

# CHARACTERISTICS OF SINGLE VEHICLE ACCIDENTS IN EUROPE

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## INTRODUCTION

- ❖ **Single vehicle accident (SVA)** is a type of road accident in which only one vehicle and no other road user is involved.
- ❖ Almost **one third of all road fatalities** in the EU occurred in single vehicle accidents during 2006-2015.
- ❖ In 2015, **8.066 persons** were killed in SVAs in the EU countries.

## OBJECTIVE

The objective of this research is the **analysis of characteristics of single vehicle accidents** in European countries by the use of the EU CARE database with disaggregate data on road accidents.

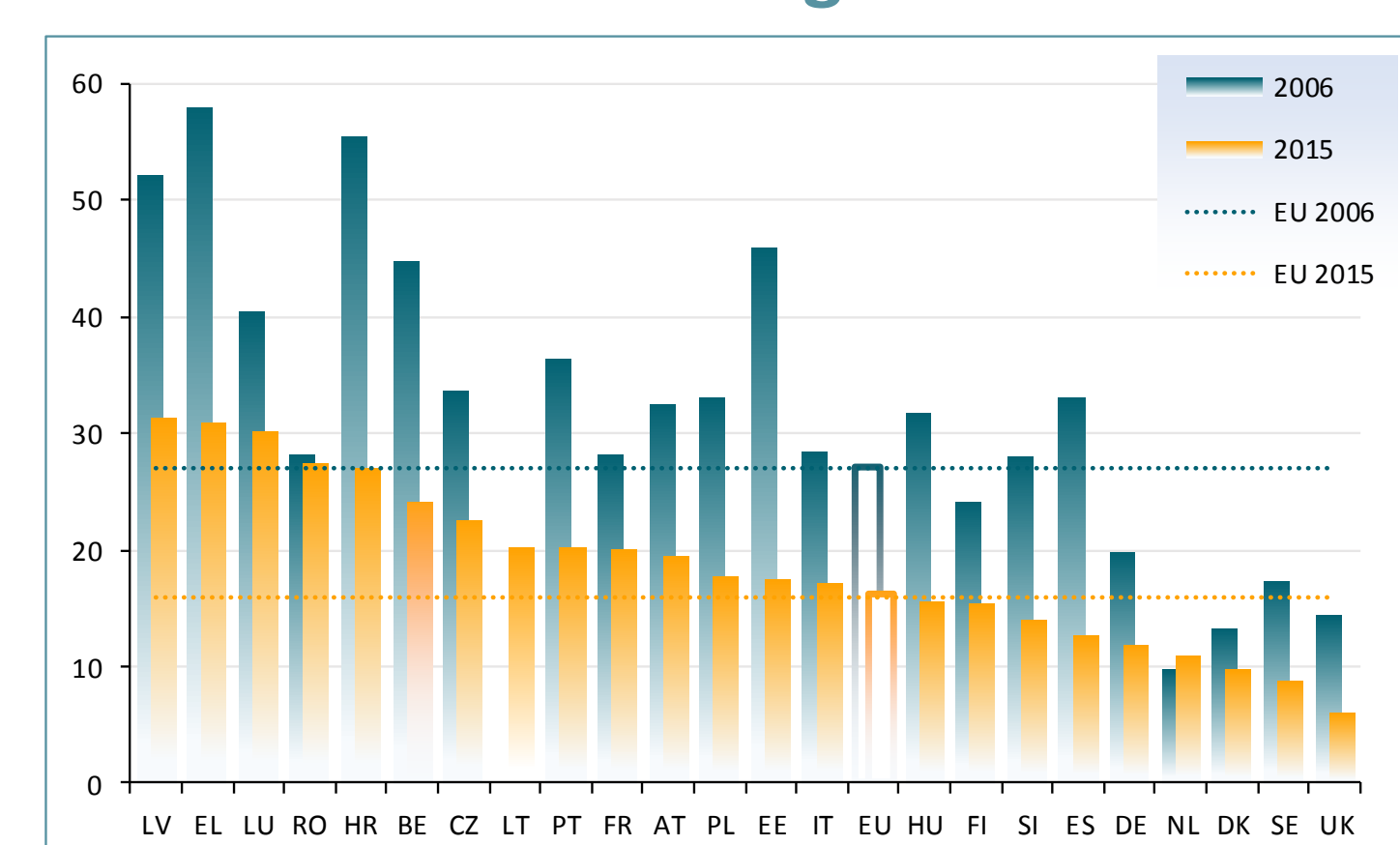
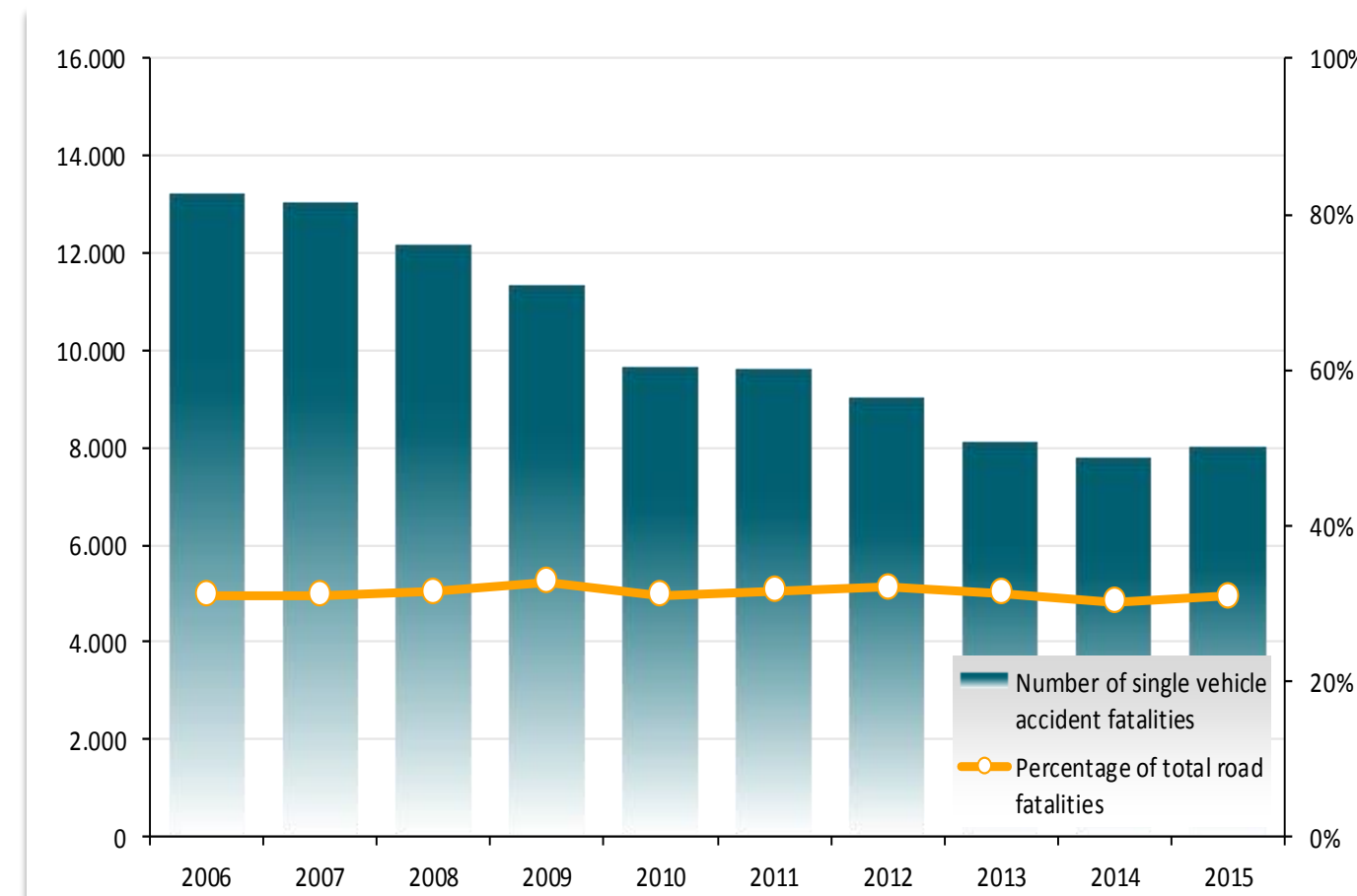
## METHODOLOGY

- ❖ Macroscopic road accident data from the **EU CARE database** for the 28 EU countries over the period 2006-2015.
- ❖ Road accident data involving SVAs correlated with **basic safety parameters**:
  - ❖ casualty age and gender
  - ❖ type of vehicle
  - ❖ area type and type of road
  - ❖ season of the year
  - ❖ lighting conditions etc.
- ❖ Available **risk exposure data** from other international data files (Eurostat, etc.).



## ROAD SAFETY TRENDS OF SVAS

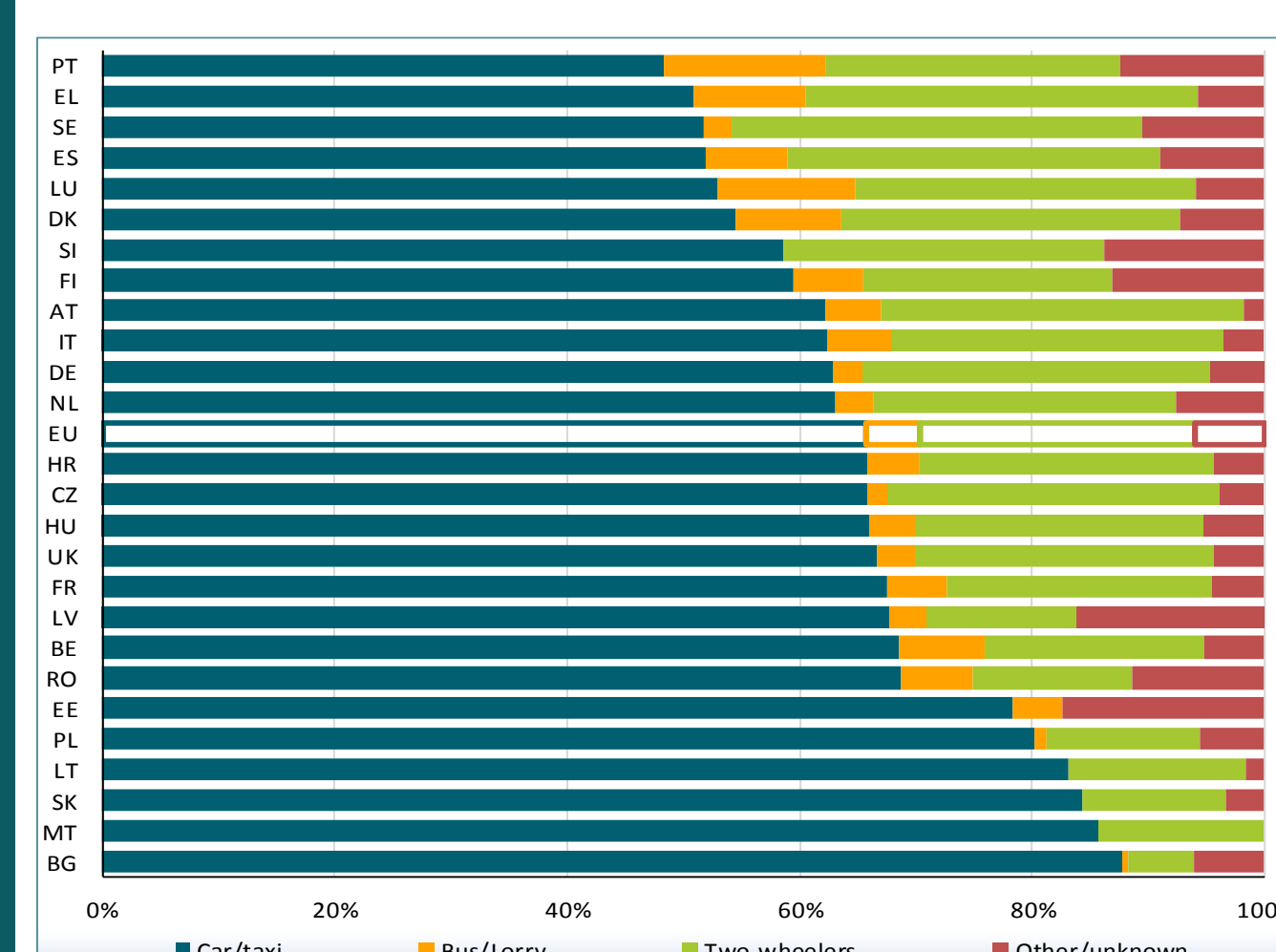
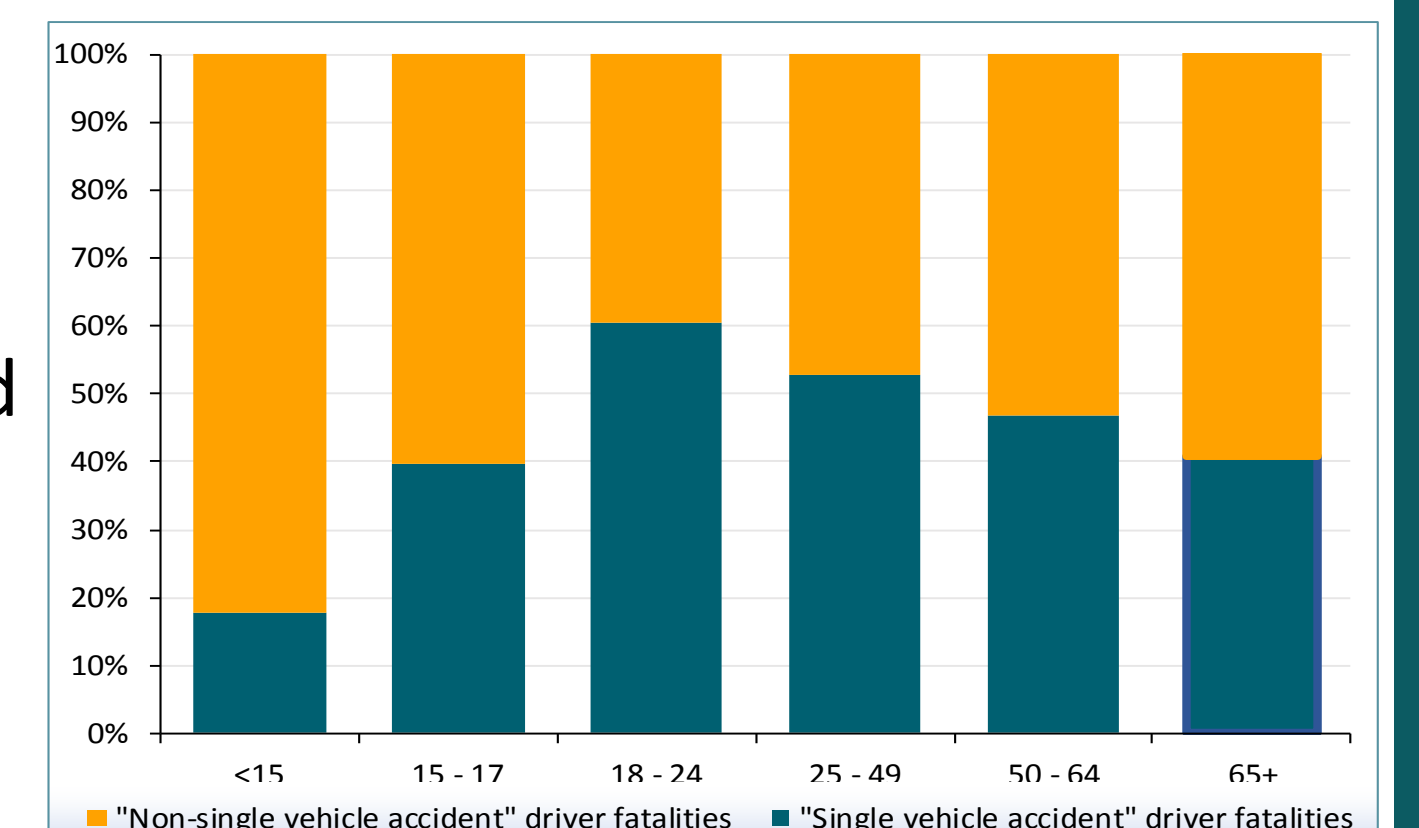
- ❖ The number of SVA fatalities **decreased by 39%** between 2006 and 2015.
- ❖ The highest decreases in SVA fatalities among the EU countries were recorded in **Estonia (63%)** and **Spain (59%)**.
- ❖ The percentage of SVA fatalities over total road all road fatalities **varied within a narrow range** over this decade.



- ❖ In 2015, the lowest SVA fatality rates per million population were recorded in the **UK (6,1)** and **Sweden (8,8)**.
- ❖ The highest SVA fatality rates were recorded in **Latvia (31,2)** and **Greece (30,9)**.

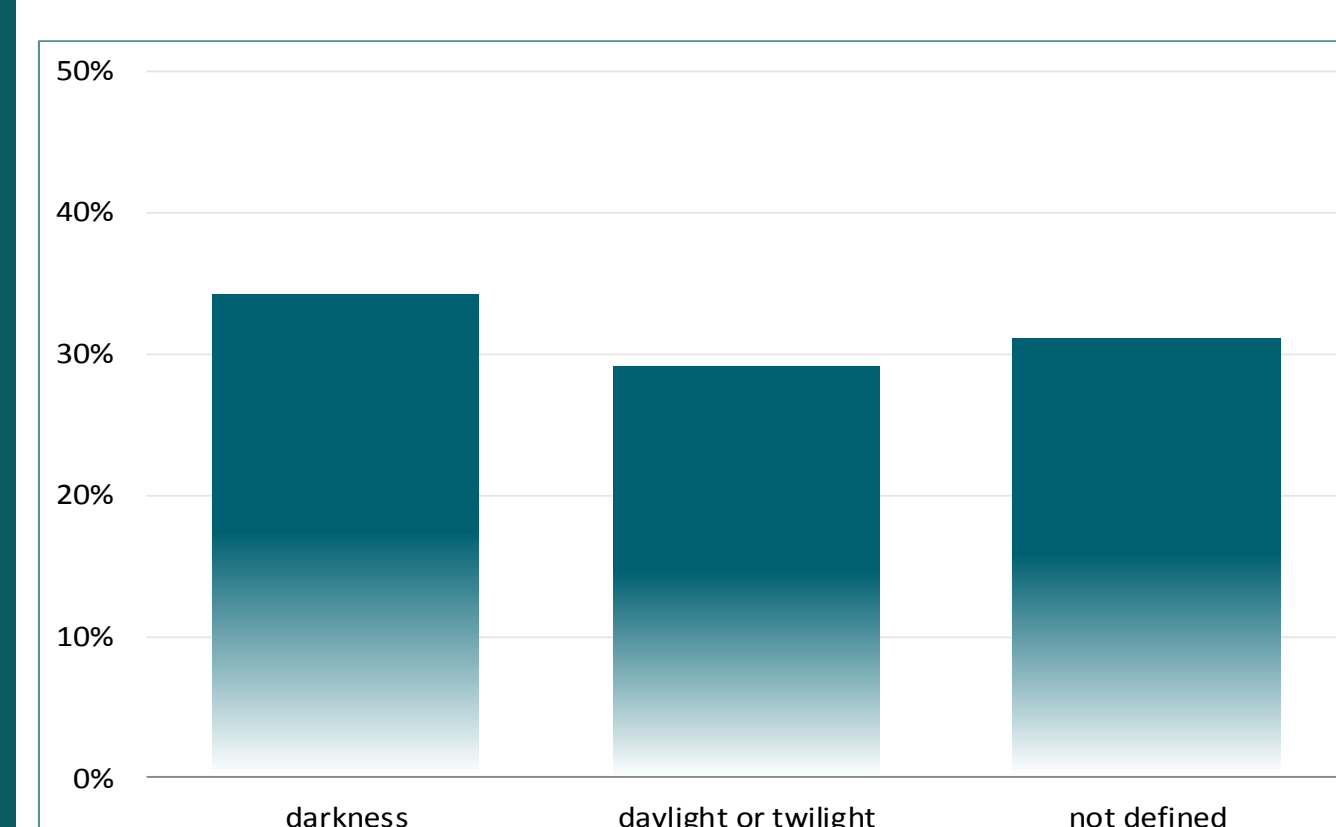
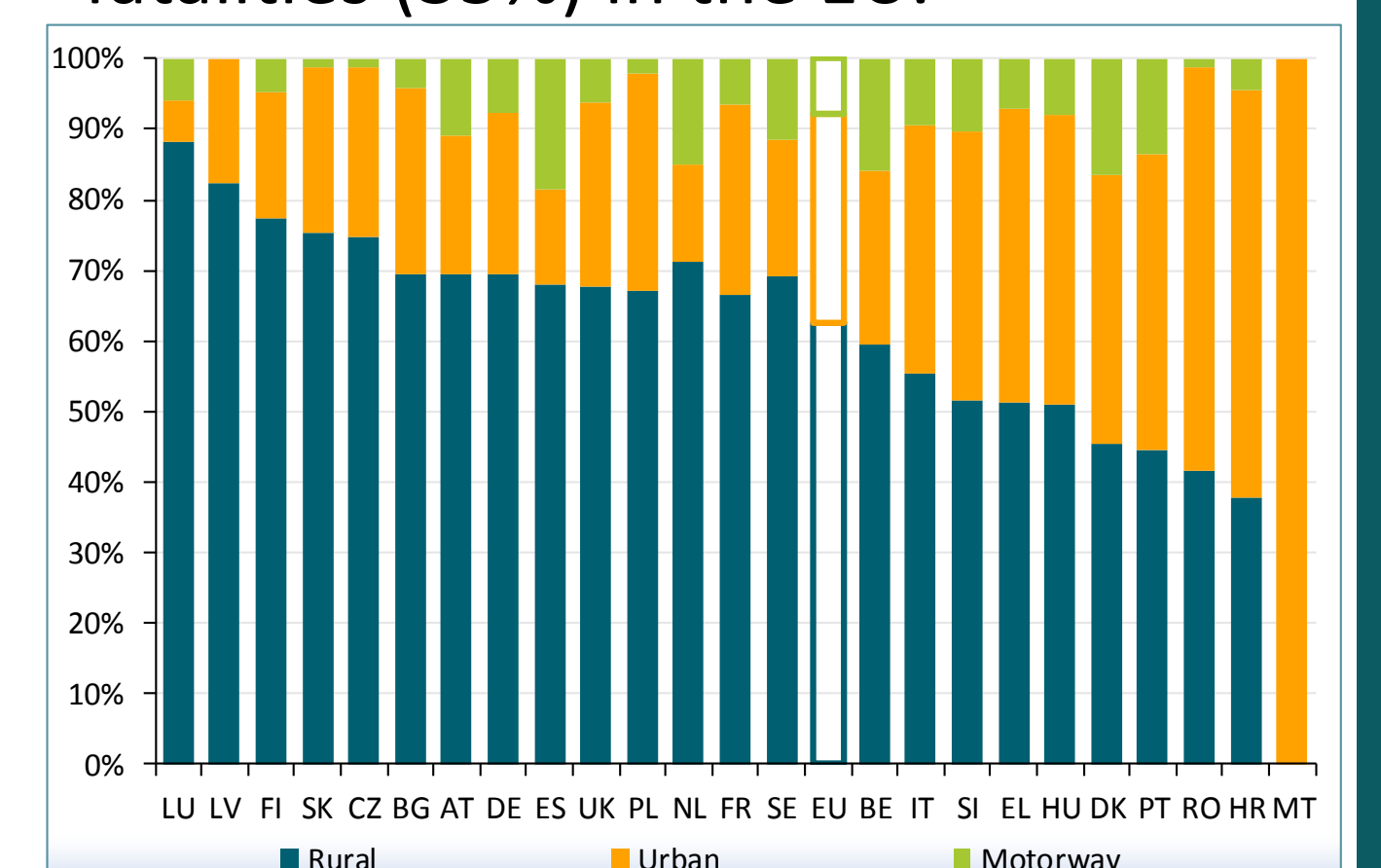
## ROAD SAFETY PARAMETERS OF SVAS

- ❖ The highest percentages of killed drivers in SVAs concern the **25-49 years old age group**.
- ❖ Almost **60% of all killed drivers** aged 18-24 years old were killed in SVAs.
- ❖ **Males account for 83%** of the SVA fatalities in the EU countries.



- ❖ The highest percentage of SVA fatalities is highest for **car/taxi (66%)**,
- ❖ **Two-wheeler fatalities** (mopeds, motorcycles and pedal cycles) accounted for 24% of SVA fatalities in the EU in 2015.
- ❖ **Sweden** had the highest percentage of two wheelers' fatalities (35%) in the EU.

- ❖ 62% of the SVA fatalities occurred **outside urban areas**.
- ❖ A **third of all motorway fatalities** in the EU occurred in SVAs.
- ❖ 37% of all fatalities **at no junction area** involved a single vehicle, compared with 14% at a junction.



- ❖ In 2015, the peak of the SVA fatalities occurred in **July and August (22%)**.
- ❖ One third of all fatalities in **darkness** concerned SVAs (34%).
- ❖ The respective percentage in **daylight/twilight** is below 30%.

## DISCUSSION

- ❖ SVAs **differ at a significant level from other types of road accidents**, since specific types of road users or vehicles are most commonly involved in such accidents.
- ❖ A more detailed statistical analysis would contribute to the **identification of the combined correlation of the parameters with an impact on SVAs** and the underlining reasons behind the related casualties.

## ACKNOWLEDGEMENTS

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