



# Road Safety Country Overview





### **Structure and Culture**

### **Basic Data**

Table 1: Basic data of Hungary in relation to the EU average

Basic data of Hungary	EU average
- Population: 9,83 million inhabitants (2016)[2]	18,2 million (2016)
- Area: 93.030 km <sup>2</sup> (2015)[2]	159.678 km <sup>2</sup> (2015)
(3,67% water) (2015)[4]	2,94% water (2015)
- Climate and weather conditions (capital city; 2015) [3]:	(2015)
<ul> <li>Average winter temperature (Nov. to April):</li> <li>4,6°C</li> </ul>	5,1°C
<ul> <li>Average summer temperature (May to Oct.):</li> <li>17,9°C</li> </ul>	16,6°C
- Annual precipitation level: 630 mm	691,5 mm
- Exposure: 370.000 million vehicle km (2014) [5]	168.260 million vehicle km (2015)
- 0,39 vehicles per person (2015) [2]	0,57 (2015)

Sources: [1] IRTAD; [2] EUROSTAT; [3] national sources; [4] CIA [5] OECD

The Hungarian GDP per capita is much lower than the EU average.

### **Country characteristics**

Table 2: Characteristics of Hungary in comparison to the EU average

Characteristics of Hungary	EU average
- Population density: 105,8 inhabitants/km²	114 inhabitants/km²
(2015) [2]	(2015)
- Population composition (2015) [2]	
14,5% children (0-14 years)	15,6% children
67,6% adults (15-64 years)	65,6% adults
17,9% elderly (65 years and over)	18,9% elderly (2015)
- Gross Domestic Product (GDP) per capita:	
€11.156 (2015) [2]	€27.198 (2015)
- 72,1% of population lives inside urban area	72,6% (2015)
(2015)[4]	72,0 % (2013)
- Special characteristics [4]: mostly flat to rolling	
plains	

Sources: [1] IRTAD; [2] EUROSTAT; [3] national sources; [4] CIA



Structure of road safety management

Policy making is centralised in Hungary. In 2014 the Hungarian government introduced the National Transport Strategy which also includes Road Safety Programme.

The following key actors are responsible for Road Safety (RS) policy making:

Table 3: Key actors per function in Hungary			
Key functions	Key actors		
<ul><li>1.</li><li>Formulation of national RS strategy</li><li>Setting targets</li><li>Development of the RS programme</li></ul>	- Ministry of National Development - Ministry of Interior		
<ol><li>Monitoring of the RS development in the country</li></ol>	- Institute for transport science (KTI);		
3. Improvements in road infrastructure	<ul> <li>Hungarian Transport Administration (traffic development activities, maintenance and asset management)</li> <li>National Toll Payment Services Private Company Limited (SMMC): competence on expressway network</li> </ul>		
4. Vehicle improvement	- The Central Office for Administrative and Electronic Public Services (KEK KH)		
5. Improvement in road user education	- National Transport Authority: programs preparing children education to transport		
6. Publicity campaigns	- Ministry of Administration and Justice - Police		
7. Enforcement of road traffic laws	- National Police Headquarters (ORFK)		
8. Other relevant actors  Sources: national sources	<ul> <li>KOBE (Central European Mutual Insurance Association)</li> <li>Global road safety partnership Hungary</li> <li>RoSEE Project (Road Safety in South East European Regions)</li> </ul>		
Sources, Hattorial Sources			

The Ministry of Development and the Ministry of Interior are both dealing with road safety issues in Hungary.



Hungarian drivers are more supportive for stricter legislation than drivers in other countries.

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Attitudes towards risk taking

- Hungarian drivers are more supportive for stricter legislation on speeding and drink-driving than drivers in other countries.
- The perceived probability of being checked is slightly higher than the ESRA-average paired with average police checks.

Table 4: Road safety attitudes and behaviour of drivers			
	Hungary	ESRA average	
Self-reported driving behaviour		ers that show at least once	
In the past 12 months, as a road user, how often did you drive without respecting a safe distance to the car in front?	61%	60%	
In the past 12 months, as a road user, how often did you talk on a hand-held mobile phone while driving?	39%	38%	
In the past 12 months, as a road user, how often did you drive faster than the speed limit inside built-up areas?	74%	68%	
Supporting stricter legislation		rs that disagree e following	
What do you think about the current traffic rules and penalties in your country for each of the following themes?: The penalties are too severe: for speeding	44%	56%	
What do you think about the current traffic rules and penalties in your country for each of the following themes?: The penalties are too severe: alcohol	75%	80%	
Do you support each of the following measures?: Zero tolerance for alcohol (0,0%) for all drivers	19%	39%	
Perceived probability of being checked	% of drivers with answers in following categories		
In the past 12 months, how many times have you been stopped by the police for a check? <b>(once or more)</b>	30%	29%	
On a typical journey, how likely is it that you (as a driver) will be checked by the police for respecting the speed limits (including checks by police car with a camera and/or GoSafe cameras)? (Very (big) chance)	44%	37%	
In the past 12 months, how many times were you checked by the police for alcohol while driving a car (i.e., being subjected to a Breathalyser test)? (once or more)	20%	19%	

Source: ESRA 2016/2017

(comparison of country attitude in relation to average attitude of other SARTRE countries):

2-9% better 10-19% better ≥ 20% better 2-9% worse 10-19% worse ≥ 20% worse



Hungary has a target for road casualties that is in accordance with the aim of

the EC.

# Road Safety Country Overview - HUNGARY

### **Programmes and measures**

### National strategic plans and targets

- A new road safety programme for the years 2014-2016 was adopted. The new road safety action programme for the period 2017-2020 is under preparation.
- Targets (referred to 2011):

Table 5: Road safety targets for Hungary

Year	Fatalities
2016	Max. 518
2020	-50%

Source IRTAD, 2017

- Priority topics:
  - improve road users' behaviour
  - increase the level of compliance with traffic rules
  - develop individual responsibility
  - establish partnership in road traffic

(Source: IRTAD, 2017)

### Road infrastructure

Table 6: Description of the road categories and their characteristics in Hungary

Road type
Urban roads
Sural roads
Motorways
General speed limits for passenger cars (km/h)
50
90
130

Source: EC DG-Move, 2017

- Special rules for:
  - 110 km/h on expressways
  - 80 km/h on motorways for HGVs >3,5t
- Guidelines and strategic plans for infrastructure are available in Hungary.

Table 7: Obligatory parts of infrastructure management in Hungary and other EU countries

Obligatory parts in Hungary:	EU countries with obligation
Safety impact assessment: yes	32%
Road safety audits: yes	81%
Road safety inspections: yes	89%
High risk site treatment: yes	74%

Sources: IRTAD, 2015

Safety impact assessment, road safety audits and inspections, as well as high risk site treatment are obligatory in Hungary.



• Recent activities of road infrastructure improvement:

- A new road category, "fast roads", has been agreed. The roads in this category have dual carriageways and a central barrier, but, unlike motorways, they allow for intersections, traffic control signals and roundabouts. The speed limit will be 110 km/h.

(Source: IRTAD, 2017)

### Traffic laws and regulations

Table 8: Description of the regulations in Hungary in relation to the most common regulations in other EU countries

Regulations in Hungary [1]	Most common in EU (% of countries)
Allowed BAC <sup>1</sup> levels:	
<ul><li>General population: 0,0%</li><li>Novice drivers: 0,0%</li><li>Professional drivers: 0,0%</li></ul>	0,5% (61%) 0,2% (39%) and 0,0% (36%) 0,2% (36%) and 0,0% (36%)
Phoning:	
- Hand held: not allowed - Hands free: allowed	Not allowed (all countries) Allowed (all countries)
Use of restraint systems:	
<ul><li>Driver: obligatory</li><li>Front passenger: obligatory</li><li>Rear passengers: obligatory</li><li>Children: obligatory</li></ul>	Obligatory (all countries) Obligatory (all countries) Obligatory (all countries) Obligatory (all countries)
Helmet wearing:	
<ul><li>Motor riders: Obligatory</li><li>Moped riders: Obligatory</li><li>Cyclists: obligatory only outside urban areas and for speed &gt;50 km/h</li></ul>	Obligatory (all countries) Obligatory (all countries) Not obligatory (46%)
- Daytime running lights are mandatory	
even during daylight hours. Mandatory only	
outside built-up areas.	
- A demerit point system is in place. [2]	

Sources: [1] EC DG-Move 2017; [2] WHO, 2013

### **Enforcement**

Table 9: Effectiveness of enforcement effort in Hungary according to an international respondent consensus (scale = 0-10)

Issue	Score for Hungary	Most common in EU (% of countries)
Speed legislation enforcement	8	7 (43%)
Seat-belt law enforcement	8	7 (25%) and 8 (25%)
Child restraint law enforcement	8	8 (39%)
Helmet legislation enforcement	9	9 (50%)
Drink-driving law enforcement	8	8 (43%)

Source: WHO, 2015

Hungary has zero tolerance for drink-driving.

Effectiveness of traffic law enforcement in Hungary is at or above the EU average.

<sup>&</sup>lt;sup>1</sup> Blood Alcohol Concentration



Driving licences thresholds are lower for mopeds than in most EU countries.

Mandatory inspection periods in Hungary are longer for passenger cars than in the

other EU countries.

### **Road User Education and Training**

Table 10: Road user education and training in Hungary compared to the situation in other FU countries

Education and training in Hungary	Most common in EU (% of countries)
General education programmes:	
- Primary school: compulsory	Compulsory (71%)
- Secondary school: compulsory	Compulsory (43%)
- Other groups: lifelong journey programme	_
Driving licences thresholds:	
- Passenger car: 18 years	18 years (82%)
- Motorised two wheeler: 14 years for AM	16 years for low categories
category; 16 years for A1 category; 18 years	(68%) and 18 years for higher
for A2 category; 24 years for A category	categories (64%)
- Buses and coaches: 21 years	21 years (89%)
- Lorries and trucks: 21 years	21 years (71%)
Sources: [1] BOSE25, 2005: [2] national sources: [3] EC website	

Sources: [1] ROSE25, 2005; [2] national sources; [3] EC website

### **Public Campaigns**

Table 11: Public campaigns in Hungary compared to the situation in other EU countries

Campaigns in Hungary	Most common issues in EU (% of countries)		
Organisation:			
- The National Committee for Accident Prevention (OBB) of the national police headquarters.			
Main themes:			
<ul><li>drink-driving</li><li>speeding</li><li>seat-belts</li><li>hazard of railway crossing</li></ul>	Drink-driving (96%) Speeding (86%) Seat-belt (79%)		

Sources: national sources

### Vehicles and technology (national developments)

Table 12: Developments of vehicles and technology in Hungary, compared to the situation in other EU countries

Mandatory technical inspections:	Most common in EU (% of countries)
Passenger cars: first inspection after 4 years, then every 24 months Taxis: every 12 months	Every 12 months (39%)
Motorcycles: first inspection after 4 years, then every 24 months	Every 24 months (32%)
Buses or coaches: every 12 months	Every 12 months (61%)
Lorries or trucks: every 12 months	Every 12 months (68%)

Sources: EC website, national sources



The amount of speed tickets per population has increased over time in Hungary.

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### **Road Safety Performance Indicators**

### **Speed**

Table 13: Number of speed tickets per population in Hungary versus the EU

	average					
	Measure	2006	2015	Average annual change	EU average (2015)	
	Number of speed tickets/1.000 population	17	28	5,7%	94	
Sources: [1] ETSC, 2010; [2] ETSC, 2016						

Table 14: Percentage of speed offenders per road type in Hungary compared to the EU average

Road type	2004	2008	Average annual change	EU average
Motorways	56%*	32%	-24,4%	n/a
Rural roads	27%*	30%	5,4%	n/a
Urban roads	67%	55%	-4,8%	n/a

Sources: [1] ETSC, 2010; [2] ETSC, 2015

\*Data from 2006

Table 15: Mean speed per road type in Hungary compared to the EU average

Road type	2004	2008	Average annual change	EU average
Motorways	120 km/h*	116 km/h	-1,7%	n/a
Rural roads	82 km/h*	82 km/h	0,0%	n/a
Urban roads	55,7 km/h	46,4 km/h	-4,5%	n/a

Sources: [1] ETSC, 2010; [2] ETSC, 2015

\*Data from 2006

### **Alcohol**

Table 16: Road side surveys for drink-driving in Hungary compared to the EU average

Measure	2006	2015	Average annual change	EU average (2015)
Amount of tests/1.000 population	144	135	1,9%	209
% tested over the limit	2,9%	1,5%	-7,1%	2,2%

Sources: [1] ETSC, 2010; [2] ETSC, 2016

The amount of drink-driving tests in Hungary has decreased between 2006 and 2015, however, the amount of offenders has decreased.



The Hungarian vehicle fleet is much older than the EU average, however it has a relatively high occupant protection score.

Seat-belt wearing rates in Hungary are lower than the EU average.

### **Vehicles**

Table 17: State of the vehicle fleet in Hungary compared to the EU average

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Vehicles	EU average
Cars per age group (2015) [1]:	Passenger cars (2015)
- < 2 years: 5,4%	<2 years: 10,5%
- 2 to 5 years: 5,7%	2 to 5 years: 12,5%
- 5 to 10 years: 25,5%	6 to 10 years: 26,0%
- > 10 years: 63,3%	>10 years: 51,0%
EuroNCAP occupant protection score of cars	
(new cars sold in 2013) [2]:	
- 5 stars: 53,4%	5 stars: 52,5%
- 4 stars: 2,9%	4 stars: 4,5%
- 3 stars: 4,3%	3 stars: 2,9%
- 2 stars: 0,4%	2 stars 0,5%
- not tested: 39,0%	not tested: 39,6% <sup>2</sup>
Source: [1] EUROSTAT, 2017; [2] ETSC, 2016	

## **Protective systems**

Table 18: Protective system use in Hungary versus the average in EU

Protective systems	EU average³
Daytime seat-belt wearing in cars and vans (2015):	(2016)
<ul><li>83% front</li><li>82% driver</li><li>no information on % front passenger</li></ul>	not available 91,6% driver 92,4% front passenger
- 39% rear - 79% child restraint systems Helmet use (2015):	70,9% rear not available
- nearly 100% motorcyclists - no information on % cyclists	not available

Source: IRTAD, 2017

<sup>&</sup>lt;sup>2</sup> Based on data of 25 EU countries (excl. HR, LU and MT).

<sup>&</sup>lt;sup>3</sup> Based on data of 17 EU countries; data of AT, DE, IE, IT, LT, FI, SE (2016); data of BE, CZ, HU, LU, PL, SI (2015); data of DK, HR, UK (2014); data of PT (2013)

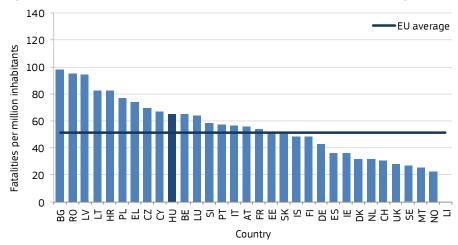


### **Road Safety Outcomes**

### **General positioning**

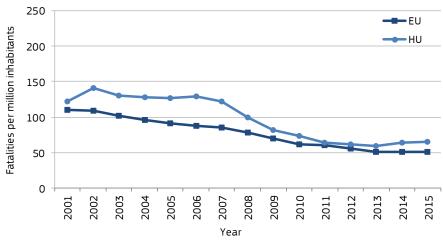
The fatality rate of Hungary is higher than the EU average (around 65 fatalities per million population in 2015). Since 2008 the Hungarian fatality rate and the EU average rate have shown nearly similar developments. Before 2008 the fatality rate of Hungary was higher than the EU average rate.

Figure 1: Fatalities per million inhabitants in 2015 with EU average



Sources: CARE, Eurostat

Figure 2: Development of fatalities per million inhabitants between 2001 and 2015 for Hungary and the EU average



Sources: CARE, Eurostat

The fatality rate of Hungary is higher than the EU average; since 2008 the Hungarian fatality rate and the EU average rate have shown nearly similar developments.



The share of cyclist fatalities in Hungary is higher than the EU average.

Transport mode

The share of cyclist fatalities is higher than the EU average. While the average annual reduction of motorcyclist fatalities between 2003 and 2015 was only 2%, it was 7% for car occupants. In the same period, the annual reduction rates of pedestrian and cyclist fatalities were 6% and 7%.

Table 19: Reported fatalities by mode of road transport in Hungary compared to the EU average

Transport mode	2003	2015	Average annual change	Share in 2015	EU average (2015)
Pedestrians	299	149	-6%	23%	21%
Car occupants	640	304	-7%	47%	46%
Motorcyclists	66	50	-2%	8%	15%
Mopeds	36	27	-3%	4%	3%
Cyclists	178	83	-7%	13%	9%
Bus/coach					
occupants	38	1	-28%	0%	0%
Lorries or truck					
occupants	45	28	-4%	4%	5%

Sources: CARE, national sources

### Age, gender and nationality

Table 20: Reported fatalities by age, gender and nationality in Hungary versus the EU average

Terbus the Lo are	versus the Eo average							
Age and gender	2003	2015	Average annual change	Share in 2015	EU average (2015)			
Females								
0 - 14 years	16	6	-9%	1%	1%			
15 - 17 years	8	3	-9%	0%	1%			
18 - 24 years	37	14	-8%	2%	3%			
25 - 49 years	112	46	-8%	7%	6%			
50 - 64 years	62	38	-4%	6%	4%			
65+ years	75	66	-1%	10%	10%			
Males								
0 - 14 years	16	5	-10%	1%	1%			
15 - 17 years	24	6	-12%	1%	2%			
18 - 24 years	92	47	-6%	7%	11%			
25 - 49 years	469	225	-6%	35%	29%			
50 - 64 years	235	107	-7%	17%	16%			
65+ years	157	78	-6%	12%	17%			
Nationality of killed person								
National	1.199	605	-6%	94%	n/a			
Non-national	127	32	-12%	5%	n/a			

Sources: CARE, national sources

Hungary has a higher share of road fatalities of males aged 25 to 49 than the EU average.



### Location

Fatalities in built-up areas in Hungary are higher than the EU average.

Table 21: Reported fatalities by location in Hungary compared to the EU

average							
Location	2003	2015	Average annual change	Share in 2015	EU average (2015)		
Built-up areas	478	261	-7%	41%	37%		
Rural areas	790	349	-9%	54%	54%		
Motorways	58	34	-6%	5%	8%		
Junctions	316	136	-9%	21%	20%		

Sources: CARE, national sources

Fatalities in built-up areas in Hungary are higher than the EU average.

### Lighting and weather conditions

Table 22: Reported fatalities by lighting and weather conditions in Hungary compared to the EU average

compared to the Lo average						
Conditions	2003	2015	Average annual change	Share in 2015	EU average (2015)	
<b>Lightning conditions</b>						
During daylight	731	381	-6%	59%	52%	
During night-time	540	237	-7%	37%	31%	
Weather conditions						
While raining	71	47	-4%	7%	9%	

Sources CARE, national sources

### Single vehicle accidents

Table 23: Reported fatalities by type in Hungary compared to the EU average

Accident Type	2001	2015	Average annual change	Share in 2015	EU average (2015)
Single vehicle	281	140	-13%	22%	29%

Sources: CARE, national sources

### **Under-reporting of casualties**

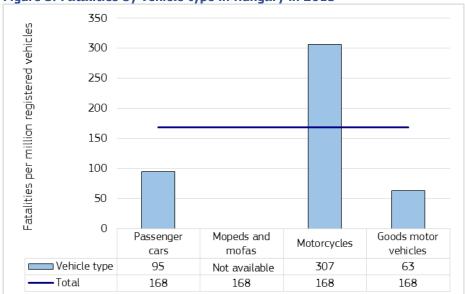
- Fatalities: 100%, due to improvements of the data recording systems.
- Hospitalised: no studies with quantitative information exist.

The share of fatal single vehicle accidents in Hungary is lower than the EU average.



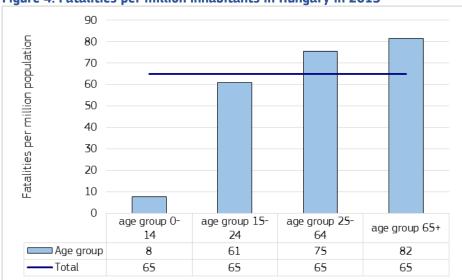
### **Risk Figures**

Figure 3: Fatalities by vehicle type in Hungary in 2015



Sources CARE, IRTAD; Number of registered mopeds and mofas was not available, Total = all motor vehicles excluding mopeds and mofas

Figure 4: Fatalities per million inhabitants in Hungary in 2015



Sources: CARE, EUROSTAT

years).

In Hungary risk is high for

motorcyclists, the elderly and middle-aged people (25-65



### **Social Cost**

- The total cost of road accident casualties (fatalities and injuries) is estimated at 48,5 billion euros (2014).
- The following costs are an update of the values in Table 5.3 of the HEATCO Deliverable D5 (2006) to base year 2010. Each figure includes the value of safety per se (VSL<sup>4</sup> for fatality, 13% of VSL for severe, 1% for light injury) and the value of direct and indirect economic costs (10% of VSL for fatality, severe and slight injury based on HEATCO (2005)). EU average based on the VSL of €1,7 million.
- The costs per casualty for 2010 are as follows:

Table 24: Cost (€) per injury type in Hungary versus the EU average

Table 24: Cost (€) per injury type in Hungary versus the EU average							
Country	Fatality	Severe injury	Slight injury				
Austria	2.395.000	327.000	25.800				
Belgium	2.178.000	330.400	21.300				
Bulgaria	984.000	127.900	9.800				
Croatia	1.333.000	173.300	13.300				
Cyprus	1.234.000	163.100	11.900				
Czech Republic	1.446.000	194.300	14.100				
Denmark	2.364.000	292.600	22.900				
Estonia	onia 1.163.000	155.800	11.200				
Finland	2.213.000	294.300	22.000				
France	2.070.000	289.200	21.600				
Germany	2.220.000	307.100	24.800				
Greece	1.518.000	198.400	15.100				
Hungary	1.225.000	164.400	11.900				
Ireland	2.412.000	305.600	23.300				
Italy	1.916.000	246.200	18.800				
Latvia	1.034.000	140.000	10.000				
Lithuania	1.061.000	144.900	10.500				
Luxembourg	3.323.000	517.700	31.200				
Malta	2.122.000	269.500	20.100				
Netherlands	2.388.000	316.400	25.500				
Poland	1.168.000	156.700	11.300				
Portugal	1.505.000	201.100	13.800				
Romania	1.048.000	136.200	10.400				
Slovakia	1.593.000	219.700	15.700				
Slovenia	1.989.000	258.300	18.900				
Spain	1.913.000	237.800	17.900				
Sweden	2.240.000	328.700	23.500				
Great Britain	2.170.000	280.300	22.200				
EU average	1.870.000	243.100	18.700				
Source: Update of the Handbook on External Costs of Transport. Final Report. Report for the European							

Source: Update of the Handbook on External Costs of Transport. Final Report. Report for the Europea Commission: DG MOVE. Ricardo-AEA/R/ ED57769 Issue Number 1; 8th January 2014

In Hungary, the costs of road

accident casualties are much lower than the EU average.

<sup>&</sup>lt;sup>4</sup> Value of Statistical Life



### **Synthesis**

### Safety position

- With 65 fatalities per million population in 2015, the Hungarian fatality rate is still higher than the EU average, despite a steady decrease that was recorded since 2007.

### Scope of problem

- Pedestrians and cyclists have a relatively high share in the annual fatalities of Hungary compared to the EU average. Motorcyclists have the highest risk of being killed in road accidents.
- The elderly and middle-aged people (25-65 years old) have a higher risk of getting involved in fatal road accidents.
- The share of fatal single vehicle accidents in Hungary is lower than the EU average.
- The Hungarian vehicle fleet is much older than the EU average.
- Seat-belt wearing rates in Hungary are lower than the EU average.

### **Recent progress**

- Since 2008 the Hungarian fatality rate and the EU average rate have shown nearly similar developments. Before 2008 the fatality rate of Hungary was higher than the EU average rate.
- The amount of speed tickets per population has increased over time in Hungary, but it still remains much lower than the EU average.
- The amount of drink-driving tests in Hungary has decreased between 2006 and 2010, however, the amount of offenders has also decreased.
- The Hungarian vehicle fleet has a relatively high occupant protection score.

### Remarkable road safety policy issues

- Safety impact assessment, road safety audits and inspections, as well as high risk site treatment are obligatory parts of road infrastructure management in Hungary.
- Effectiveness of traffic law enforcement in Hungary is at or above the EU average.
- Hungary has zero tolerance for drink-driving.
- Driving licences thresholds are lower for passenger cars but higher for motorised two wheelers in Hungary than in most EU countries.

Effectiveness of traffic law enforcement in Hungary is at or above the EU average.



### References

- CARE database (2017).
- 2. CIA database (2017).
- 3. DG-TREN (2010). Technical Assistance in support of the Preparation of the European Road Safety Action Program 2011-2020. Final Report. DG-TREN, Brussels.
- 4. European Commission website (2017a).

  <a href="http://europa.eu/youreurope/citizens/vehicles/registration/formalities/index\_en.">http://europa.eu/youreurope/citizens/vehicles/registration/formalities/index\_en.</a>

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- 5. European Commission website (2017b). <a href="http://europa.eu/youreurope/citizens/vehicles/driving-licence/get-driving-licence/get-driving-licence/">http://europa.eu/youreurope/citizens/vehicles/driving-licence/get-driving-licence/get-driving-licence/</a>
- 6. European Commission DG Move website (2017). http://ec.europa.eu/transport/road\_safety/index\_en.htm
- 7. ETSC (2009). Boost the market for safer cars across Europe. + Background tables PIN Flash no. 13. ETSC, Brussels.
- ETSC (2010). Road Safety Target in Sight: Making up for lost time. + Background tables 4th Road Safety PIN report. ETSC, Brussels.
- 9. ETSC (2014). Ranking EU progress on car occupant safety. + Background tables PIN Flash no. 27. ETSC, Brussels.
- 10. ETSC (2015). Enforcement in the EU-Vision 2020. + Background tables. ETSC, Brussels.
- 11. ETSC (2015). Making walking and cycling on Europe's roads safer. + Background tables PIN Flash no. 29. ETSC, Brussels.
- 12. ETSC (2015). Ranking EU progress on improving motorway safety. + Background tables PIN Flash no. 28. ETSC, Brussels.
- 13. ETSC (2016). How safe are the new cars sold in the EU? An analysis of the market penetration of Euro NCAP-rated cars. + Background tables PIN Flash no. 30. ETSC, Brussels.
- 14. ETSC (2016). How traffic law enforcement can contribute to safer roads. + Background tables PIN Flash no. 31. ETSC, Brussels.
- 15. Eurostat database (2017).
- 16. European Commission (2014). Handbook on External Costs of Transport. Final Report. Ricardo-AEA/R/ ED57769 Issue Number 1; 8th January 2014.
- 17. European Commission (2015). Road Safety in the European Union: Trends, statistics and main challenges. European Commission, Mobility and Transport DG, Brussels.
- 18. National Sources (2017): via national CARE experts and official national sources of statistics.
- 19. OECD/ITF (2014). Road Safety Annual Report 2014. OECD Publishing, Paris.
- 20. OECD/ITF (2015). Road Safety Annual Report 2015. OECD Publishing, Paris.
- 21. OECD/ITF (2015). Road Infrastructure Safety Management. OECD Publishing, Paris.
- 22. OECD/ITF (2016). Road Safety Annual Report 2016. OECD Publishing, Paris.
- 23. OECD/ITF (2017). Road Safety Annual Report 2017. OECD Publishing, Paris.
- 24. ROSE25 (2005). Inventory and compiling of a European good practice guide on road safety education targeted at young people. Final report. KfV, Vienna.
- 25. SUPREME (2007) Final Report Part F1. Thematic Report: Education and Campaigns. European Commission, Brussels.
- 26. Torfs, K., Meesmann, U., Van den Berghe, W., & Trotta M., (2016). ESRA 2015 The results. Synthesis of the main findings from the ESRA survey in 17 countries. ESRA project (European Survey of Road users' safety Attitudes). Belgian Road Safety Institute, Brussels.
- 27. WHO (2013). Global status report on road safety 2013: supporting a decade of action. World Health Organisation, Geneva.
- 28. WHO (2015) Global status report on road safety 2015. World Health Organisation, Geneva.
- 29. UNECE database (2017).



### **Notes**

### 1. Country abbreviations



2. Sources: CARE (Community database on road accidents), EUROSTAT, ITF-IRTAD, National sources.

The full glossary of definitions of variables used in this Report is available at: <a href="http://ec.europa.eu/transport/road/safety/pdf/statistics/cadas/glossary.pdf">http://ec.europa.eu/transport/road/safety/pdf/statistics/cadas/glossary.pdf</a>

- 3. Data available in September 2017.
- 4. Average annual change is calculated with the power function between the first and last years:

[aac =  $(b/a)^{1/n}$ -1, where aac: annual average change, a: first year value, b: last year value, n: number of years].

5. Explanation of symbols in Tables:

n/a: not available

- "-": not applicable (e.g. calculation cannot be performed)
- 6. This 2017 edition of Road Safety Country Overviews updates the previous version produced in 2012 within the EU co-funded research project <u>DaCoTA</u>.

### 7. Disclaimer

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8. Please refer to this Report as follows:

European Commission, Road Safety Country Overview - Hungary, European Commission, Directorate General for Transport, September 2017.



