses on specific road safety problems (young drivers, motorcyclists, road types)
 - It can be useful for international comparisons
 - Difficult to collect
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The added value of V-km

V-km by type of roads

- Motorways
- Rural roads

V-km by type of road users

- Young drivers
- Vulnerable users
- lorries

V-km by day time

Fatalities/V-km allow an in-depth analysis of risk exposure

To conclude

Risk exposure measurement depends on the data availability and analysis type:

- Number of inhabitants: country mortality rates
- Vehicle stock: an approximation of risk exposure

To conclude

- If risk exposure is to be related to traffic then the most appropriate measures should include distance travelled (Vkm or Pkm travelled)

<https://www.itf-oecd.org/sites/default/files/docs/monitoring-progress-urban-road-safety.pdf>

- But Vkm are more difficult to collect

Thank you

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