

ROAD TRAFFIC SAFETY INDICATOR TRENDS IN SERBIA AND EUROPE

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Introduction

Road Safety Management (RSM) consists of continuous monitoring of the current state of Road Traffic Safety (RTS), professional and realistic setting of the desired state, and the selection and application of various measures in order to bring the current state closer to the desired traffic safety situation (Lipovac et al., 2020).

Just like goods and services, safety is also produced, and the production process could be seen through a three-level management system. The institutional management function produces interventions, which in turn produce results. The institutional management function is result-oriented, and provides coordination, regulations, financing and allocation of resources, promotion, monitoring, evaluation, research and development and knowledge transfer. Interventions seek to manage risk exposure, prevent Road Traffic Accidents (RTA) and reduce injury. Results are defined and expressed as objectives in terms of final outcomes, intermediate outcomes and outputs. The objectives define the desired performance of the RTS system, and the level of safety is ultimately determined by the quality of the system's institutional management functions (Bliss & Breen, 2008). The final outcomes are the social costs and the number of RTAs, and the number of victims (injured and killed), while intermediate outcomes are the RTS system performance indicators, i.e. any measures that are causally related to RTAs or casualties, used with RTAs and casualty data, that indicate the performance of RTS system or understanding of the processes that lead to RTAs (ETSC, 2001). The most commonly used RTS system performance indicators were initially related to the speed of vehicles in the traffic flow, driving under the influence, usage of safety belts and motorcycle and bicycle helmets, etc. (Bliss & Breen, 2008). Outputs represent physical results that influence improvements in intermediate and final outcomes. According to Bliss & Breen (2008), typical output indicators were: kilometres of roads with safety engineering improvements, the number of police traffic enforcement operations, the number of road-worthiness tests, or alternatively measures corresponding to achievements that show that a certain task has been completed.

Respecting the best practices, this approach has been shaped into the international standard ISO 39001 (ISO/FDIS 39001:2012) which specifies the requirements for a RTS management system to enable the organization that interacts with the road traffic system to reduce the mortality and serious injuries related to RTAs that it can influence. This standard has been translated into Serbian and as

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such has officially been in use in the Republic of Serbia since January 29, 2016. The ISO 39001 standard provides performance indicators classified into three groups:

2. Risk exposure factors (distance travelled and volume of road traffic; amount of products and/or services provided by the organization);
3. Final results of safety factors (e.g. the number of the persons killed and seriously injured in RTAs);
4. Intermediate results of safety factors (related to safe planning, design and use of the road network, products and services on them, etc.). This includes indicators related to the usage of safety belts, child restraints, helmets for cyclists and motorcyclists, alcohol, narcotics, indicators of reaction after RTAs, etc.

RTS performance indicators have an important place in the RTS management process, and that is why it is important to make a relevant selection of indicators and to continuously monitor them.

Key Performance Indicators

The process in which entities (jurisdictions - states, provinces, etc.) continuously measure and compare various aspects of their performance in traffic safety with each other, with the aim of improving their own performance (that is, to learn from each other) is called Road Traffic Safety Benchmarking (Wegman and dr., 2010; Nešić et al., 2021). Two key tasks in this process are: (1) developing a set of Road Safety Performance Indicators (RSPINs) and combining them into a composite index (RSPI - Road Safety Performance Index); and (2) identifying a meaningful reference (best in class), which has already acquired outstanding practices in RTS improvement (Wegman et al., 2010). Best-in-class provides information about better achieved performance that can be used as a basis for making appropriate decisions and taking necessary actions (e.g. policy making, goal setting, countermeasures and program development and prioritization) to improve performance (Chen et al., 2015).

In the selection and development of the set of RSPINs, different approaches were made.

ETSC (2001) recommended seven basic fields for the development of the indicators: the use of alcohol and drugs, speed, restraint systems, daytime running lights, vehicles, roads and medical care.

Al-Haji (2005, 2007) proposed the Road Safety Development Index (RSDI) based on eight dimensions of road safety: traffic risk, individual risk, vehicle safety, road conditions, participant behaviour in traffic, socio-economic origin, organization of road traffic safety and enforcement of traffic regulations. Each dimension is represented by one or more quantitative RSPIN.

Within the SUNflowerNext project (Wegman et al., 2008), and later work (Wegman and Oppe, 2010; Gitelman et al., 2010) a comprehensive set of indicators was developed, which were summarized in a composite index. The indicators are classified into RSPINs (outcome indicators), implementation performance indicators (process indicators) and policy performance indicators (quality of national road safety plans) along with indicators of the structure and culture of the observed entities.

Within the European SafetyNet project Hakkert et al. (2007) developed a set of RSPINs related to seven key areas: alcohol and drugs, speed, safety systems, daytime running lights (DRL), vehicles, roads and trauma management.

Bax et al. (2012) grouped the indicators into (1) final outcomes (fatalities and RTAs), (2) intermediate outcomes (RSPINs such as drunk driving, speeding, vehicle safety) and (3) policy outcomes (measures and programs).



Pešić et al. (2013) selected the most used outcomes indicators (number of traffic accident fatalities per 100 000 inhabitants; number of traffic accident fatalities per 10,000 registered vehicles; and number of traffic accident fatalities per 100,000,000 vehicle kilometres travelled) and RSPINs which have the most influence on traffic safety (percentage of drivers and passengers in front seats that use safety belts; percentage of drivers that do not drive under the influence of alcohol; percentage of non-speeding drivers) as relevant road traffic safety indicators as to the rate of traffic safety level of a territory.

Kukić et al. (2013) chose five indicators based on public risk (number of injuries weighted by corresponding coefficients, depending on the level of injuries; number of RTA with injuries; number of killed persons; number of RTA with killed persons; number of killed and seriously injured persons) expressed in relation to the number of inhabitants.

Tešić et al. (2018) collected and compared data of 6 RSPINs: (SPI1) the percentage (%) of surveyed car drivers below the legal limit of Blood Alcohol Concentration; (SPI2) % of surveyed car drivers who drive below the legal speed limit in urban areas; (SPI3) safety belt wearing rate at front seats of cars and vans; (SPI4) % of cars younger than 6 years; (SPI5) density of motorways and (SPI6) total health expenditure as a % of GDP.

Kukić et al. (2016) selected the following outcome indicators: the number of RTAs with casualties, number of fatalities, and number of fatalities and the seriously injured together, all expressed in relation to the population and the number of vehicles.

Davidović et al. (2020) categorized indicators related to driver fatigue into four groups: Sleep-related indicators (indicators related to the quantity and quality of sleep); Operation-related indicators (indicators related to working hours and time of the day); Rest-related indicators (indicators related to rest periods and breaks); Indicators of undertaken activities (indicators related to the measures for eliminating fatigue and education of drivers). As indicators which can be monitored on a daily basis in transportation companies and that can be observed on a national basis, they have selected key performance indicators which affect driver fatigue as: % of professional drivers with good sleep quality; % of drivers using appropriate measures for fatigue prevention (according to age groups); % of nights with the sufficient sleep quantity; % of nights without sleep; daily driving time; weekly driving time; fortnightly driving time; % of daytime driving hours; % of night-time driving hours; and daily rest.

These are just some examples from the period of intensive development of benchmarking in the field of Road Traffic Safety. Works that are also worth mentioning are for example: Chen et al. (2016); Egilmez G. and McAvoy D. (2013); Chen et al. (2017); Antić et al. (2020).

The EU reaffirmed its long-term goal of approaching zero fatalities by 2050 (Vision Zero), and for the first time, in line with the Valletta Declaration on Road Safety of 9 March 2017, set a target to halve the number of serious injuries in the EU by 2030 compared to 2020. A technical study (Jeanne Breen Consulting, 2018), among other things, recommended the setting of new interim objectives on the way to "Vision Zero" and the establishment of a range of key performance indicators for road safety (KPIs) at the European level directly related to the prevention of death and serious injury to provide focus for intervention strategy and delivery. In order to be able to gain a much clearer understanding of the different issues that influence overall safety performance, the European Commission has established, in close cooperation with Member State experts, the main intervention areas and measurement as a first set of KPIs to be connected to target outcomes.

The main intervention areas are (European Commission, 2019):

1. Infrastructure - safe roads and roadsides



2. Safe vehicles
3. Safe road use
 - a) Safe speed,
 - b) Sober driving (alcohol and drugs),
 - c) Preventing driving whilst distracted,
 - d) Use of safety belts, child restraint systems and protective equipment.

A KPI for road infrastructure should show the safety quality of a road network independent of road user behaviour or vehicle technology (European Commission, 2019). There are numerous tools for measuring the road infrastructure safety performance. Various methods for identifying dangerous locations (black spot) have been in use for the longest time (Nešić et al., 2016; Lipovac et al., 2016).

Research found 5-star rated Euro NCAP cars to have a 68% ($\pm 32\%$) lower risk of fatal injury alone and a 23% ($\pm 8\%$) lower risk of fatal and serious injury combined than 2-star rated cars (Kullgren et al., 2010). This is why the vehicle safety KPI should be based on data on Euro NCAP ratings (European Commission, 2019).

Safe road use is the third pillar for the prevention and mitigation of fatalities and serious injuries in collisions. Driver licensing, targeted education and awareness raising, supported by strong and sustained compliance and enforcement regimes, all have an important role to play in giving road users the capability and willingness to use roads and vehicles safely. On the other hand, non-resident drivers in the EU represent about 5% of traffic, but about 15% of traffic offences. So, current cross-border enforcement legislation (Directive (EU) 2015/413), which tackles the biggest offences including speeding, running red lights, failure to use safety belts and drink driving, should be improved.

Regarding speeding, the risk of being involved in a crash is 12.8 times higher when speeding than if not speeding (Dingus et al., 2016). When it comes to distraction, research found that the risk of being involved in a crash is increased by 12.2 times when dialling and 6.1 times when texting (Dingus et al., 2016). Distraction has been found to be a factor in 10 to 30% of road crashes, and the Spanish authorities reported that it had overtaken speed and alcohol as the highest risk factors in 2017².

Table 1 List of KPIs and Their Definitions

KP Indicator	Definition
Speed	Percentage of vehicles travelling within the speed limit
Safety belt	Percentage of vehicle occupants using the safety belt or child restraint system correctly
Protective equipment	Percentage of riders of powered two wheelers and bicycles wearing a protective helmet
Alcohol	Percentage of drivers driving within the legal limit for blood alcohol content (BAC)
Distraction	Percentage of drivers NOT using a handheld mobile device
Vehicle safety	Percentage of new passenger cars with a Euro NCAP safety rating equal or above a predefined threshold
Infrastructure	Percentage of distance driven over roads with a safety rating above an agreed threshold
Post-crash care	Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services

² Cited in European Commission (2019)



The European Commission elaborated a list of Key Performance Indicators (KPIs) for road safety in 2019. These KPIs are defined and discussed in the Staff Working Document 'EU Road Safety Policy Framework 2021-2030 (European Commission, 2019). The KPIs relate to the main road safety challenges to be tackled and the aim of using the KPIs is to monitor the trends in factors that contribute to reaching the EC targets in road safety. The KPIs and their definitions are listed in Table 1.

A data collection methodology was developed and defined for each KPI. For example, for speed, methodological aspects of data collection are shown in Table 2.

Table 2 *Methodological Aspects of the Speed Indicator*

Aspect	Minimum methodological requirements
Road type coverage	Motorways, rural non-motorway roads and urban roads.
Vehicle type	At least passenger vehicles (cars). Buses and goods vehicles (light [less than 3.5t] and heavy [more than 3.5t]) and powered two-wheelers are optional in the first phase.
Location	The choice of locations should be based on random sampling if this is possible, but not near safety cameras whether fixed or mobile.
Time of day	For day hours in free flow traffic; the night indicator should be optional due to its higher cost.
Day of the week	Tuesdays, Wednesdays or Thursdays. Weekend measurements also possible but optional.
Month	Late spring and/or early autumn.
Weather	Not during bad weather conditions (e.g. heavy rain, snow, ice, strong winds or fog).

Data Analysis

European Transport Safety Council (ETSC) started to publish Road Safety PIN (Performance Index) Report in 2007 (Achterberg, 2007). After that, the annual publication of the PIN report continued. In the beginning, the Report contained indicators representing final outcomes (total number of deaths, number of deaths from drink-driving crashes), but also indicators representing intermediate outcomes. The latter refers to certain indicators that were generally not available in all countries. Safety belts use was available for all countries from the beginning, but distribution of alcohol levels among the driver population only for the Netherlands, Belgium, Finland and Estonia. Speed was available for France, Belgium, Switzerland, Norway, the Netherlands, Great Britain, Ireland, Portugal, Austria, Estonia, Latvia and Poland. Regarding the vehicle, the first indicators were related to safety belt reminders. Data were available for Sweden, Luxemburg, Germany, Czech Republic, Slovakia, Hungary, Poland, Lithuania, Italy and Greece. Subsequently, an increasing number of countries joined the collection of data on various indicators.

In accordance with the decision of the European Commission on determining the list of KPIs (European Commission, 2019), within the "BASELINE" project³ (Vanhove, 2023; Silverans & Vanhove, 2023), KPI values were collected, processed and published through eight reports - one for each KPI (Van den Broek et al., 2023; Van den Broek, et. al., 2022; Yannis & Folla, 2022a; Yannis & Folla, 2022b; Boets, 2023; Wardenier & Silverans, 2023; Van den Berghe, 2022; Nuyttens, 2022).

³ BASELINE project: 2020-2022. Via Institute, Brussels, Belgium. <https://www.baseline.vias.be/en/>. Accessed on 31.08.2023.



When it comes to the analysis of the current state and trends based on indicators representing intermediate outcomes, the “BASELINE” project reports are representative, and for the analysis of the current state and trends based on indicators representing final outcomes, the ERSO (European Road Safety Observatory) Annual statistical report on road safety in the EU 2022 (European Commission, 2023) and ETSC 17th Road safety performance index report (Carson et al., 2023) are representative. The ETSC report is particularly interesting because it also contains some data about the Republic of Serbia.

Compared to European countries (Figure 1), Serbia is at the bottom of the scale with 83 Road Deaths/Million Inhabitants, right before Romania, which is at the last place in terms of Public Risk during 2020 with 86 Road Deaths/Million Inhabitants. Best performing European countries are Norway and Sweden (with 21 and 22 Road Deaths/Million Inhabitants, respectively). During the observed period (2022 compared to 2012) the average for 27 EU countries decreased from 54 to 46 Road Deaths/1 Million Inhabitants (a decrease of 14.8%) (Figure 2). For the same period, the decrease in Serbia is 12.6% (from 95 to 83 Road Deaths/Million Inhabitants) (Figure 2).

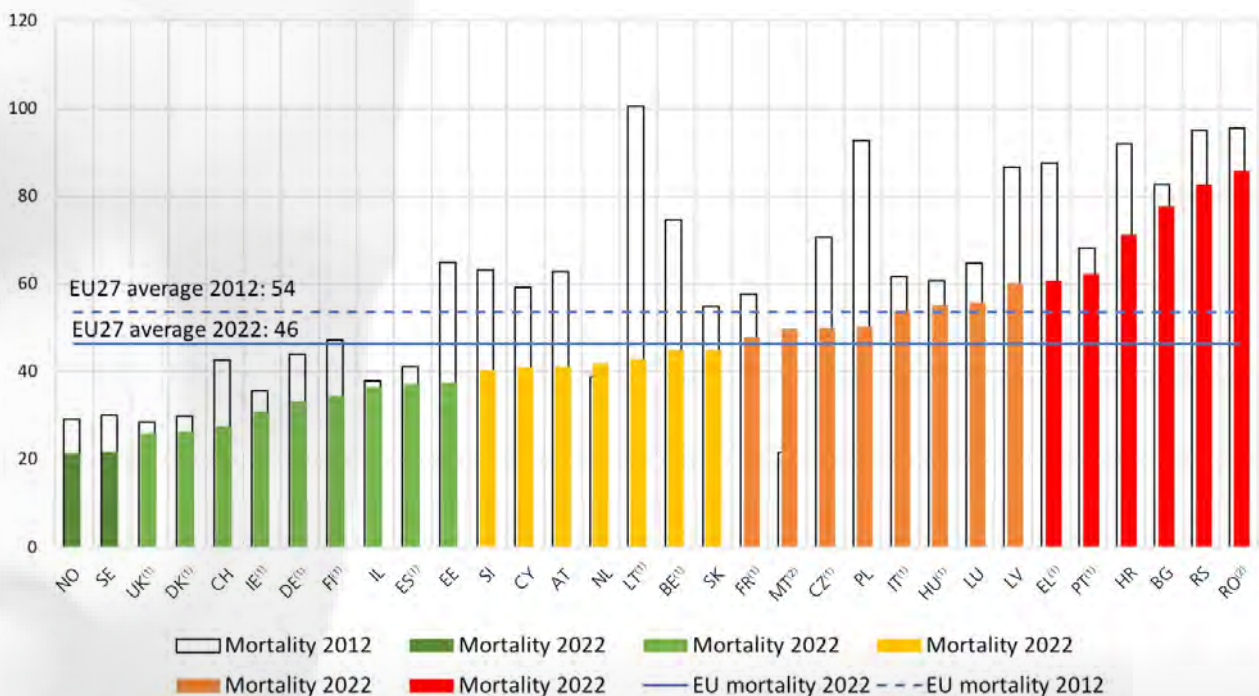


Figure 1 Public Risk in 2022 Compared to 2012 (in Road Deaths per 1 Million Inhabitants) (Carson et al., 2023)

Compared to Sweden, as a leader in road traffic safety in EU27, the current situation in Serbia in terms of Public Risk corresponds to the situation in Sweden about 25 years ago, and compared to the average in the EU27, Serbia lags behind by about 15 years.

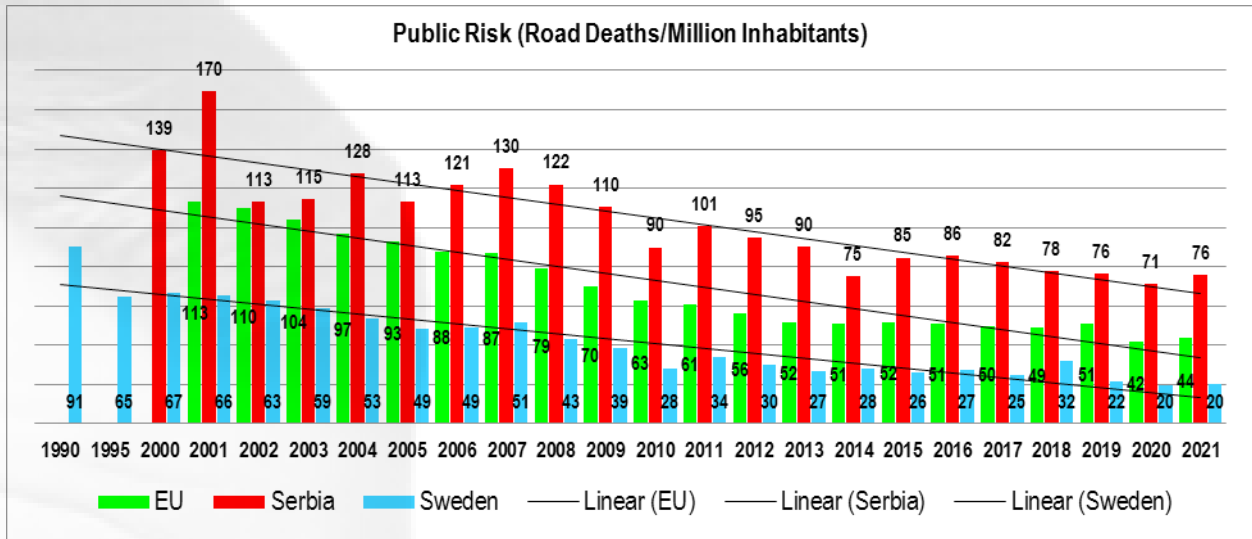


Figure 2 Direct Comparison of Public Risk in Serbia with Values in Sweden and in Relation to the Average in the EU over a Long Series of Years (Road Deaths/Million Inhabitants)



Figure 3 The Ratio of Public Risk in Serbia and the EU over a Long Series of Years

Observed individually by year, in the period from 2001, the value of Public Risk in Serbia was always higher than the average in the EU by 1.1 to 1.7 times (Figure 3), while compared to the values in Sweden, as one of the most successful countries in road traffic safety, the value of Public Risk was always higher by 1.8 to 3.8 times (Figure 4). In both cases, the emerging trend indicates an increase in the value of those relations, which indicates an increasing lag between Serbia and the EU for past 20 years.



Figure 4 The Ratio of Public Risk in Serbia and Sweden over a Long Series of Years



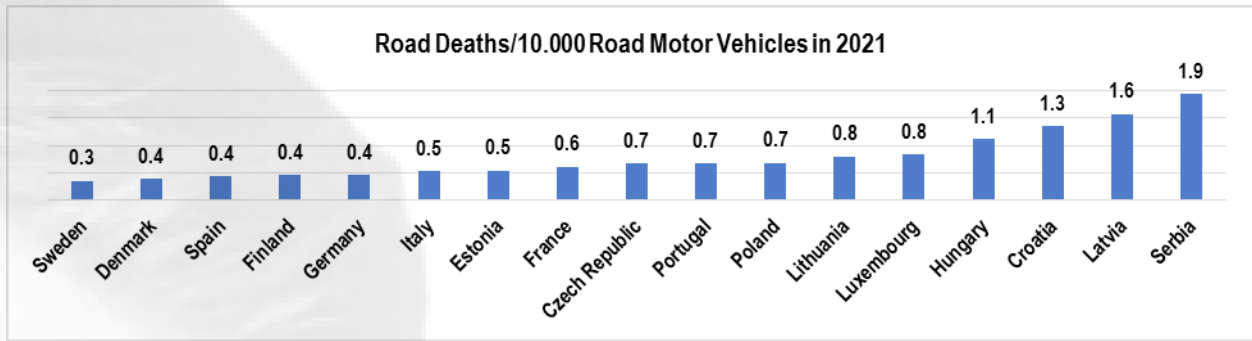


Figure 5 Traffic Risk in 2021 (Road Deaths/10,000 Road Motor Vehicles)

The analysis of the current state of Traffic Risk showed results that are similar to the analysis of Public Risk. Sweden has the best results (0.3 Road Deaths/10,000 Road Motor Vehicles), followed by Denmark, Spain, Finland and Germany (Figure 5). Among the EU countries, the worst situation is in Latvia (1.6 Road Deaths/10,000 Road Motor Vehicles), and the situation is somewhat better in Croatia (1.3) and Hungary (1.1) (Figure 5). Of the analysed countries, the worst situation is in Serbia, where this indicator has a value of 1.9 Road Deaths/10,000 Road Motor Vehicles (Figure 5).

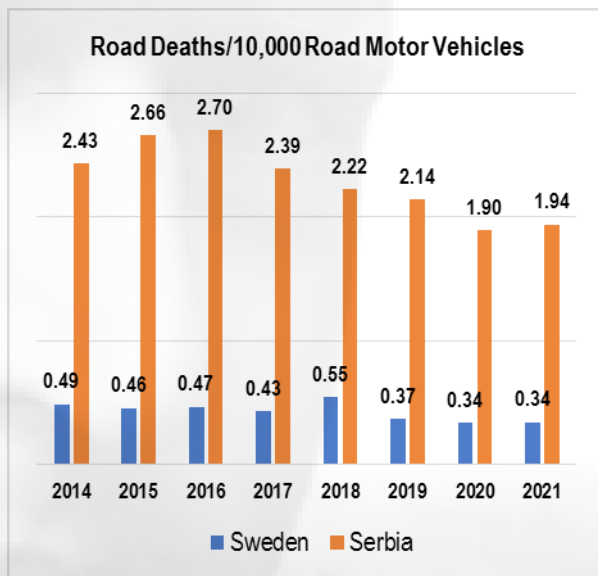


Figure 6 Direct Comparison of Traffic Risk in Serbia with Values in Sweden over 8 Years (Road Deaths/10,000 Road Motor Vehicles)

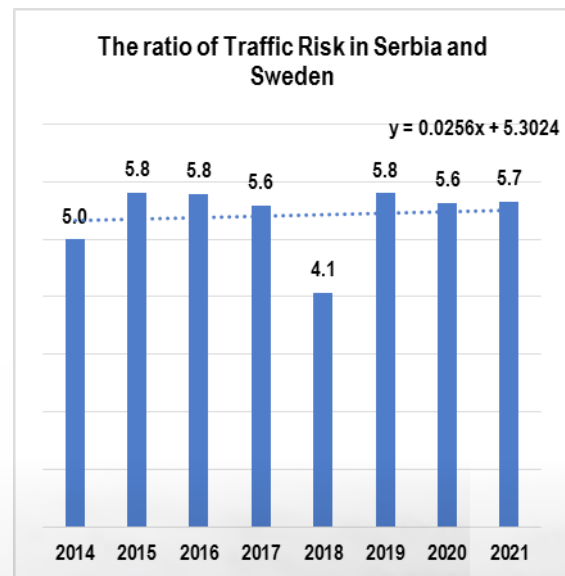


Figure 7 The Ratio of Traffic Risk in Serbia and Sweden over 8 Years

When comparing Traffic Risk values (Road Deaths/10,000 Motor Vehicles) in Sweden and Serbia over a period of 8 years (2014-2021), even greater differences than in Public Risk are observed (Figure 6). In Serbia, Traffic Risk is 4.1 to 5.8 times higher than in Sweden, with a slight trend of increasing the difference during the observation period (Figure 7).

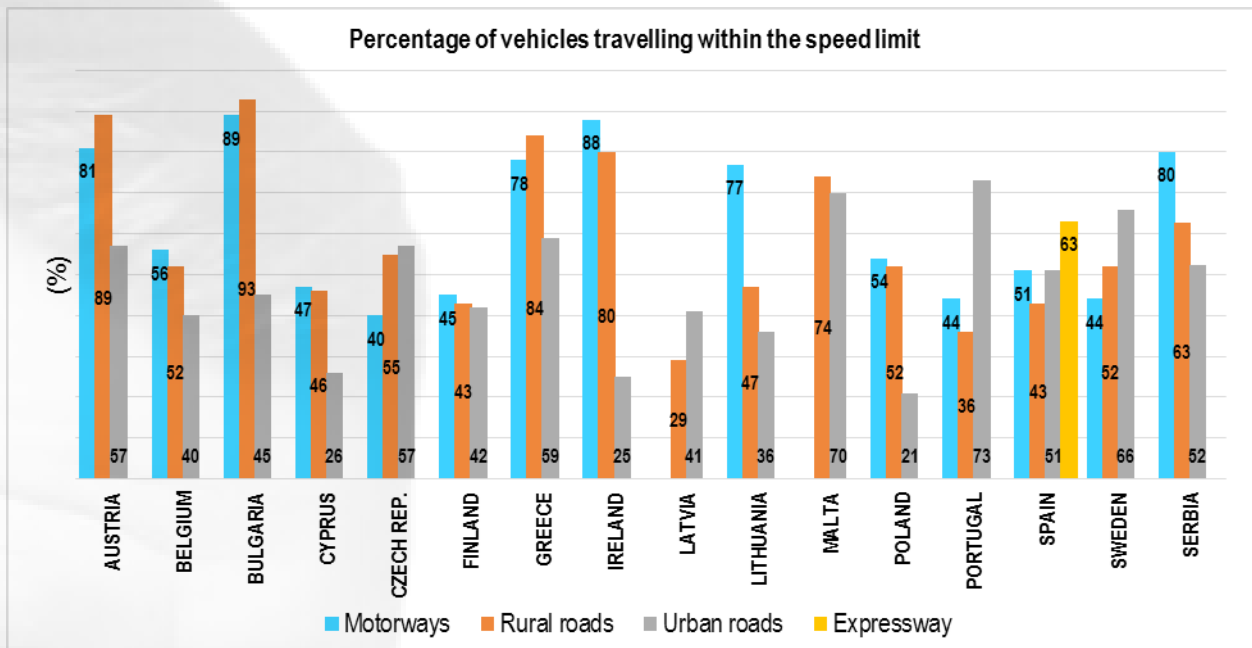


Figure 8 Speed Compliance by Passenger Cars During Weekday/Daytime in 2022

When it comes to indicators representing intermediate outcomes, the indicators related to vehicle speed and the use of vehicle user protection systems (safety belts, child restraint systems and the use of motorized two-wheel helmets) are discussed here.

Speeding is defined as the percentage of drivers driving within the speed limit (Van den Broek, 2023). Data are presented separately by road type (Figure 8). The highest degree of compliance on Motorways is observed in Bulgaria (89%), followed by Ireland (88%), Austria (81%), Serbia (80%), Greece (78%) and Lithuania (77%). According to this indicator, Serbia ranks quite well. Bulgaria (93%), followed by Austria (89%), Greece (84%) and Ireland (80%) leads the way in terms of compliance on rural roads. Serbia is well below with 63%, but it is still better than the Czech Republic (55%), Sweden, Poland and Belgium (52%). On urban roads, the highest degree of compliance is observed in Portugal (73%), Malta (70%) and Sweden (66%). Serbia is in 7th place with 52% compliance.

The KPI safety belts and child restraint systems (CRS) is defined as the percentage of vehicle occupants using the safety belt or child restraint system correctly (Van den Broek, 2022). The data is shown for passenger vehicles, separately for the driver, front seat occupant, front passenger and rear seat occupant (Figure 9).

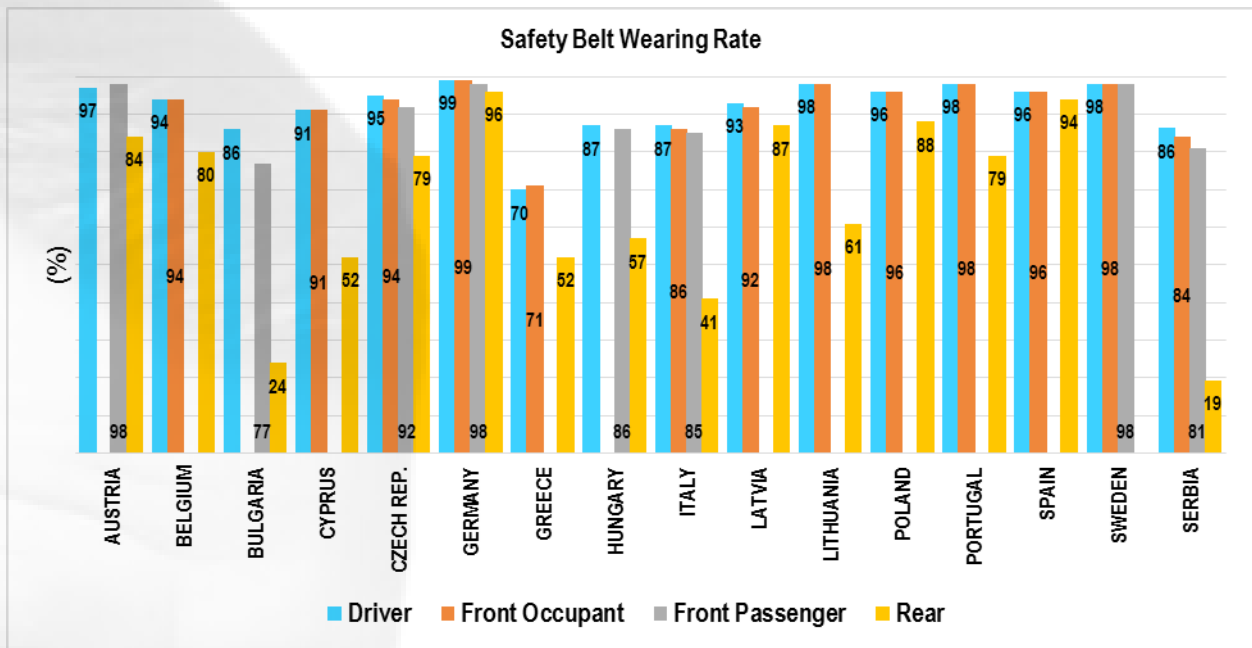


Figure 9 Percentage of Passenger Car Occupants Correctly Using the Safety Belt During Weekday/Daytime by Position in the Vehicle in 2022

The degree of driver safety belt use of over 95% was achieved in the following countries: Germany (99%), Lithuania (98%), Portugal (98%), Sweden (98%), Austria (97%), Poland (96%) and Spain (96%). In 11 EU countries, the safety belt usage rate is over 90%. Serbia is at the bottom with 86%, together with Italy. The most unfavourable situation is in Greece with 70%. Also, the use of safety belts by front passengers usually has high rates in the EU countries, and in most countries it is greater than 95%, such as in: Germany (99%), Austria (98%), Sweden (98%), Lithuania (98%), Portugal (98%), Poland (96%) and Spain (96%). Serbia is on the other side of the scale, with 81%. The rate of safety belt use in rear seats is generally lower than in the front, with only two countries exceeding 95%. These are Germany (96%) and Spain (94%). Serbia is in the last place on the scale with only 19% of occupants in the back seats using safety belts.

When it comes to child restraint systems (Figure 10), only two EU countries exceed 95%: Austria and Germany with 99%. Poland follows with 95%, and then a number of countries with values below 90%. Serbia is slightly below the middle of the scale with 60%. The lowest level of use is in Spain with 36%.

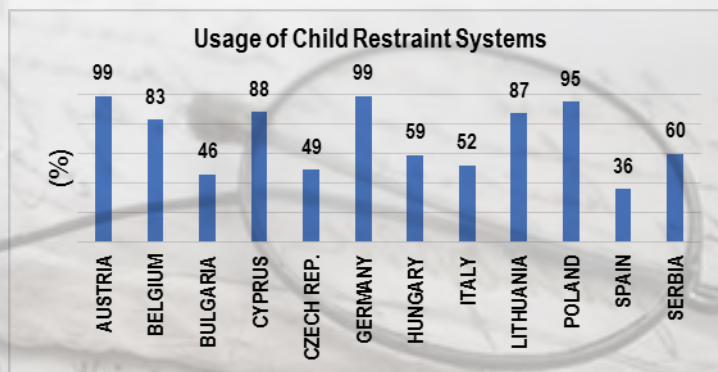


Figure 10 Percentage of Children in Passenger Cars (Correctly) Using Cars During Weekday/Daytime According to Roadside Observation in 2022

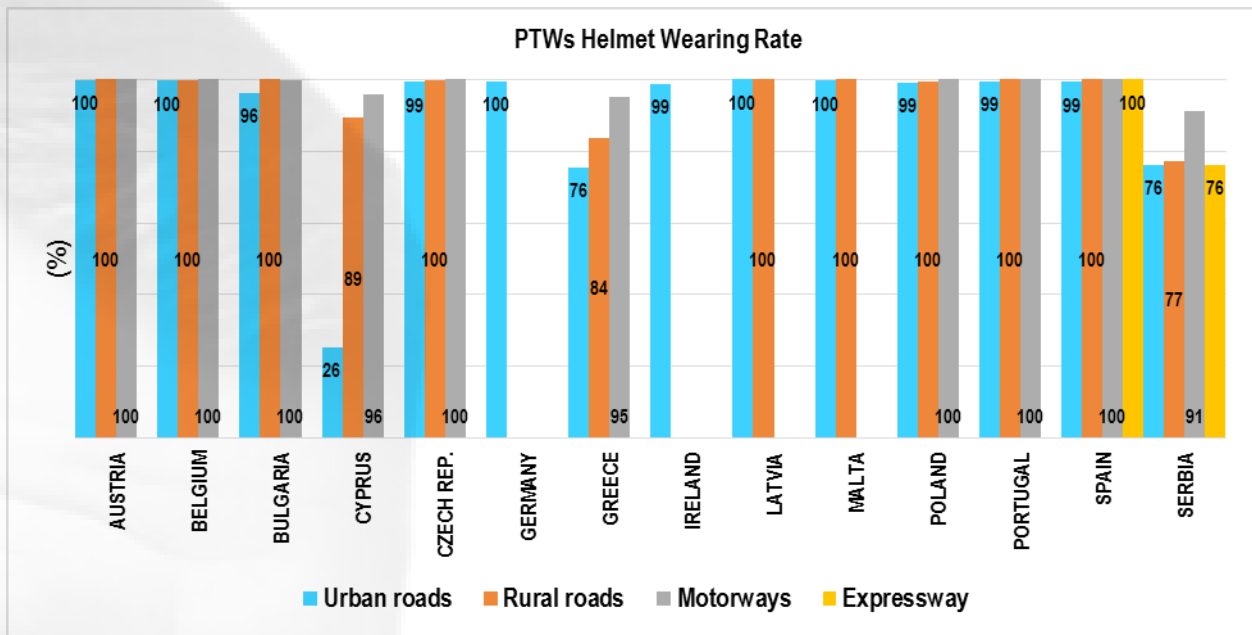


Figure 11 Helmet Use Among PTWs by Road Type in 2022

Helmet use among powered two-wheelers (PTWs) is defined as the percentage of riders of powered two-wheelers wearing a protective helmet (Yannis & Folla, 2022a). For 10 of the 13 EU countries that submitted data on helmet wearing rates for PTW riders and passengers on urban roads, the values are higher than 99%, and for 11 countries they are higher than 95% (Figure 11). The worst is Cyprus with 25.5%, followed by Greece with 75.5% and Serbia with 76.1%. It is similar with helmet wearing rates for PTW riders and passengers on rural roads. In 9 of the 11 countries that submitted data, the percentage of use is greater than 99%. Serbia is at the bottom of the scale with 77.3%. Greece has 83.7% and Cyprus 89.3%. On motorways, the helmet wearing rate for PTW riders exceeds 99% in 7 out of 10 EU countries. These are: Austria, Portugal, Spain, Belgium, the Czech Republic, Poland and Bulgaria. According to this indicator, Serbia is at the bottom (in the tenth or last place) with 91%.

Discussion and Conclusion

Among the indicators representing final outcomes of the road safety system, Public Risk (total number of deaths per number of inhabitants) is one of the easily accessible and most frequently used indicators. By comparing the value of this indicator between the EU countries and Serbia, it can be concluded that the state of traffic safety in Serbia ranks among the worst EU countries. When it comes to the trends of this indicator, it is positive for both the EU and Serbia. However, by comparing the ratio between the values of average Public Risk in the EU and Public Risk in Serbia, it is evident that the difference in the trends of decreasing of values during the observed period of 20 years is increasing, which indicates that over time Serbia is lagging behind the EU countries according to this indicator. Compared to Sweden, the lag is even more prominent. When looking at the second most famous indicator representing final outcomes of the road safety system, Traffic Risk (total number of Road Deaths per number of Road Motor Vehicles), the situation is similar. In the current state, the value of the indicator in Serbia is more than 5.5 times higher than in Sweden, and during the observed period of 8 years (2014-2021), the difference in the ratio of the value of the indicator has been steadily increasing, so that Serbia is falling further behind.



Indicators representing intermediate outcomes (KPIs) were also used to compare the state of traffic safety.

The most common KPI is speeding, and it is analysed separately by road type. None of the EU countries exceeds the degree of compliance of 95% on any type of road. The highest level of compliance on Motorways is 89% (Bulgaria) and 88% (Ireland). Serbia ranks quite well with 80%, and at the bottom of the scale are several EU countries with less than 50%, including Sweden with 44%, which indicates that speeding on motorways in itself does not have to be decisive for the state of traffic safety. Bulgaria again has the highest level of compliance on rural roads (93%), and as many as six EU countries have a level of compliance below 50%. Serbia is somewhere in the middle with 63%. The example of Bulgaria shows that a small percentage of speeding on Motorways and Rural roads does not necessarily imply a good state of traffic safety. On Urban roads, the degree of compliance is the lowest, so the best (Portugal) has only 73% and the worst (Poland) only 21%. Serbia is again somewhere in the middle with 52%.

The most well-known KPI in the field of passive safety is the use of safety belts. When it comes to the use of safety belts by drivers, Germany is at the top with 99%. A total of seven EU countries (out of 16) have over 95% (Sweden is among them). The lowest degree of safety belt use is 70% (Greece). Serbia is at the bottom of the scale with 86%. More than 95% of safety belts are used in the passenger seat in three EU countries (out of 6). It is used the least in Bulgaria (77%). Serbia is slightly below the middle of the scale with 81%.

On average, in the front seats, in six out of 12 EU countries, safety belt usage is over 95%. The worst is in Greece (71%), and Serbia is at the bottom of the scale with 71%. The use of safety belts in the back is less than in the front. In only two countries (out of 14 in the EU) the degree of use is over 95%. It is used the most in Germany (96%) and the least in Bulgaria (24%). Serbia is below all with only 19%.

And finally, the use of a helmet for PTW on urban roads in 11 countries (out of 13 EU countries) transfers a value of 95%. In Cyprus it is only 26%, and in Serbia it is around the middle of the scale (76.1%). Rural roads are even better, because in 9 countries (out of 11 EU), the usage rate is over 99.5%. Serbia is at the bottom of the scale with 77.3%. On Motorways, in 7 countries (out of 9 EU countries) the usage rate is over 99.8%. Serbia is again at the bottom of the scale with 91.2%.

Analysis of traffic safety conditions and trends is a complex and demanding job, and requires the collection of a large volume of data and the selection and application of sophisticated and demanding methods that exceed the scope of this work. Several well-known and easily accessible indicators representing final and intermediate outcomes of the road safety system are analysed here. Based on them, the most important conclusions were drawn:

1. The analysis of the current state of the road safety system based on indicators representing final outcomes showed that Serbia is among the EU countries with the worst state;
2. The analysis of trends in the state of the road safety system based on indicators representing final outcomes showed that Serbia lags significantly behind the EU countries, and that it lags behind more and more over time;
3. The analysis of indicators representing intermediate outcomes of the road safety system showed that Serbia is among the EU countries with the worst conditions.



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