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Trendline project Report on KPI Speed

Version: 2.0

Date: 13/10/2025

Co-funded by the European Union

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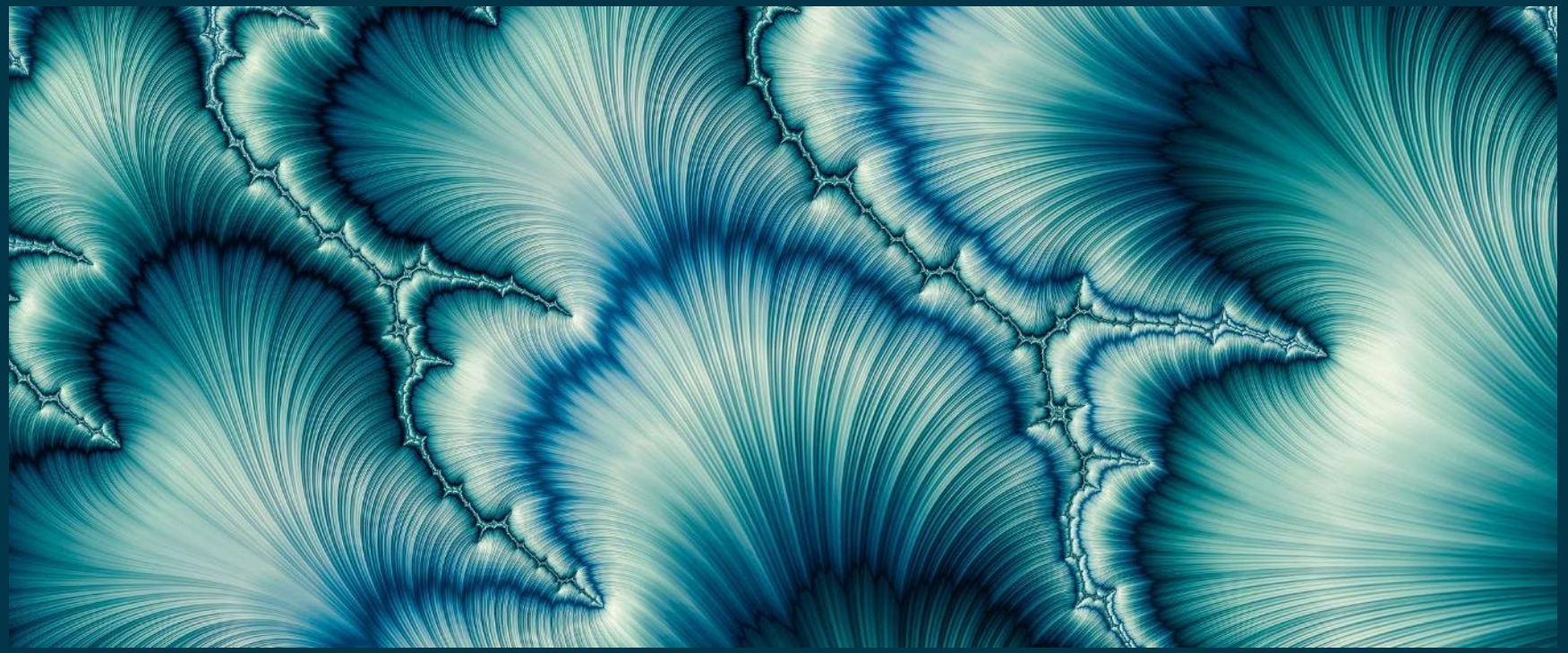
Trendline

Context



Trend line

Purpose and objectives of Trendline

- The purpose of the Trendline project (2022-2025) is to promote the use of road safety KPIs (Key Performance Indicators) within the European Union.
- Collecting such KPI data on a regular basis will underpin and support road safety policies and interventions.
- By using common methodologies, the KPI values of countries can be compared with those of other countries.
- Trendline is supported by the European Commission, who funds 100% of the coordination costs and up to 50% of the costs for data collection and analysis in the EU Member States.
- Trendline is the successor project of "Baseline" (2020-2022).

Main components of Trendline

8

Data collection and analysis for the 8 initial KPIs

Define and test methodologies for 10 experimental indicators

Promote the use of road safety KPIs in road safety policies

Trendline

Countries participating in Trendline

- 25 EU countries (out of 27)
- 4 observers: Estonia, Malta, Norway and Switzerland

Trendline

The eight initial KPIs in Trendline

- Speeding
- Safety belt
- Helmets
- Drink driving
- Distraction
- Vehicle safety
- *Infrastructure**
- Post-crash

** Trendline did only support methodological development; no funding was available for data collection and analysis*

KPI Expert Group (KEG)

- Purpose of the KEG
  - to review and adapt the methodological guidelines developed within the Baseline project
  - to advice on the interpretation and possible deviations of the common guidelines
  - to verify the quality of the data collected
  - to draft and review the report on the KPI

- Members of the KEG Speed:
  - Alexandra Laiou, NTUA (Greece) - Chair
  - Anna Vadeby, VTI (Sweden)
  - François Riguelle, AWSR (Belgium)
  - Ingrid Van Schagen, SWOV (Netherlands)
  - João Cardoso, LNEC (Portugal)
  - Pawel Tutka, WUT (Poland)
  - Davide Shingo Usami, CTL (Italy)
  - Naomi Wardenier, VIAS (Belgium)

Trendline

Ten 'experimental' indicators

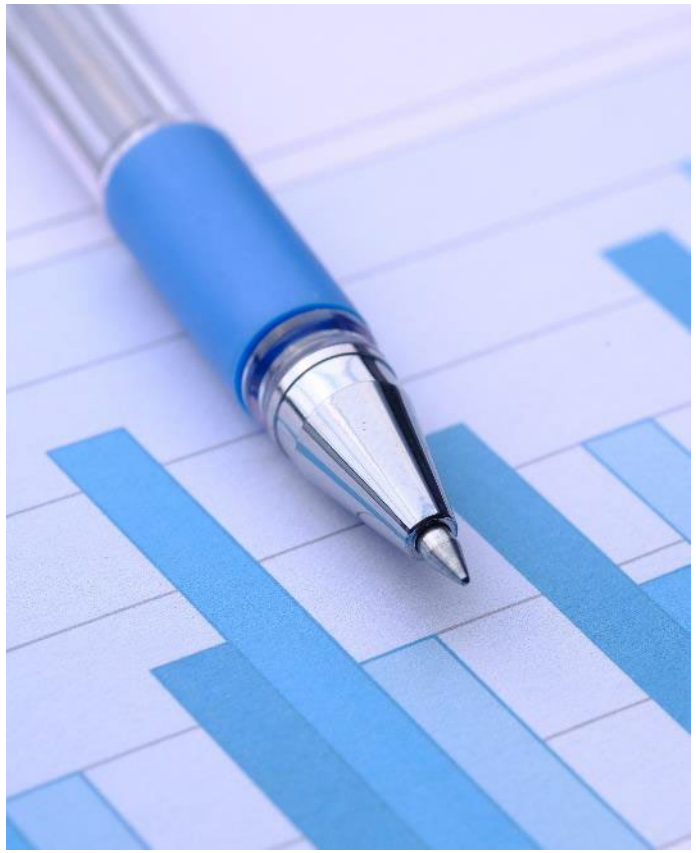
- Purpose: to examine whether the standard set of European indicators should be larger:
  - by extending the scope of existing indicators, or
  - by accepting alternative definitions, or
  - by extending the range of acceptable methodologies, or
  - by addressing new topics.

- Status
  - 10 possible new indicators have been selected.
  - KEGs (Key Expert Groups) have established methodological guidelines.
  - Pilots and tests have been conducted for each indicator in several Member States,
  - Final output are methodological guidelines, lessons learned, and recommendations.

Trendline

The ten experimental indicators

- Driving under the influence of drugs
- Share of 30km/h road lane lengths in urban zones
- Red-light negations by road users
- Compliance with traffic rules at intersections
- Helmet wearing of PMD riders
- Self-reported risky behaviour
- Attitudes towards risky behaviour
- Use of lights by cyclists in the dark
- Enforcement of traffic regulations
- Alternative speeding indicators



Trendline

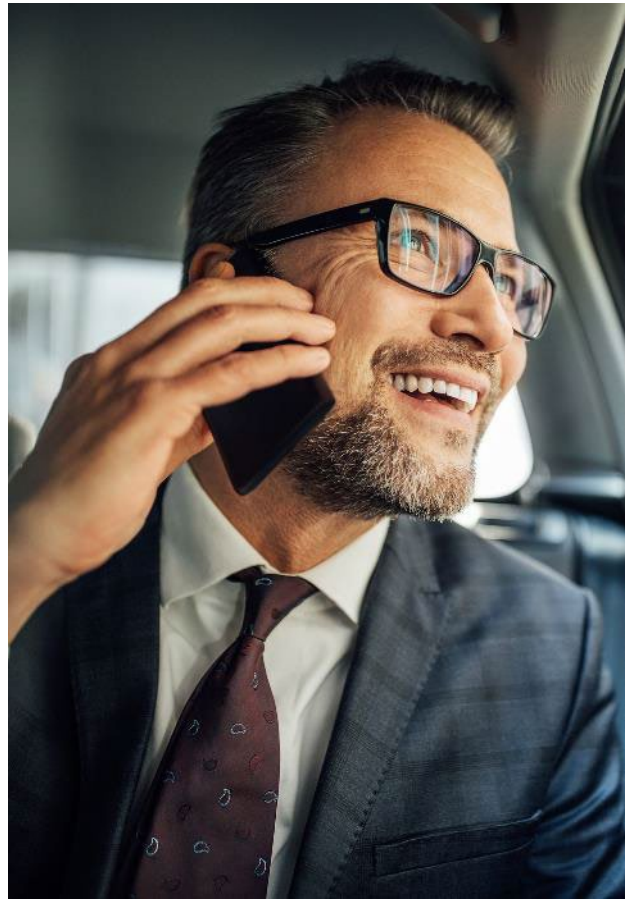
Methodology and participants

Definition and scope

- Definition: ***Percentage of vehicles travelling within the speed limit***
- Additional required measurements concerned
  - speed below which 85% of drivers are driving (**V85**)
  - **average speed** (including standard deviation)
- The theoretical population for this KPI refers to the **percentage of vehicles travelling within the speed limit over the national territory** on sections of roads that allow free flowing traffic.

Methodological requirements

- KPIs should be presented separately **per road type**:
  - motorways
  - rural non-motorway roads
  - urban roads
- **Vehicle types** to be considered:
  - passenger cars (minimum requirement)
  - buses, goods vehicles (light [less than 3.5t] and heavy [more than 3.5t]) and powered two wheelers are optional
- **Time periods** to be considered:
  - during daytime on weekdays (minimum requirement)
  - daytime at weekends, night-time on weekdays and at weekends are optional
- Absolute minimum for the sample size: observation of **2000 vehicles**
  - Minimum 500 per road type or another stratum considered
  - Min. 10 locations per stratum, and 2 locations for each combination of strata (e.g. road type and time period)
  - Need for weighting the results at the observation locations within the stratum but also across the strata; traffic volume data needed.
- Methods allowed within Trendline
  - Any method allowing the measurement of momentaneous speed in **free-flowing traffic** situations



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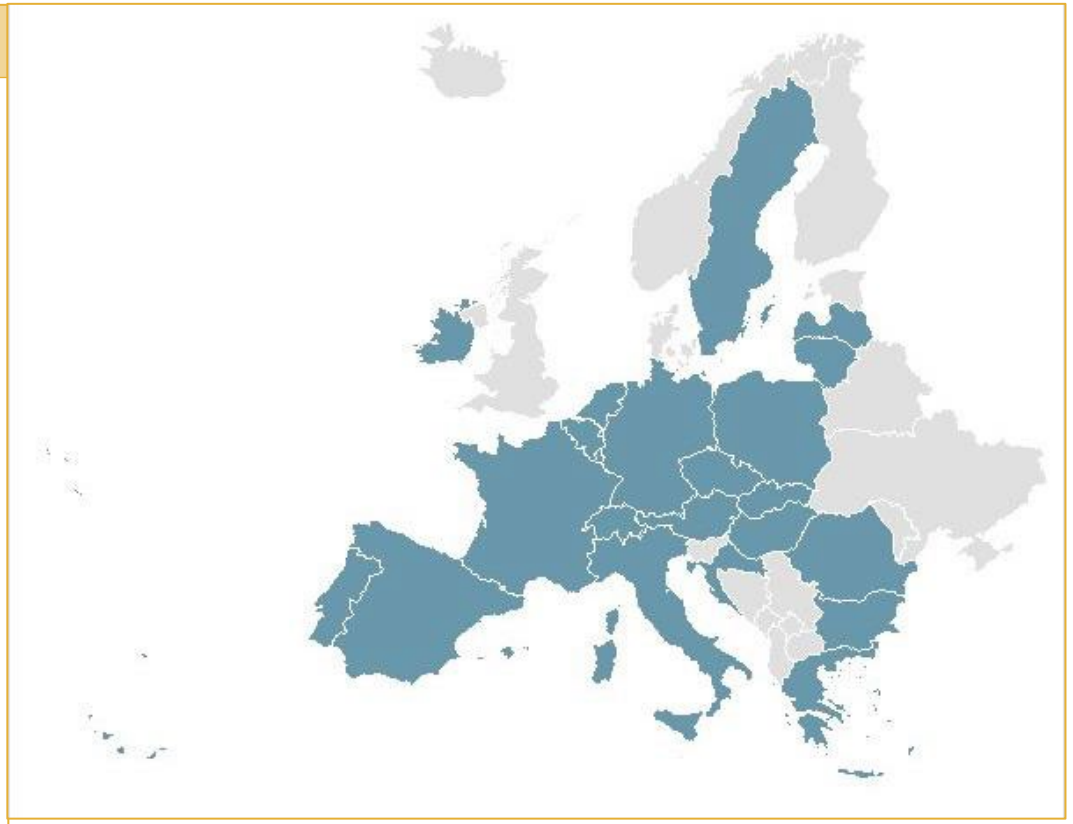
Countries collecting data on speed (20)

Country	Indicators delivered	Data collection period
Austria	KPI, Average Speed, V85	all year round, 2023
Belgium	KPI, Average Speed, V85	07/11/2024 - 18/03/2025
Bulgaria	KPI, Average Speed, V85	27/04/2024 - 30/06/24; 01/09/24 - 26/11/24
Croatia	KPI, Average Speed, V85	01.03.2023 - 01.12/2024
Cyprus	KPI, Average Speed, V85	5/6/25-29/6/25
Czechia	KPI, Average Speed, V85	04/09/23-19/10/23
Greece	KPI, Average Speed, V85	28/3/25 - 09/04/25
Hungary	KPI, Average Speed, V85	09/2024 - 10/2024
Ireland	KPI, Average Speed, V85	17/04/2024 - 07/05/2024
Italy	KPI, Average Speed, V85	17/06/2024 - 07/08/2024
Latvia	KPI, Average Speed, V85	01/09/2023 - 31/10/23; 21/08/23-24/10/23
Lithuania	KPI, Average Speed, V85	04/04/2023 - 29/06/2023
Luxembourg	KPI, Average Speed, V85	30/09/2024 - 23/12/2024
Netherlands	KPI, Average Speed, V85	01/10-2024 - 31/10/2024
Poland	KPI, Average Speed, V85	10/04/2024 - 20/06/2024
Portugal	KPI, Average Speed, V85	19/02/2024 - 15/05/2024; 30/09/2024 - 07/01/2025
Slovakia	KPI, Average Speed, V85	19/09/23 - 28/06/24
Slovenia	KPI, Average Speed, V85	01/04/2024 - 30/6/2024
Spain	KPI, Average Speed, V85	02/11/2023 - 04/12/2023
Sweden	KPI, Average Speed	05/2024 - 09/2024; 09/2023

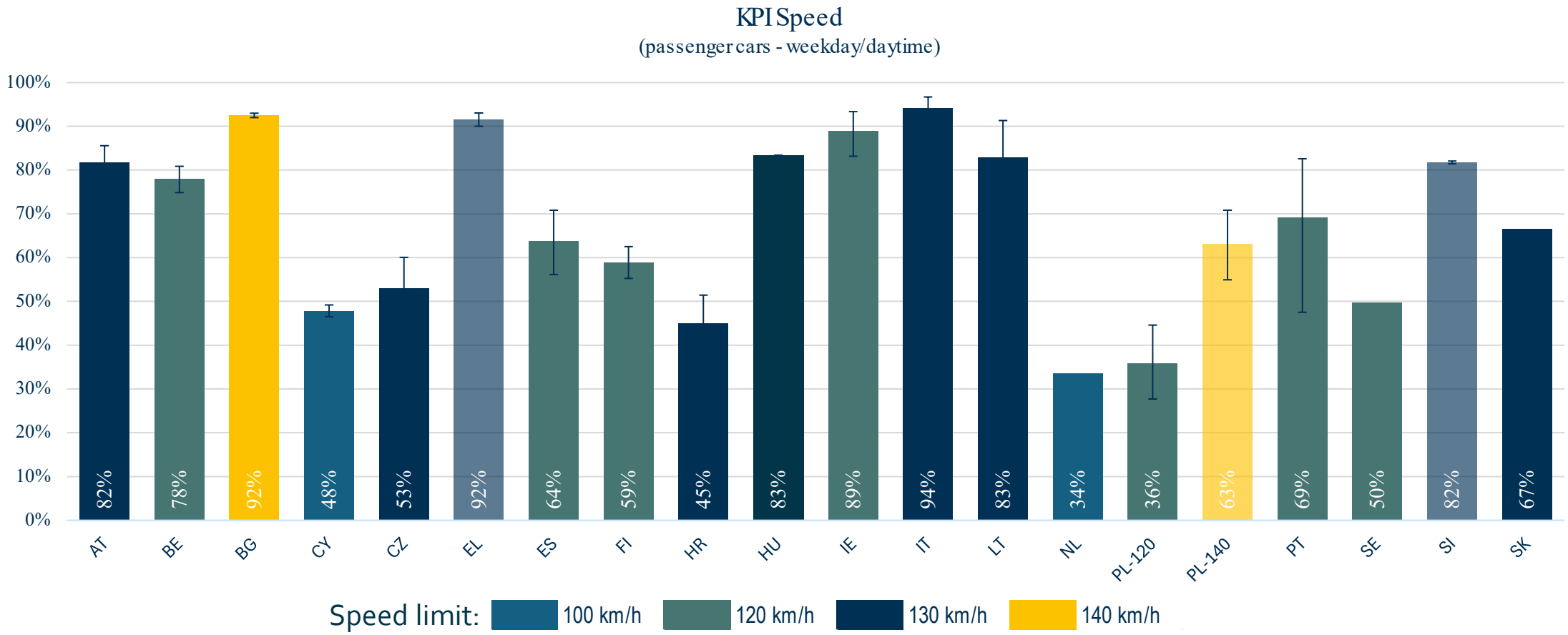


Note: Key results for Denmark and Luxembourg are not shown in the figures in the following slides, due to deviations from the methodological guidelines of the Trendline project.

Key results

Trendline

KPI Speed for motorways

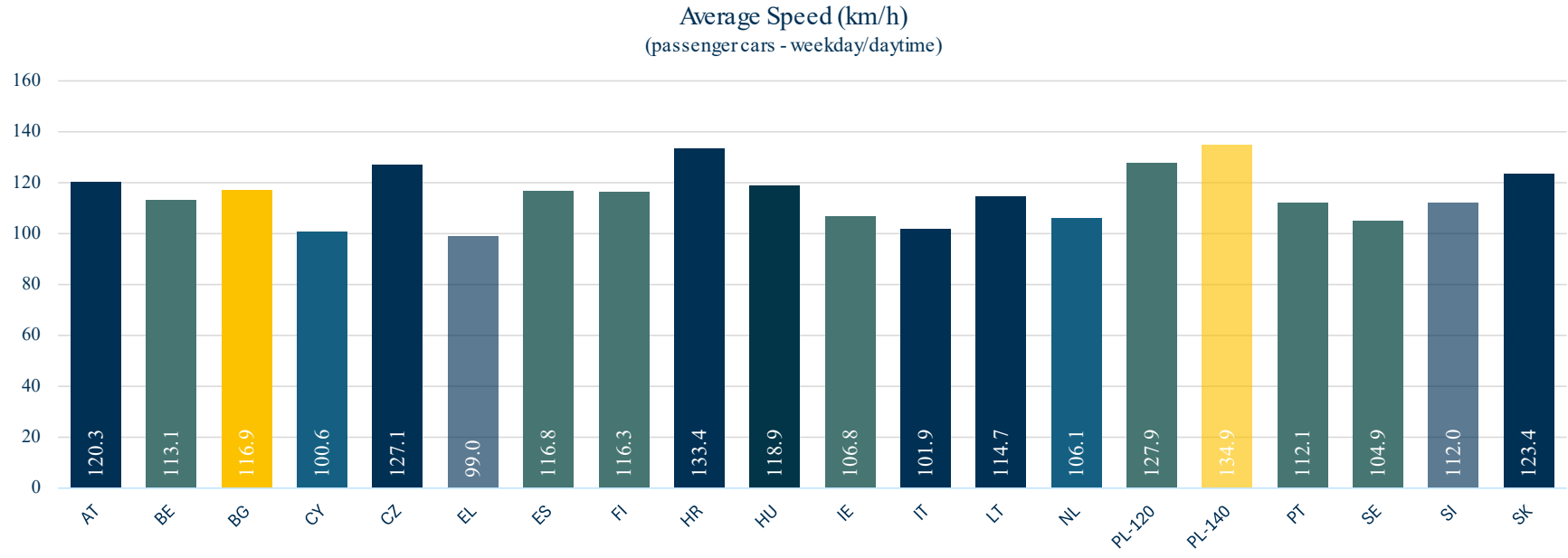


Notes:

1. Countries with samples deviating from minimum requirements are shown with lighter colours:
   EL, SI, PL-140: Low number of locations
2. Denmark: 49.5% in 2023 and 49.6% in 2024 on motorways with speed limit 110km/h
   82.0% in 2023 and 81.5% in 2024 on motorways with speed limit 130km/h
   Luxembourg: 99% in 2024 on motorways with speed limit 110km/h

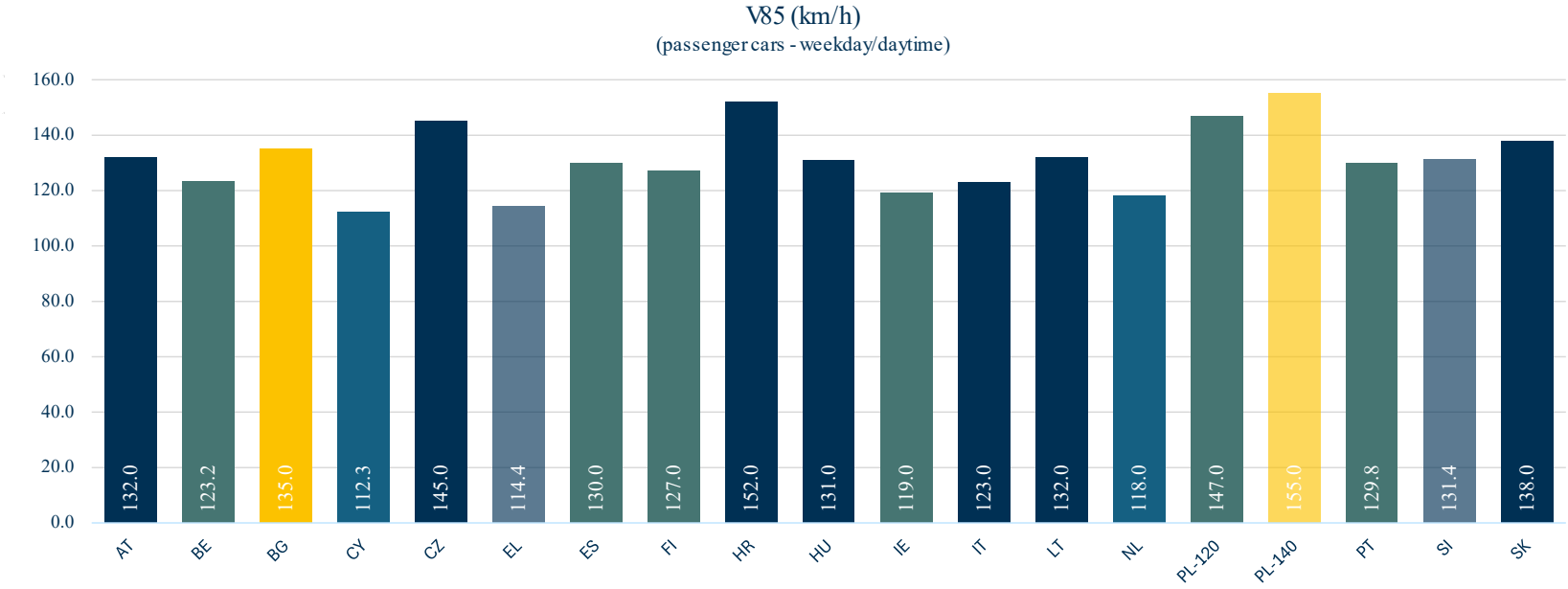
Trendline

Speed Indicators for motorways



Speed limit:

100 km/h 120 km/h 130 km/h 140 km/h



Notes:

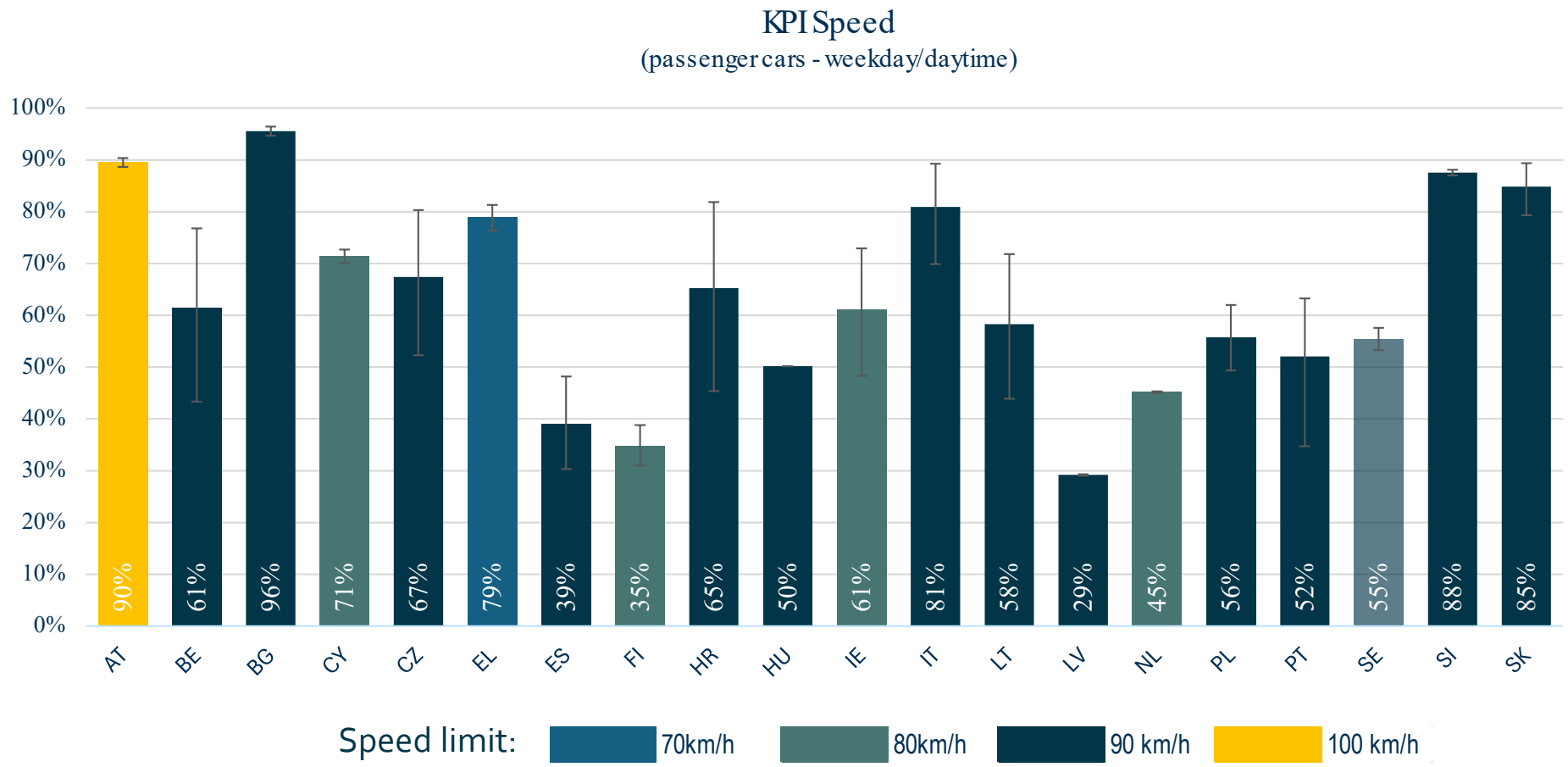
1. Countries deviating from minimum requirements are shown with lighter colours:
   EL, SI, PL-140: Low number of locations
2. Luxembourg: V85=95.2 km/h on motorways with speed limit 110km/h

Speed Indicators for motorways

- KPI speed varies from 34% to 94% on motorways
- Among MS with speed limit 130km/h, KPI varies between 45% (Croatia) and 94% (Italy)
- Among MS with speed limit 120km/h, KPI varies between 36% (Poland) and 89% (Ireland)
- Average speed varies between 99 km/h and 135 km/h
- Among MS with speed limit 130km/h, average speed varies between 99 km/h (Greece) and 133 km/h (Croatia)
- V85 varies between 112 km/h and 155 km/h
- Among MS with speed limit 130km/h, V85 varies between 123 km/h (Italy) and 152 km/h (Croatia)
- V85 lies between 10 km/h to 21 km/h higher than the average speed

Trendline

KPI Speed for rural roads

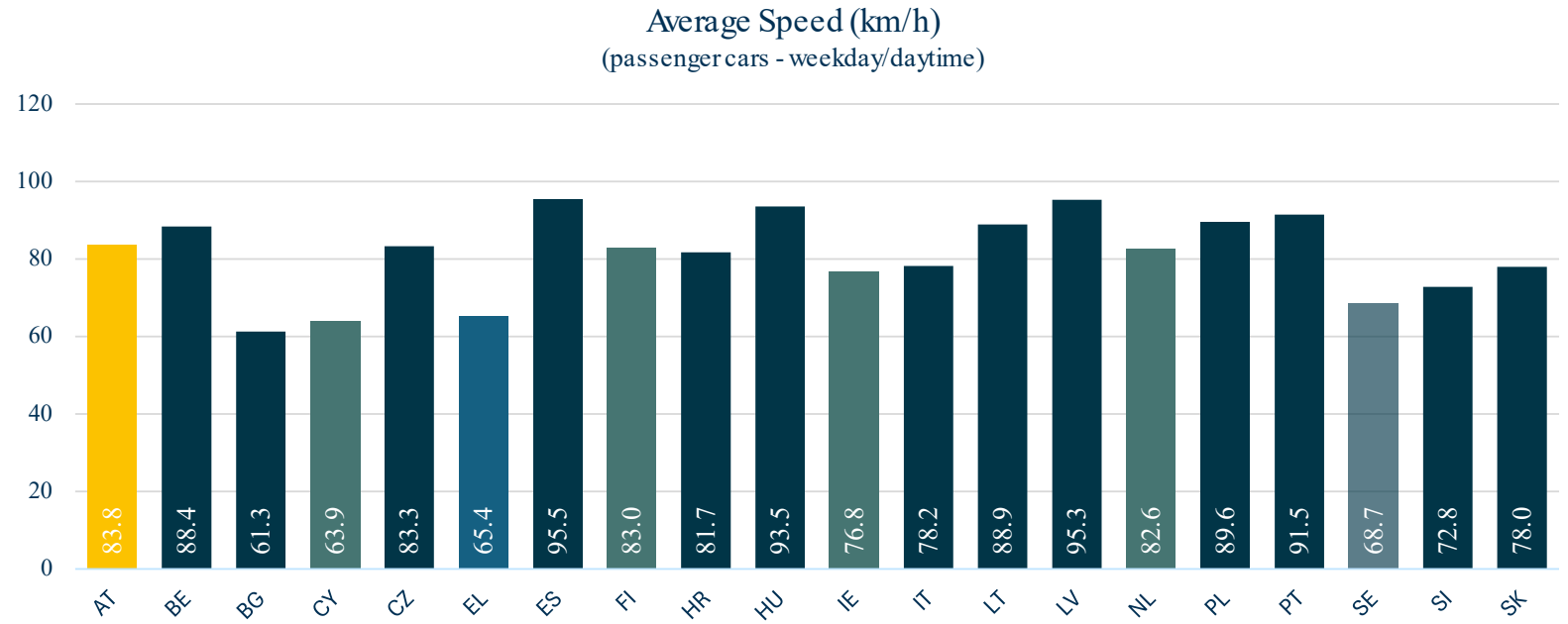


Notes:

1. Countries deviating from minimum requirements are shown with lighter colours:
   SE: The sample combines roads with different speed limits
2. Denmark: 47.5% in 2023 and 51.5% in 2024 on rural roads - mainland (speed limit 80km/h)
   63.7% in 2023 and 64.4% in 2024 on rural roads – islands (speed limit 80km/h)
   Luxembourg: 73% in 2024 on rural roads with speed limit 90km/h

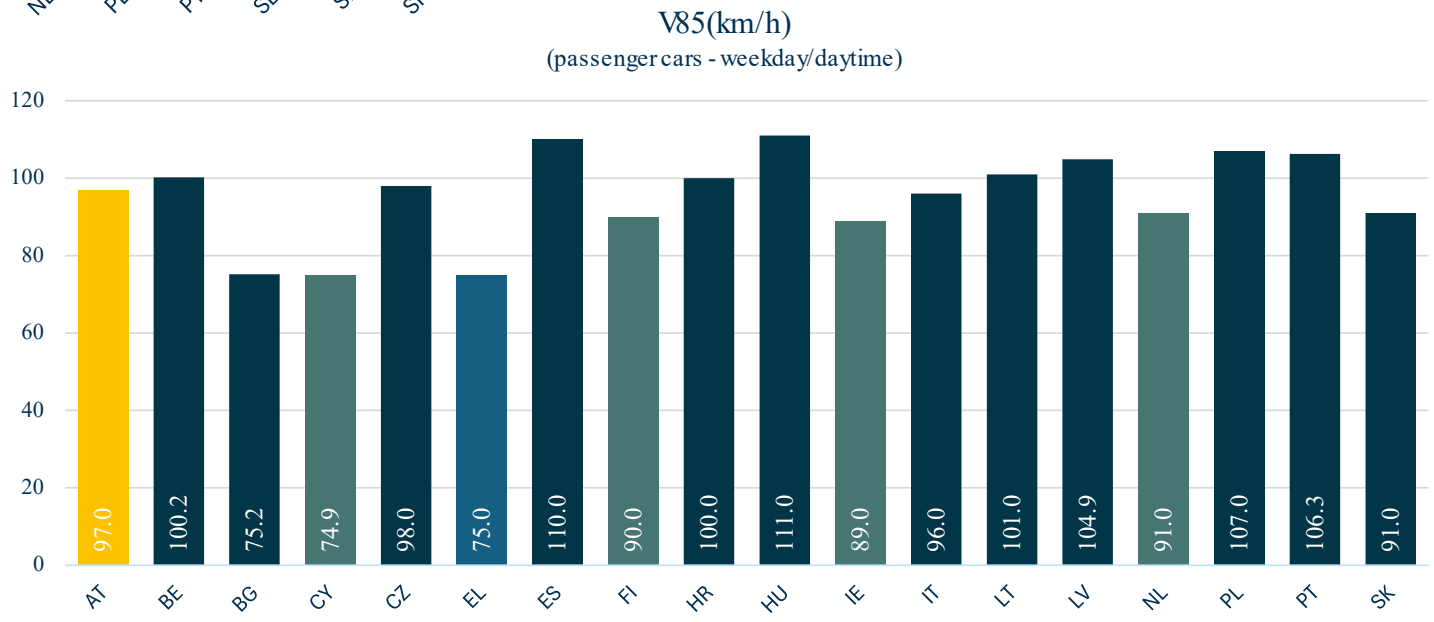
Trendline

Speed Indicators for rural roads



Speed limit:

70km/h 80km/h 90 km/h 100 km/h



Notes:

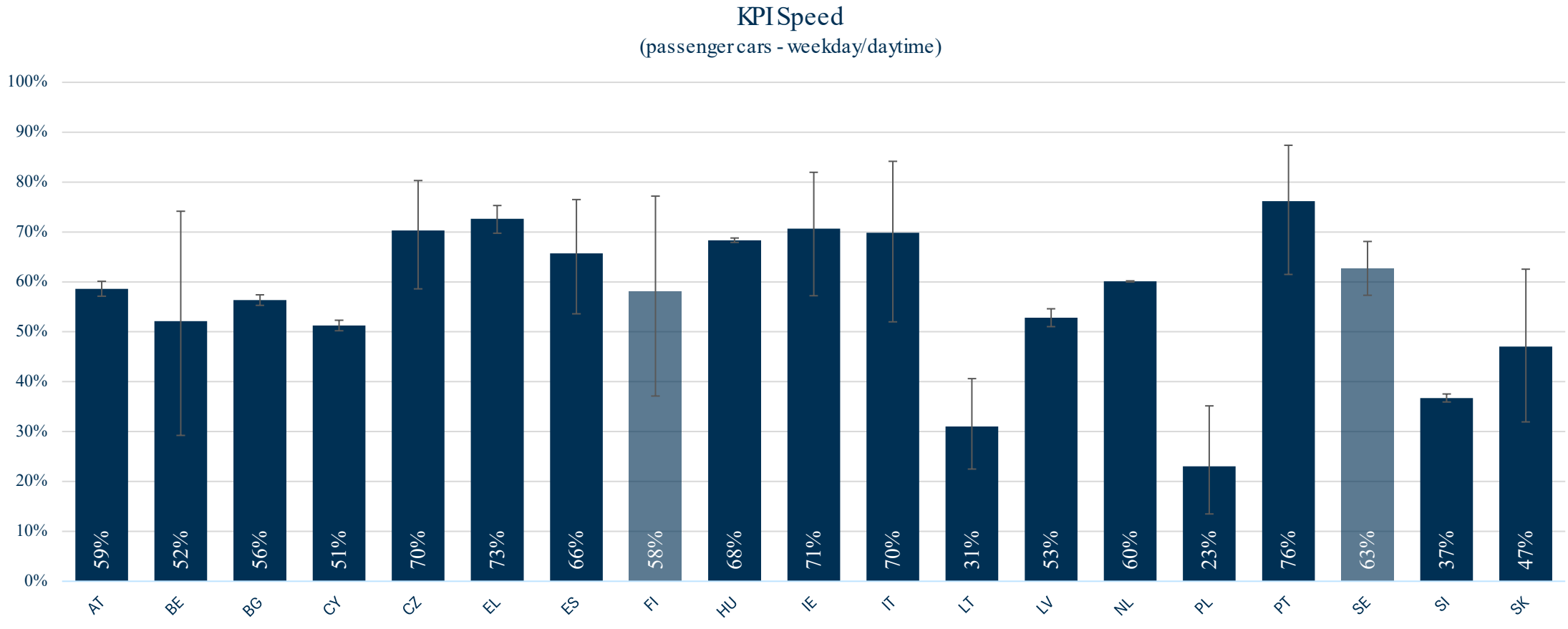
1. Countries deviating from minimum requirements are shown with lighter colours:
   SE: The sample combines roads with different speed limits
2. Luxembourg: V85=87.6km/h on rural roads with speed limit 90km/h

Speed indicators for rural roads

- KPI speed varies from 29% to 96%
- Among MS with speed limit 90km/h, KPI varies between 29% (Latvia) and 96% (Bulgaria)
- KPIs for the speed limit of 80km/h are lower
- Average speed of MS with 90km/h speed limit varies between 61.3 km/h (Bulgaria) and 95.5 km/h (Spain)
- Average speed of MS with 80km/h speed limit is close to the that of remaining MS
- V85 varies between 75 km/h (Greece and Bulgaria) and 111 km/h (Hungary)
- V85 of MS with 90km/h speed limit varies between 75.2 km/h (Bulgaria) and 111 km/h (Hungary)
- V85 of MS with 80km/h speed limit varies between 74.9 km/h (Cyprus) and 91 km/h (Netherlands)
- V85 lies between 7 km/h to 18 km/h higher than the average speed

Trendline

KPI Speed for urban roads

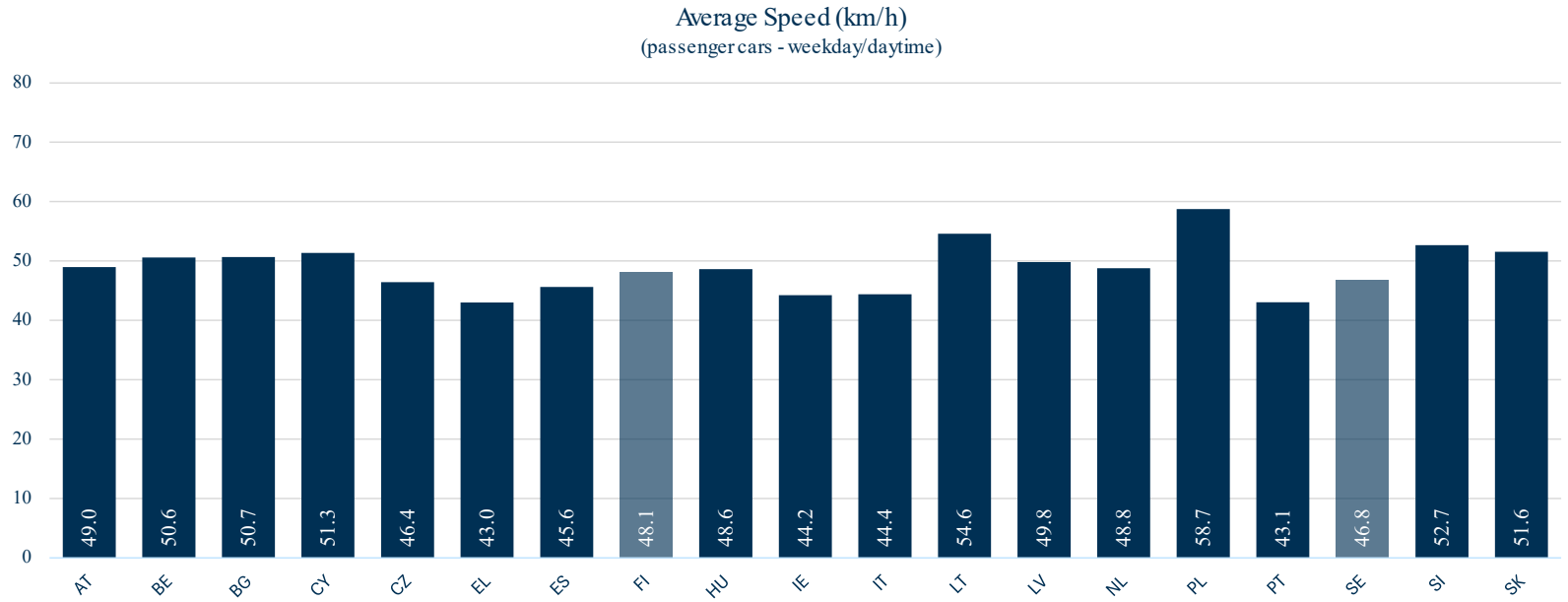


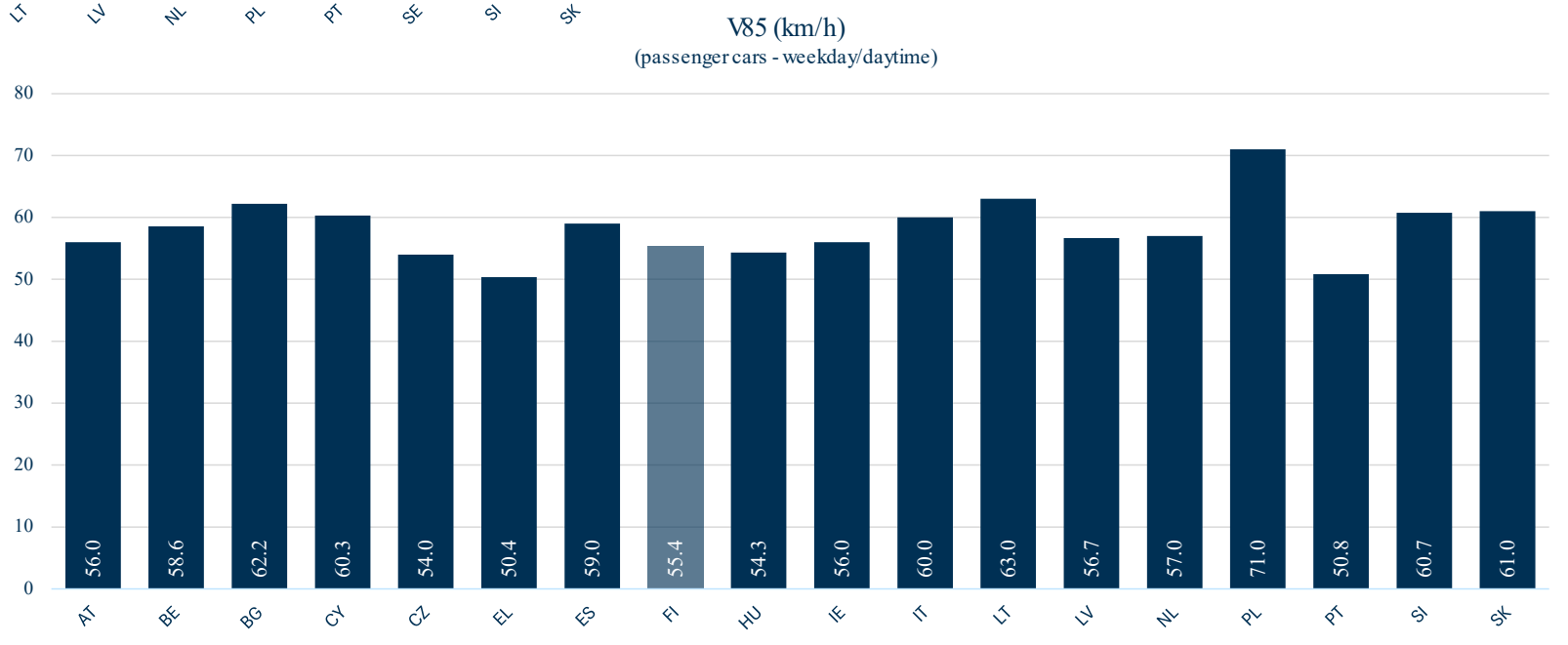
Notes:

1. Speed limit: 50km/h;
2. Countries deviating from minimum requirements are shown with lighter colours:
   SE: The sample combines roads with different speed limits; FI: Low number of locations
3. Denmark: 63.8% in 2023 and 66.4% in 2024 on urban roads – big towns/cities (speed limit 50km/h)
   54.9% in 2023 and 55.3% in 2024 on urban roads – other towns (speed limit 50km/h)
   Luxembourg: 90% in 2024 on urban roads with speed limit 50km/h

Trendline

Speed Indicators for urban roads





Notes:

1. Speed limit: 50km/h;
2. Countries deviating from minimum requirements are shown with lighter colours:
   SE: The sample combines roads with different speed limits; FI: Low number of locations
3. Luxembourg: V85=46.8km/h on urban roads with speed limit 50km/h

Speed indicators for urban roads

- KPI speed varies from 23% (Poland) to 76% (Portugal)
- KPIs for urban roads are lower than the KPIs for the other road types for most MS
- Average speed varies between 43 km/h (Greece and Portugal) and 58.7 km/h (Poland)
- V85 varies between 50 km/h (Greece and Portugal) and 71 km/h (Poland)
- V85 lies between about 6 km/h to 16 km/h higher than the average speed

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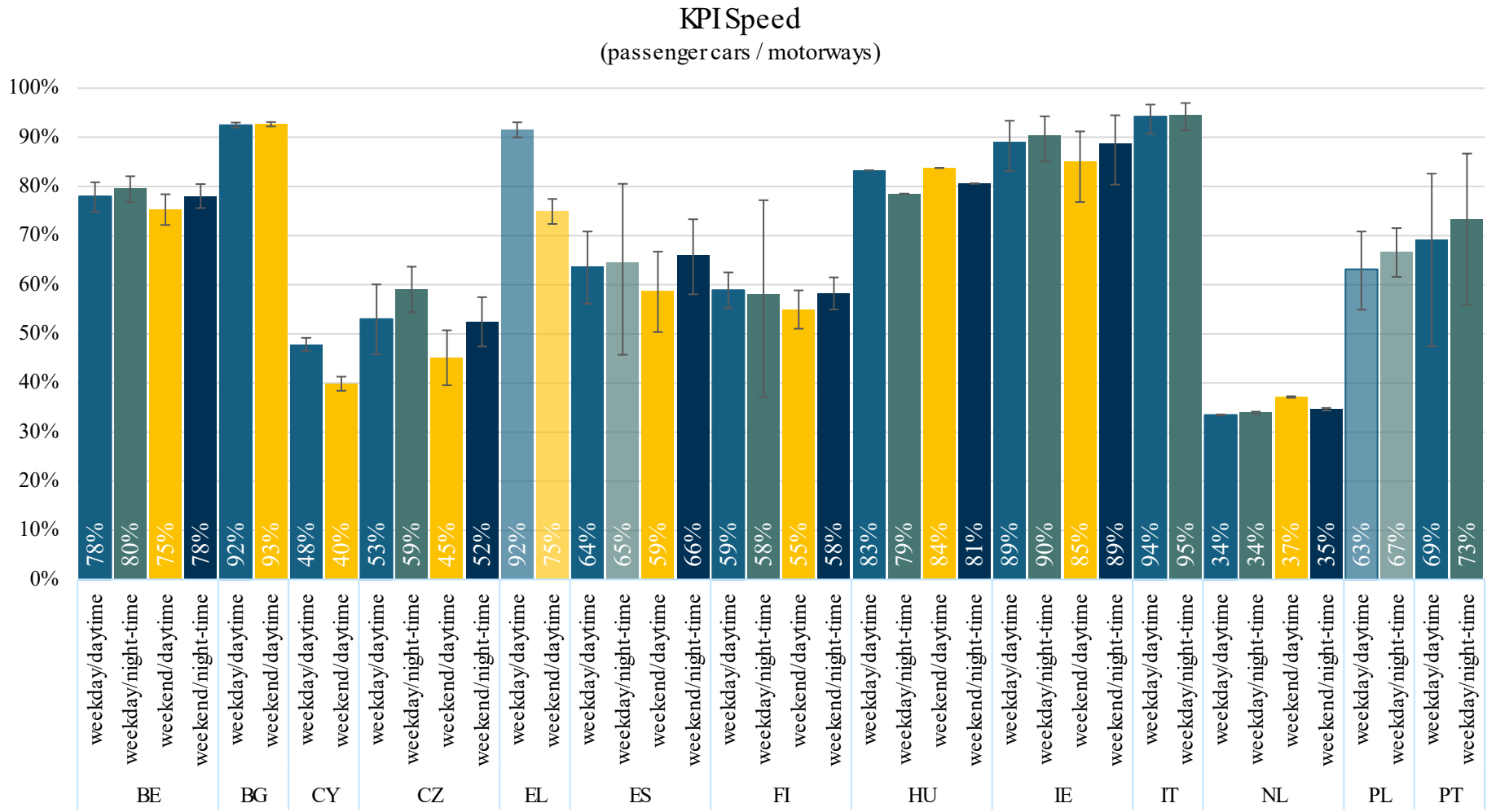
Comparability of results across countries

- Minor methodological differences: all MS considered comparable for the minimum requested indicators
- One MS have results for mixed speed limits per road type
- All indicators provided by almost all MS:
  - percentage driving within speed limit (all MS)
  - average speed (all MS)
  - 85th percentile of speed (19 MS)
- Differences in speed limits per road type between MS make comparing more complex

Trendline

Additional results

KPI Speed by time period - Motorways

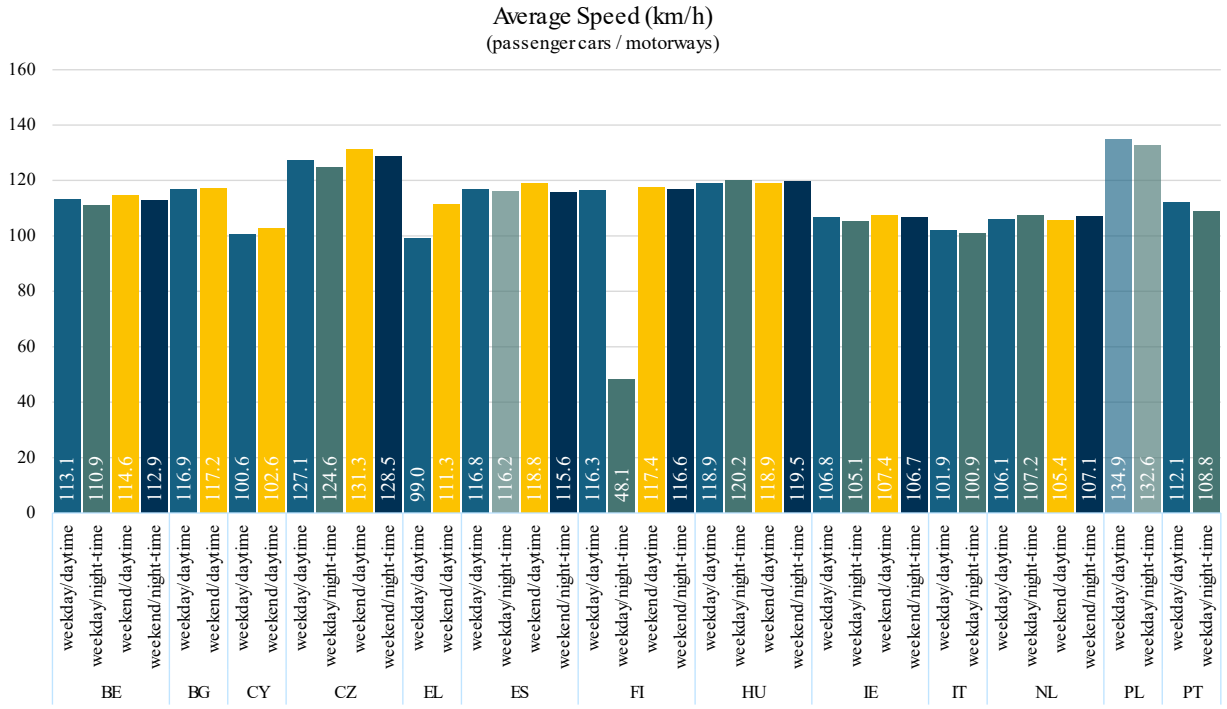


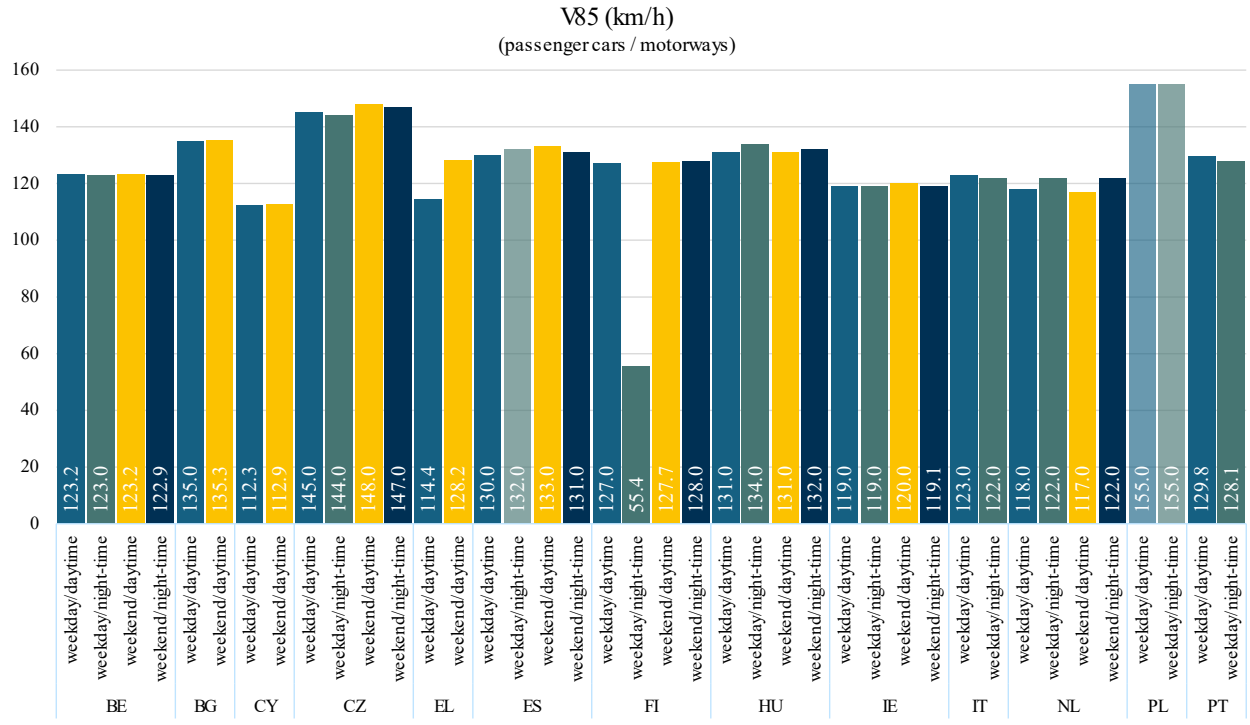
1. Results based on different speed limits between countries are shown.
2. Countries deviating from minimum requirements are shown with lighter colours:
   EL, PL: Low number of locations

weekday/daytime weekday/night-time weekend/daytime weekend/night-time

Trendline

Speed indicators by time period - Motorways

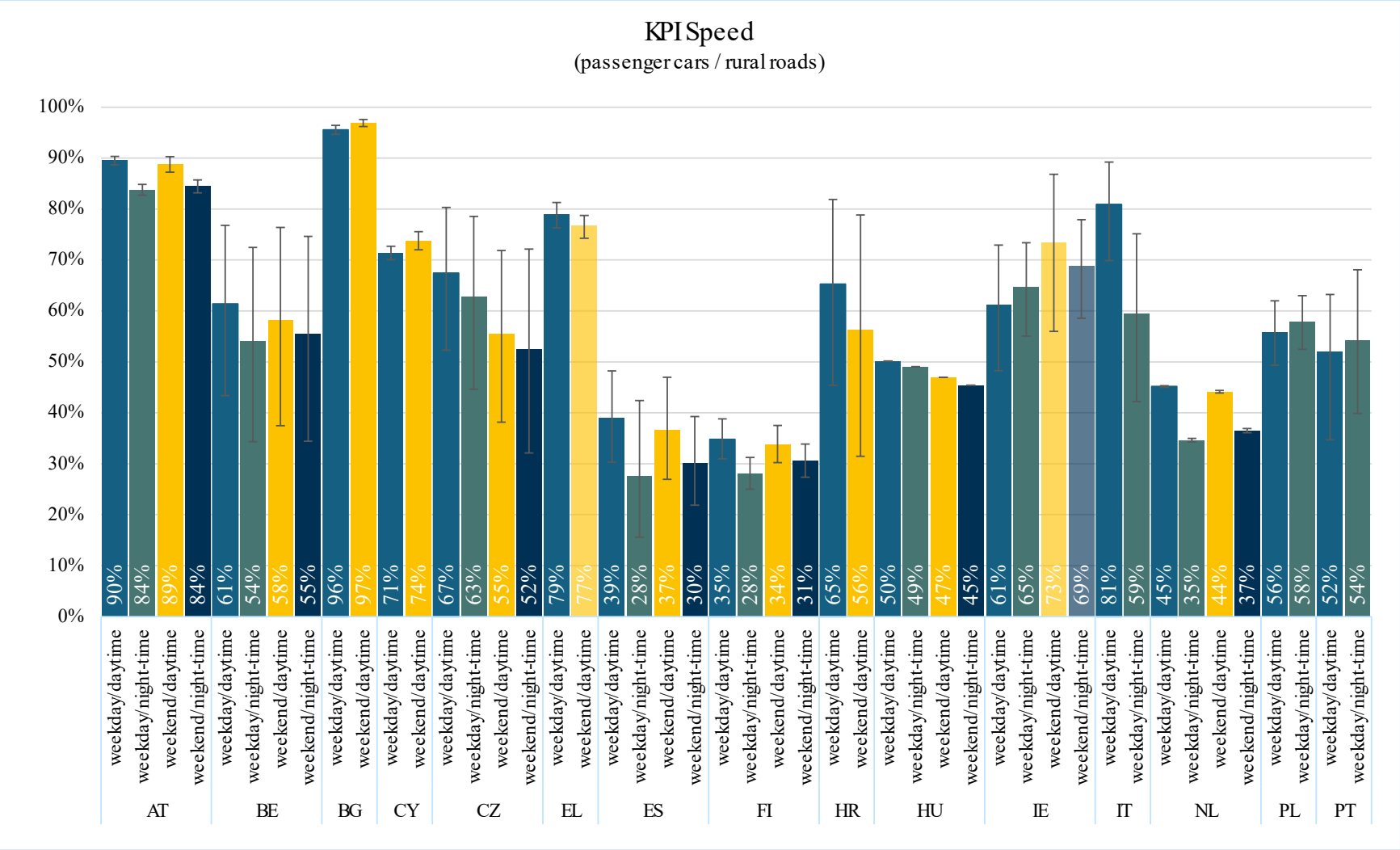




1. Results based on different speed limits between countries are shown.
2. Countries deviating from minimum requirements are shown with lighter colours:
   EL, PL: Low number of locations

weekday/daytime | weekday/night-time | weekend/daytime | weekend/night-time

KPI Speed by time period – Rural roads



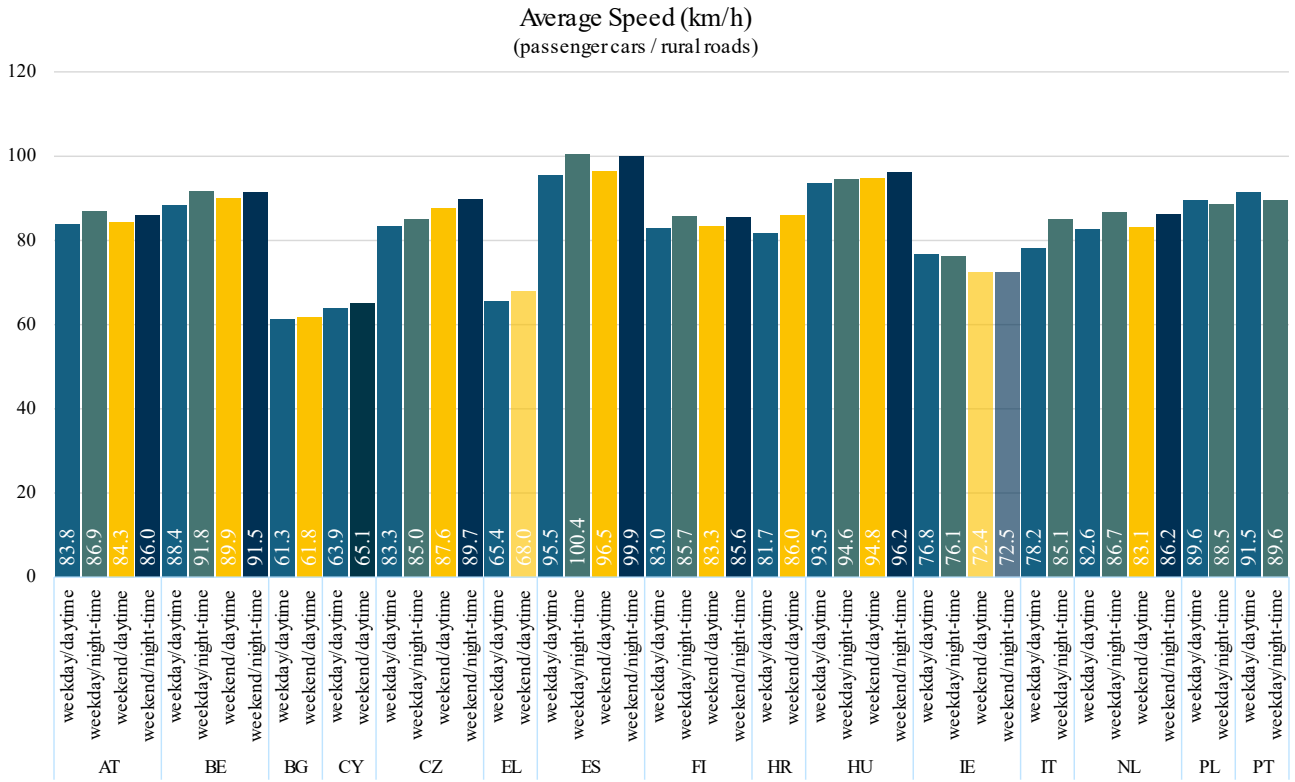
Countries deviating from minimum requirements are shown with lighter colours:

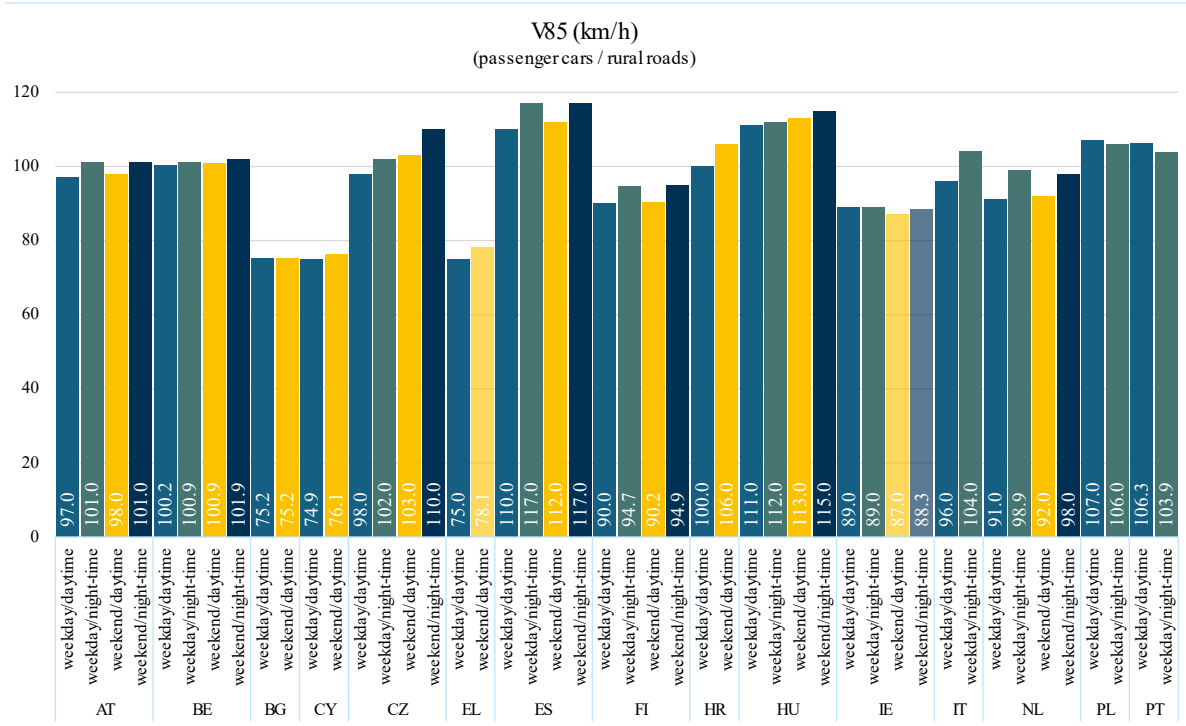
EL: Low number of locations at weekends; IE: Low sample at weekends; HR: Low number of locations during night-time

weekday/daytime weekday/night-time weekend/daytime weekend/night-time

Trendline

Speed indicators by time period – Rural roads





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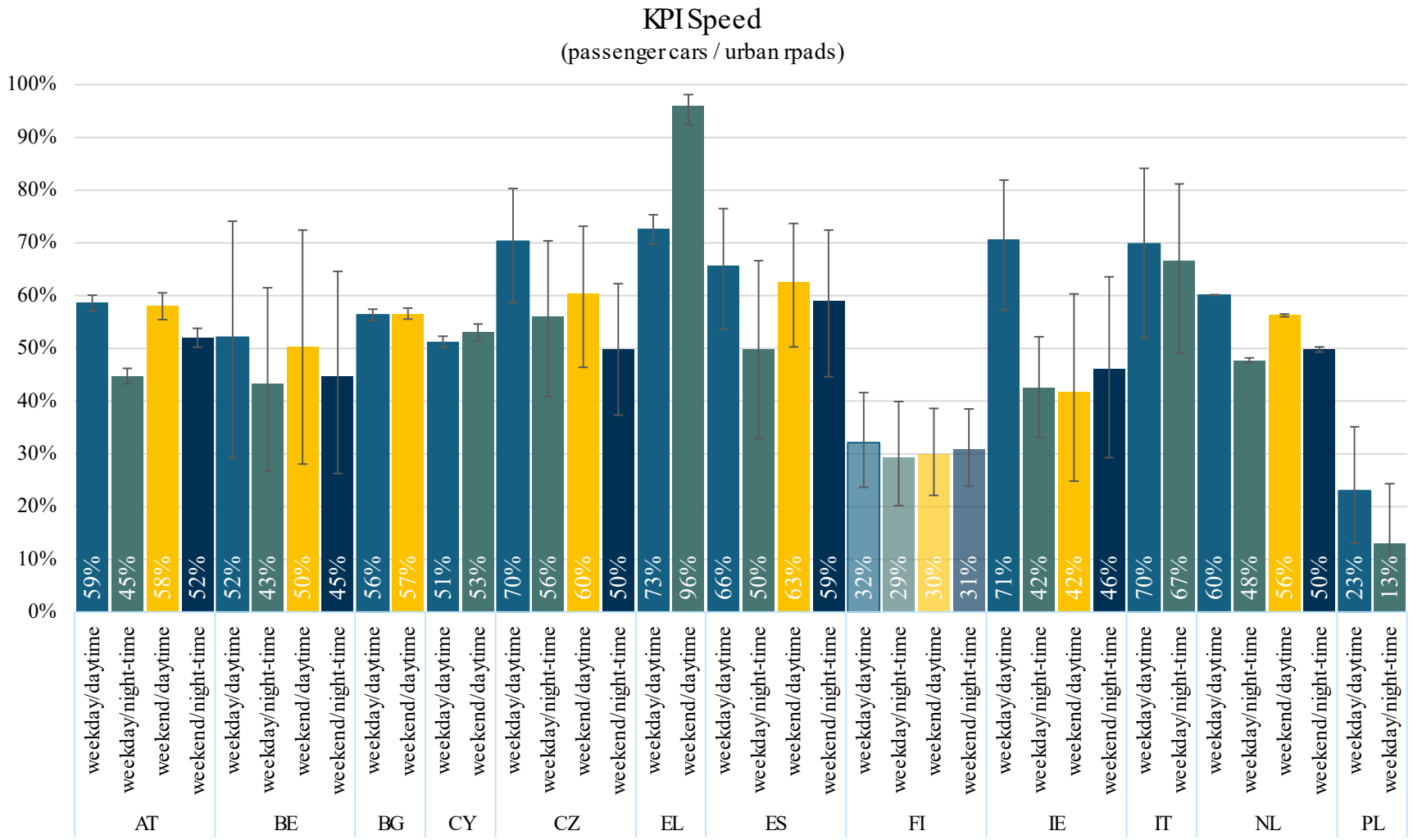
weekday/daytime weekday/night-time weekend/daytime weekend/night-time

KPI Speed by time period – Urban roads

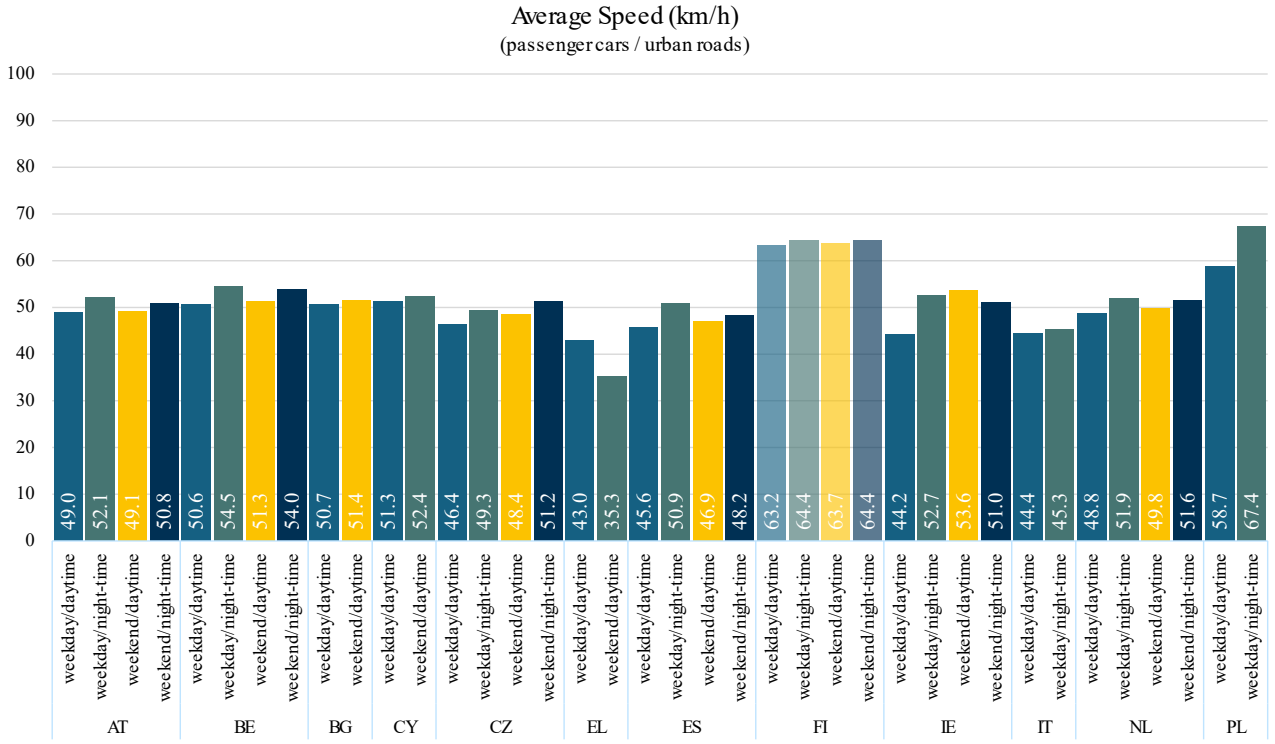


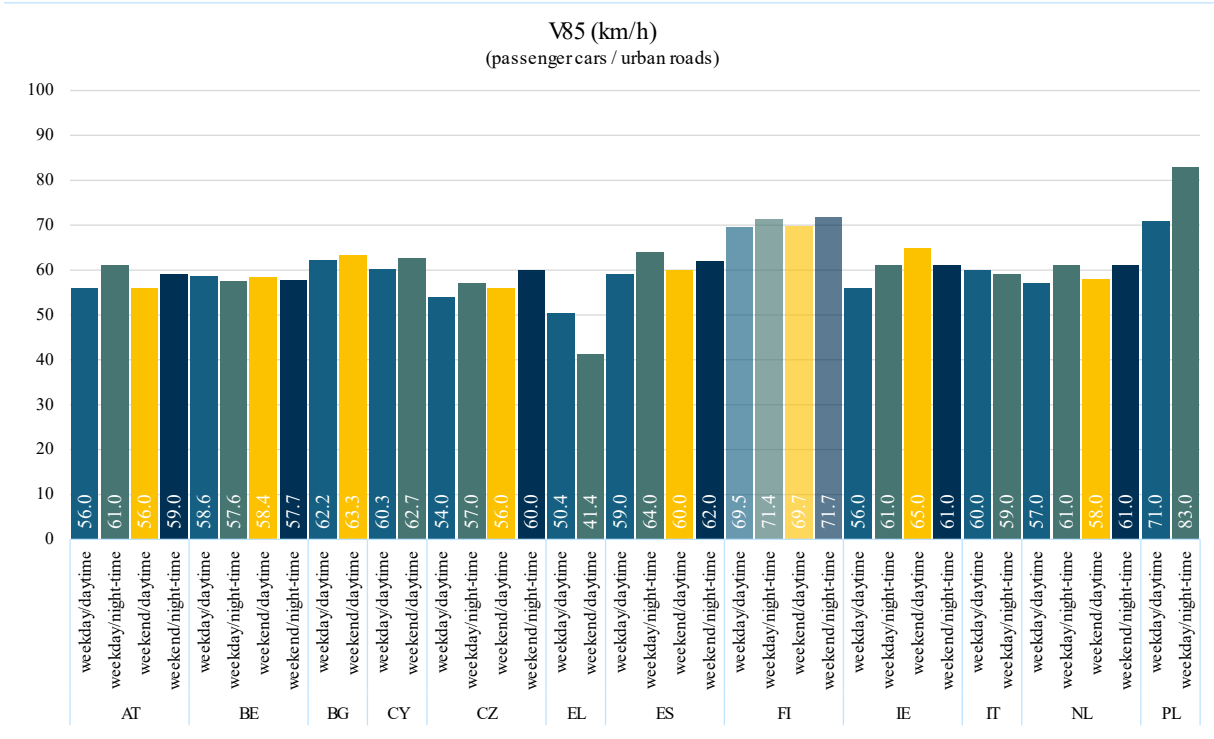
1. Speed limit: 50km/h
2. Countries deviating from minimum requirements are shown with lighter colours:
   FI: Low number of locations

weekday/daytime weekday/night-time weekend/daytime weekend/night-time

Trendline

Speed indicators by time period – Urban roads





1. Speed limit: 50km/h
2. Countries deviating from minimum requirements are shown with lighter colours:
   FI: Low number of locations

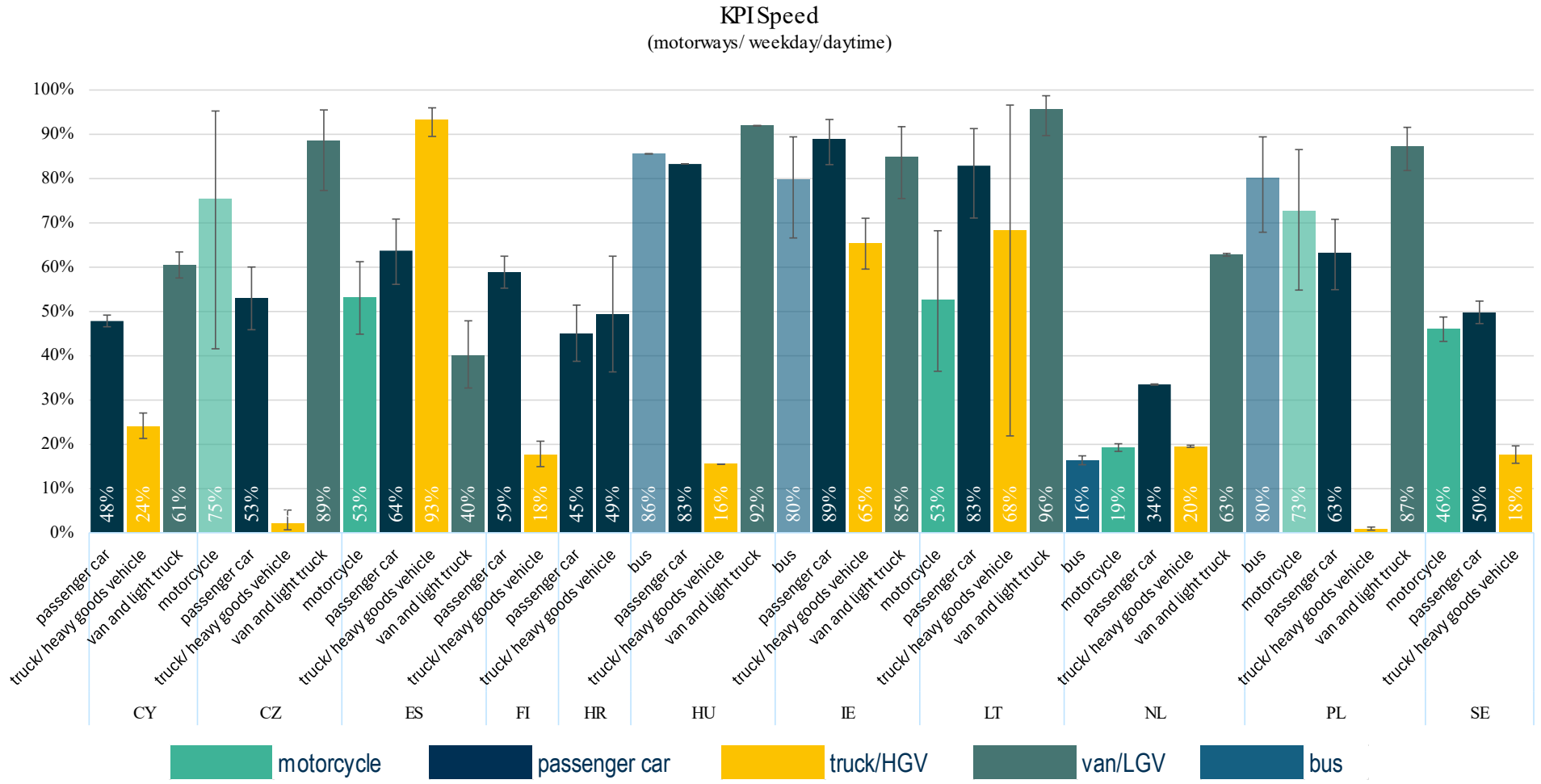
weekday/daytime weekday/night-time weekend/daytime weekend/night-time

Speed Indicators by time period

- KPIs on motorways do not differentiate significantly among different time periods for almost all MS; the same applies for average speed and V85
  - KPIs during daytime at weekends are lower than weekdays for 5 MS (BE, CY, CZ, EL, FI)
- KPIs on rural roads are lower during night-time (weekday/weekend); though not statistically significant differences in some MS
- Average speed and V85 do not differentiate significantly by time period on rural roads; somehow higher during nigh-time in few MS
- KPIs on urban roads are lower during night-time on weekdays in most MS; though not statistically significant differences for all MS
- Average speed and V85 do not differentiate significantly among time periods on urban roads in almost all MS

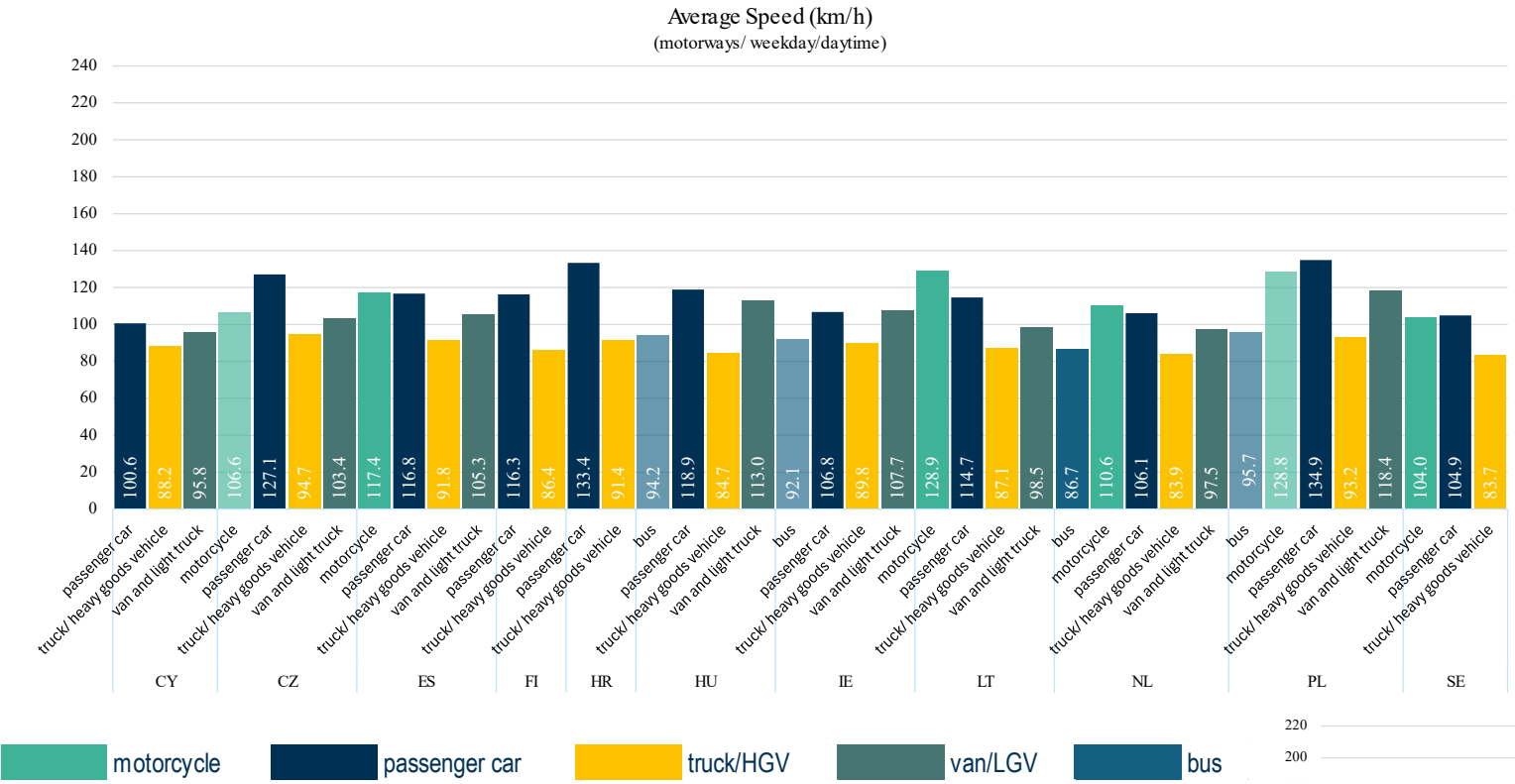
Trendline

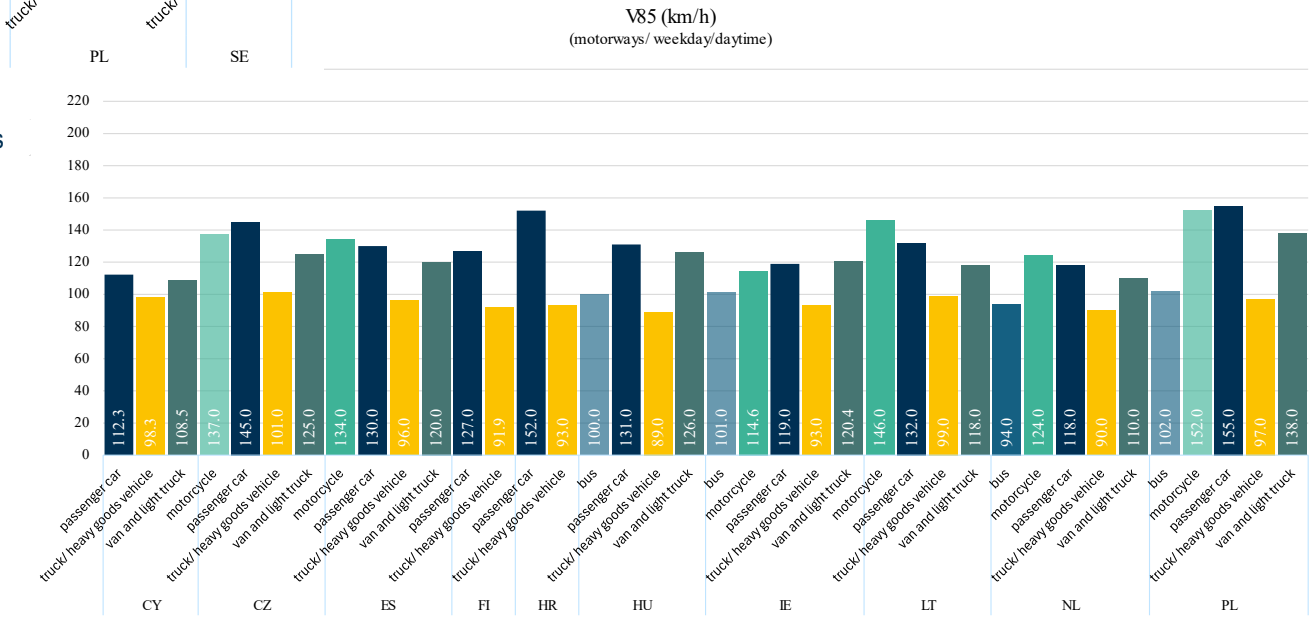
Speed Indicators by vehicle type - Motorways



1. Results based on different speed limits between countries are shown.
2. Countries deviating from minimum requirements are shown with lighter colours:
   CZ: Low number of locations for motorcycles; HU, IE: Low sample for buses; PL: Low sample for buses and motorcycles

Speed indicators by vehicle type - Motorways





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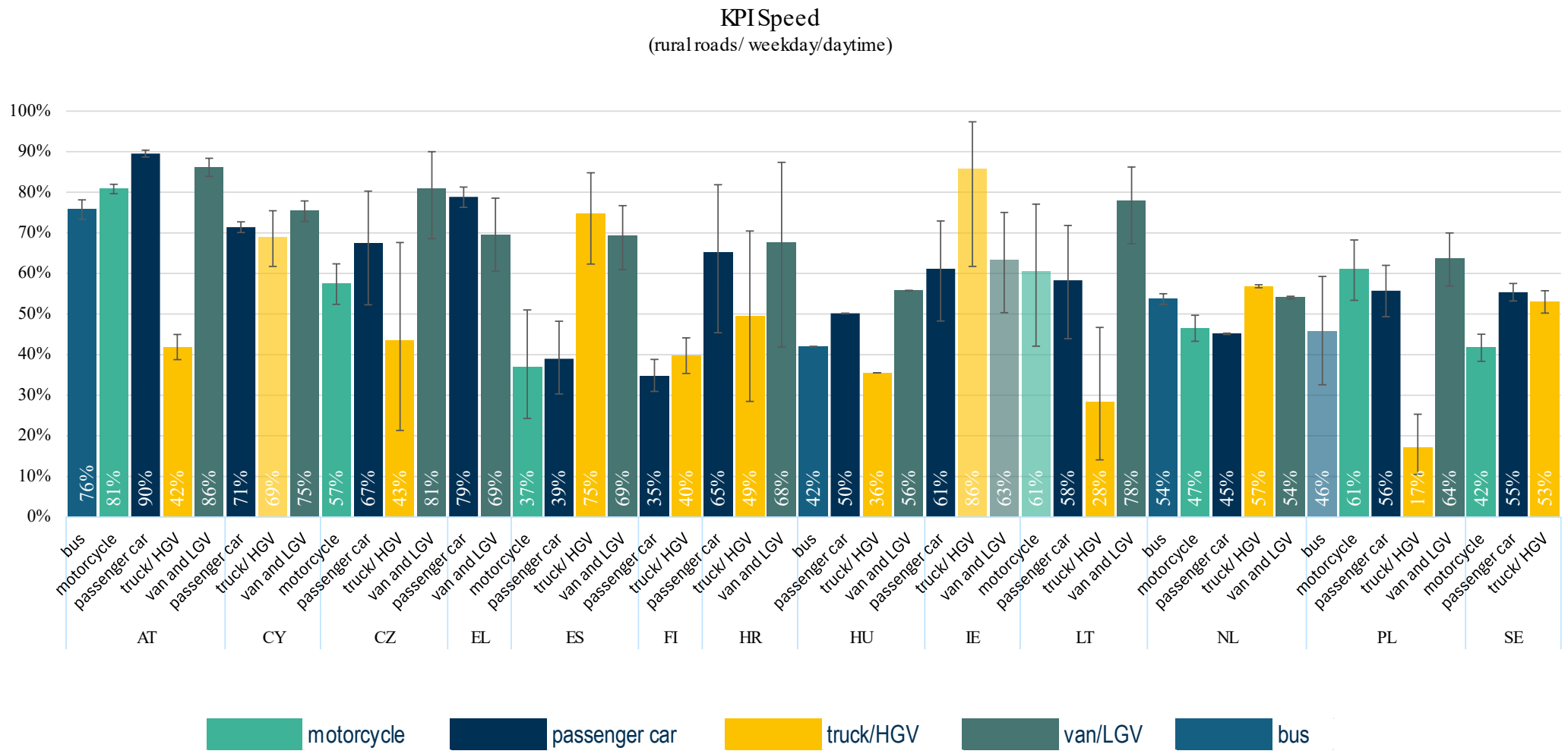
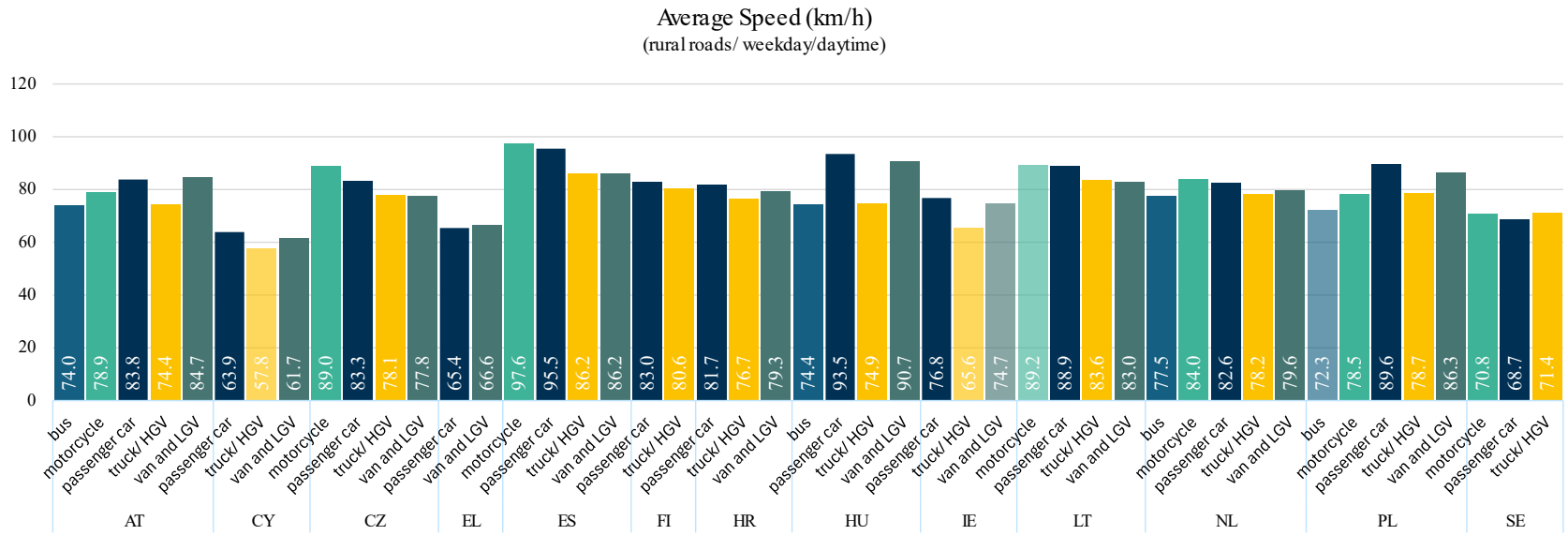
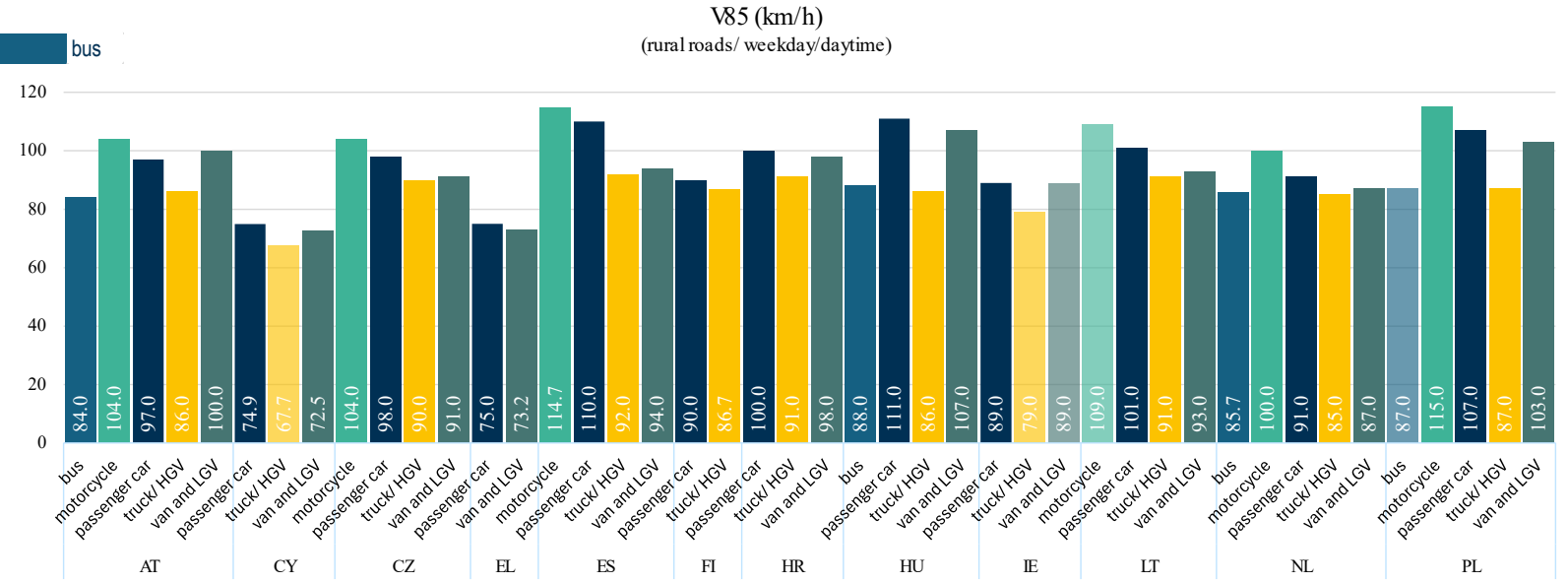
Speed Indicators by vehicle type – Rural roads



1. Results based on different speed limits between countries are shown.
2. Countries deviating from minimum requirements are shown with lighter colours:
   CY: Low sample for trucks/HGVs; IE: Low sample for trucks/HGVs and van/LGVs; LT: Low sample for motorcycles; PL: Low sample for buses

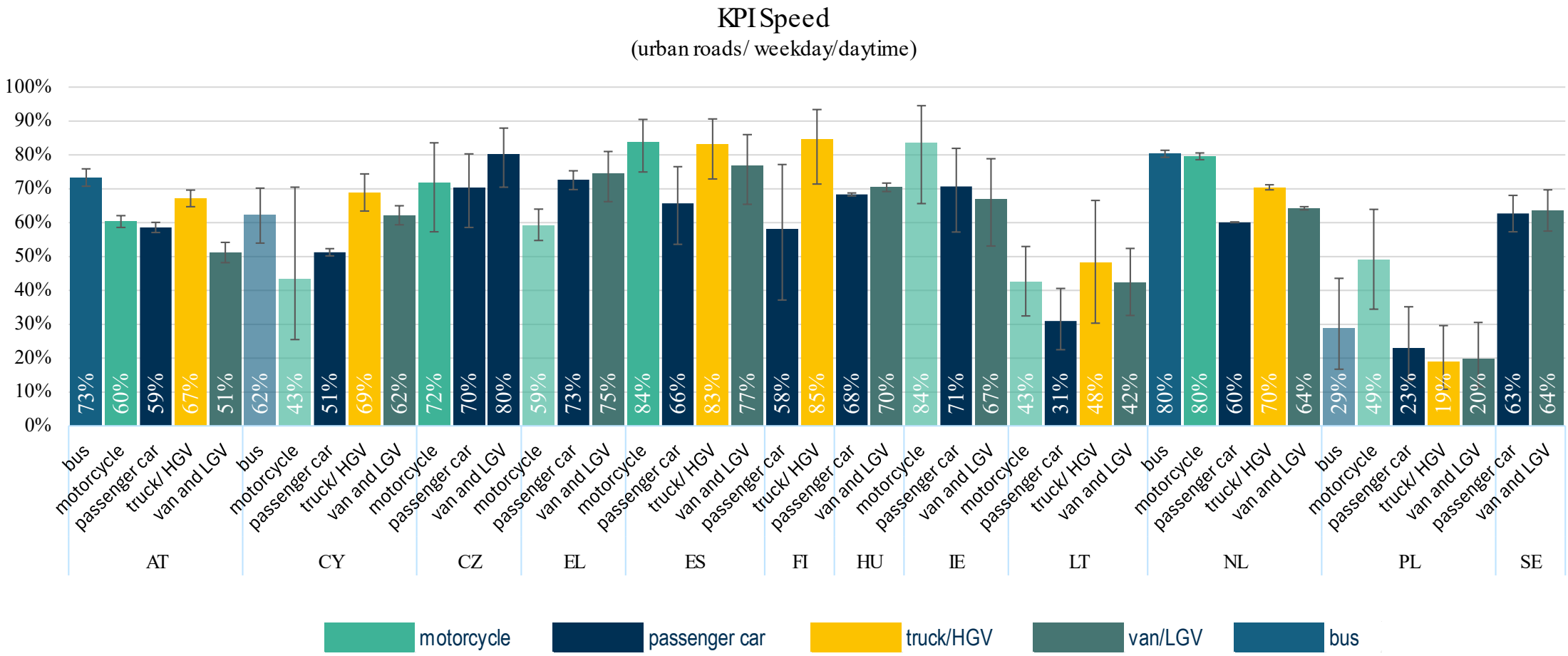
Speed indicators by vehicle type – Rural roads





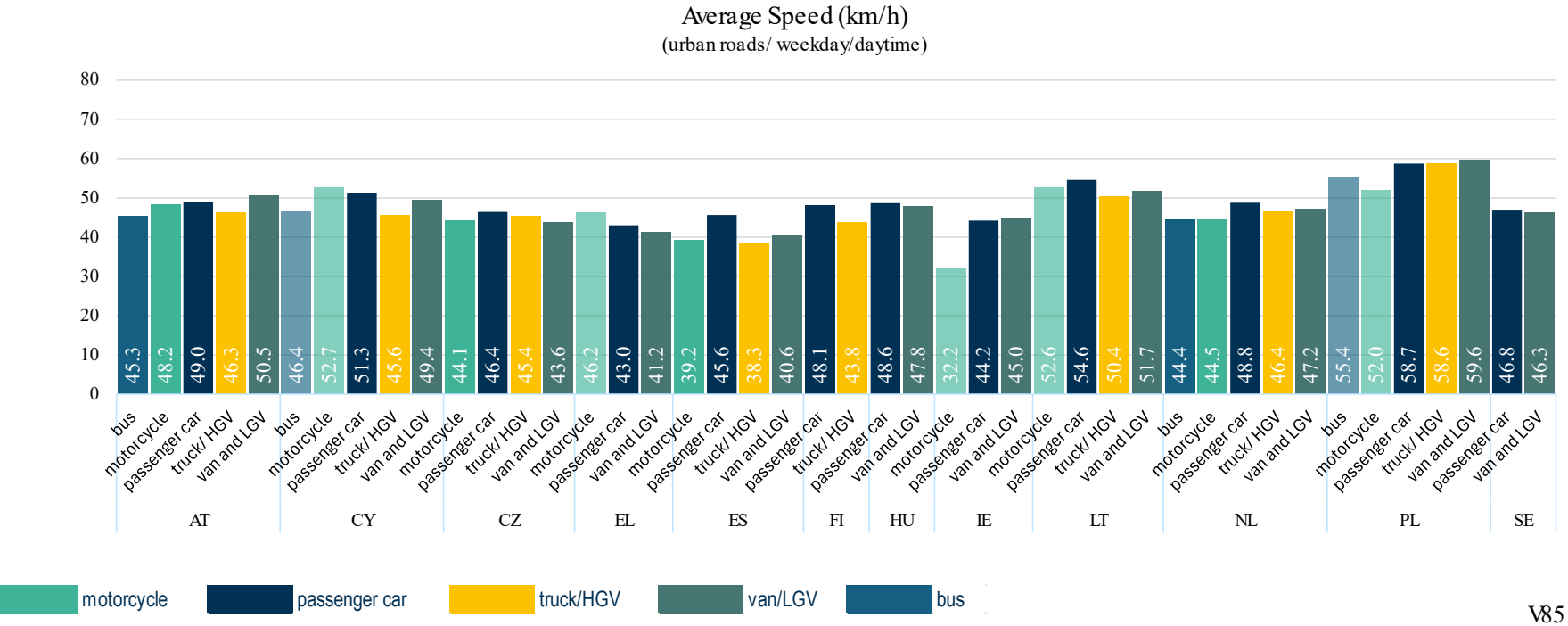
1. Results based on different speed limits between countries are shown.
2. Countries deviating from minimum requirements are shown with lighter colours:
   CY: Low sample for trucks/HGVs; IE: Low sample for trucks/HGVs and van/LGVs; LT: Low sample for motorcycles; PL: Low sample for buses

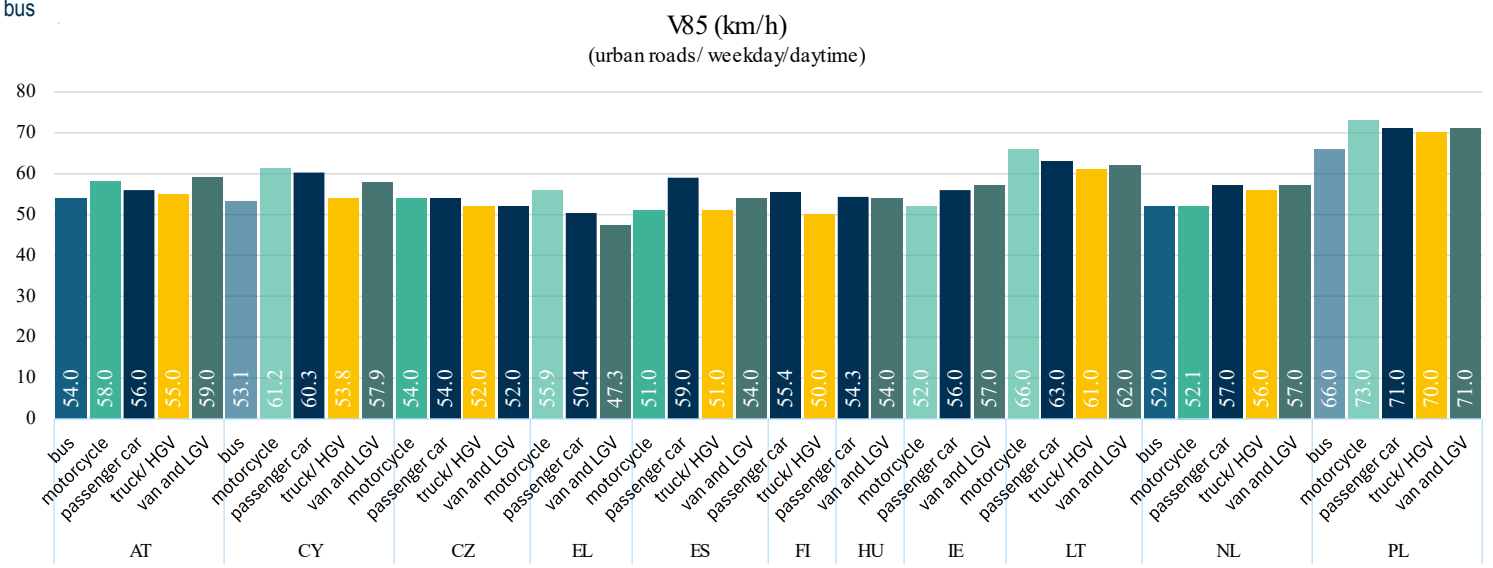
Speed Indicators by vehicle type – Urban roads



1. Speed limit: 50km/h
2. Countries deviating from minimum requirements are shown with lighter colours:
   CY, PL: Low sample for buses and motorcycles; EL, IE, LT: Low sample for motorcycles; HU: Low sample for trucks/HGVs

Speed indicators by vehicle type – Urban roads





1. Speed limit: 50km/h
2. Countries deviating from minimum requirements are shown with lighter colours:
   CY, PL: Low sample for buses and motorcycles; EL, IE, LT: Low sample for motorcycles; HU: Low sample for trucks/HGVs

Speed Indicators by vehicle type

- KPIs on motorways are lower for trucks and HGVs, followed by motorcycles in most MS
- Average speed of trucks and HGVs on motorways varies from 84km/h to 95km/h and V85 from 89km/h to 101km/h
- Average speed of motorcycles on motorways varies from 104km/h to 129km/h and V85 from 124km/h to 152km/h
- No common pattern by vehicle type on rural roads is observed among MS:
  - KPIs are lower for trucks and HGVs in most MS
  - KPIs for motorcycles are lower than KPIs for passenger cars in most MS
- Average speed of motorcycles on rural roads varies from 71km/h to 89km/h and V85 from 100km/h to 115km/h
- Average speed of vans and LGVs on rural roads varies from 62km/h to 90km/h and V85 from 73km/h to 107km/h
- Also, no common pattern by vehicle type on urban roads is observed among MS :
  - In most MS, KPIs for passenger cars are lower compared to the remaining transport modes; though not statistically differences are observed in all cases
- Average speed of motorcycles on urban roads varies from 32km/h to 53km/h and V85 from 52km/h to 73km/h
- Average speed of vans and LGVs on urban roads varies from 44km/h to 60km/h and V85 from 47km/h to 71km/h

Trendline

Speed Indicators by speed limit (1/2)

Motorways

(passenger cars; weekday/daytime)

Country	Speed limit (km/h)	KPI *(CIs)*	Avg Speed (km/h)	V85 (km/h)
Finland	100	**36%** *(31.2%-40.3%)*	103	112
	120	**59%** *(55.2%-62.5%)*	116	127
Poland	120	**36%** *(27.7%-44.6%)*	128	147
	140	**49%** *(45.5%-51.9%)*	121	149

Rural Roads

(passenger cars; weekday/daytime)

Country	Speed limit (km/h)	KPI *(CIs)*	Avg Speed (km/h)	V85 (km/h)
Austria	70	**58%** *(55.7%-59.4%)*	69	79
	80	**77%** *(75.2%-77.9%)*	74	84
	100	**90%** *(88.7%-90.4%)*	84	97
Belgium	70	**59%** *(42.3%-73.3%)*	68	78
	90	**61%***(43.4%-76.8%)*	88	100
Finland	60	**25%** *(16.2%-36.5%)*	64	71
	80	**35%** *(31.0%-38.8%)*	83	90
	100	**62%** *(59.5%-65.4%)*	97	105
Ireland	80	**61%** *(48.3%-72.9%)*	77	89
	100	**70%** *(56.9%-81.8%)*	95	108

- Few MS recorded KPIs per speed limit by road type
- Lower KPIs are observed on roads with lower speed limits by road type in each MS

Trendline

Speed Indicators by speed limit (2/2)

Urban Roads

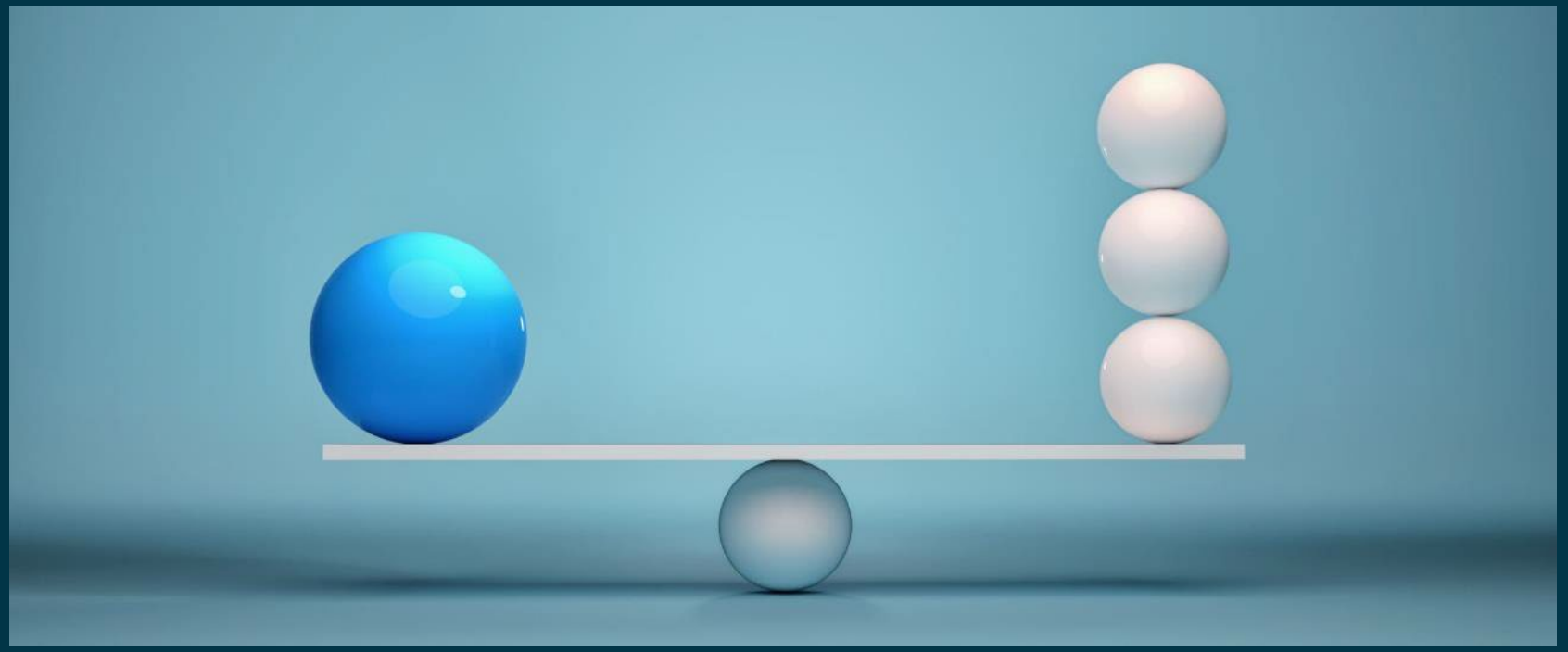
(passenger cars; weekday/daytime)

Country	Speed limit (km/h)	KPI *(CIs)*	Avg Speed (km/h)	V85 (km/h)
Austria	30	**28%** *(26.3%-29.0%)*	35	41
	50	**59%** *(57.1%-60.1%)*	49	56
Belgium	30	**19%** *(9.9%-33.4%)*	39	49
	50	**52%***(29.2%-74.2%)*	51	59
Ireland	30	**40%** *(26.9%-55.1%)*	32	40
	50	**71%** *(57.2%-81.9%)*	44	56
Italy	30	**45%** *(25.9%-65.4%)*	34	48
	50	**70%** *(52.0%-84.2%)*	44	60
Spain	30	**38%** *(28.6%-48.8%)*	33	44
	50	**66%** *(53.6%-76.5%)*	46	59

- KPIs observed on roads with 30km/h are considerably lower than the KPIs on roads with 50 km/h speed limit

Trendline

Comparison with Baseline



KPI Speed for motorways
(passenger cars/weekday daytime)

	Baseline			Trendline		
Country	KPI	Avg speed	V85	KPI	Avg speed	V85
AT	80.9%	120.8	131	81.8%	120.3	132.0
BE	56.4%	119.0	130.8	78.0%	113.1	123.2
BG	89.4%	116.2	136.8	92.5%	116.9	135.0
CZ	39.8%	133.5	151	53.0%	127.1	145.0
CY	46.5%	97.7	108.8	47.8%	100.6	112.3
EL	77.7%	109.2	124.8	91.6%	99.0	114.4
ES	50.8%	121.3	136	63.7%	116.8	130.0
FI	54.5%	116.9	128.2	58.9%	116.3	127.0
IE*	*88.0%*	*106*	*119*	89.0%	106.8	119.0
LT	76.8%	118.3	135	82.9%	114.7	132.0
PT	43.6%	124.2	144	69.1%	112.1	129.8
PL-140	71.3%	130	151	63.1%	134.9	155.0
PL-120	43.7%	124.4	144	35.8%	127.9	147.0
SE*	*44.4%*	*108.1*		49.8%	104.9	

* Results for Ireland and Sweden deviate methodologically from the other MS in the Baseline project

KPI almost stable | KPI increased | KPI decreased

- In most MS, an improvement is observed, which is reflected to increase in the KPI values and decrease in average speed and V85
- KPIs are almost stable in 4 MS
- Only in Poland, KPIs have decreased between the two periods
- It is noted that in some MS there are methodological differences in data collection and calculation of KPIs.
- CIs have been calculated differently for almost all MS, thus no statistically reliable conclusions can be drawn about the trend of all indicators.

Trendline

KPI Speed for rural roads
(passenger cars/weekday daytime)

	Baseline			Trendline		
Country	KPI	Avg speed	V85	KPI	Avg speed	V85
AT	88.9%	85.0	97.0	89.5%	83.8	97.0
BE	46.0%	92.9	106.1	61.4%	88.4	100.2
BG	93.4%	64.2	77.7	95.6%	61.3	75.2
CZ	54.5%	88.7	104.0	67.4%	83.3	98.0
CY	45.7%	69.4	77.7	71.4%	63.9	74.9
EL*	84.4%	68.1	78.9	78.9%	65.4	75.0
ES	42.6%	94.4	109.0	39.0%	95.5	110.0
FI	38.7%	82.2	90.1	34.8%	83.0	90.0
IE*	80.0%	91.0	102.0	61.1%	76.8	89.0
LT	47.2%	92.6	104.6	58.3%	88.9	101.0
LV	29.0%	96.6	105.0	29.2%	95.3	104.9
PL	51.9%	91.2	109.0	55.7%	89.6	107.0
PT	35.5%	97.1	115.9	52.1%	91.5	106.3
SE*	51.7%	69.7		55.4%	68.7	

* Results for Ireland and Sweden deviate methodologically from the other MS in the Baseline project; Different speed limits for rural roads have been considered for Greece

KPI almost stable KPI increased KPI decreased

- In most MS, an improvement is observed, which is reflected to increase in the KPI values and decrease in average speed and V85
- KPIs are almost stable in 54 MS
- It is noted that in some MS there are methodological differences in data collection and calculation of KPIs.
- CIs have been calculated differently for almost all MS, thus no statistically reliable conclusions can be drawn about the trend of all indicators.

Trendline

KPI Speed for urban roads
(passenger cars/weekday daytime)

	Baseline			Trendline		
Country	KPI	Avg speed	V85	KPI	Avg speed	V85
AT	57.4%	49.8	56.0	58.6%	49.0	56.0
BE	49.9%	51.0	59.8	52.1%	50.6	58.6
BG	44.7%	52.5	63.3	56.4%	50.7	62.2
CZ	57.3%	49.6	56.0	70.3%	46.4	54.0
CY	26.1%	56.2	65.1	51.3%	51.3	60.3
EL	58.8%	46.7	55.6	72.7%	43.0	50.4
ES	64.9%	46.5	60.0	65.7%	45.6	59.0
FI	43.0%	50.9	59.0	58.2%	48.1	55.4
IE*	25.0%	58.0	70.0	70.7%	44.2	56.0
LT	36.4%	53.6	63.0	31.0%	54.6	63.0
LV	41.4%	52.1	58.0	52.8%	49.8	56.7
PL	20.5%	60.8	74.0	23.0%	58.7	71.0
PT	73.0%	44.3	52.7	76.2%	43.1	50.8
SE*	66.0%	46.8		62.7%	46.8	

* Results for Ireland and Sweden deviate methodologically from the other MS in the Baseline project

- In most MS, an improvement is observed, which is reflected to increase in the KPI values and decrease in average speed and V85
- KPIs are almost stable in 56 MS
- It is noted that in some MS there are methodological differences in data collection and calculation of KPIs.
- CIs have been calculated differently for almost all MS, thus no statistically reliable conclusions can be drawn about the trend of all indicators.

KPI almost stable | KPI increased | KPI decreased

Trendline

Recommendations

Recommendations on future scope

- It is recommended that the indicator be collected systematically using the same methodology to ensure the comparability of results and better assessment of performance progress at national and European level.
- It is recommended that alternative speed indicators (speed variation) be collected in combination with the KPI Speed, average speed and V85 to better assess driver behavior and performance level in each MS.
- Further analysis of the speed indicators in combination with crash and injury data (as well as time series data) could be considered in the future.

Recommendations on methodology

- In order to compare Member States, breakdowns by road type and speed limit are useful.
- Behaviour appears to depend on speed limits by road type, with lower KPIs observed on roads with lower speed limits (based on data of few MS). Therefore, breakdown by speed limit by road type is preferred for comparison among MS.
- Given that speed limits differ per vehicle type, distinction between vehicle types is also recommended.
- Behaviour appears to depend on time period, with, statistically significant differences being observed in few MS. Differences between daytime and night-time and between weekdays and weekends show that breakdown by time period should be kept for future comparisons.
- Average speed and 85th percentile of speed provide additional insight, as they complement the standard KPI.

Trendline

Recommendations on policy integration

- The safe system approach is based on ensuring as clear as possible the various issues affecting overall safety performance and taking early action to reduce road crashes and injuries.
- In this context, the use of KPI Speed and other complementary speed indicators in policy making process, which are causally related to road crashes and fatal or serious injuries, can lead to this direction.
- Speed indicators included in the national road safety strategies can serve as a useful tool to monitor progress towards road safety targets and to prioritize problems.
- The systematic collection of Speed indicators, disaggregated by road type, time period and vehicle type, is recommended in order to assess the road safety performance level in each MS and progress over time.

Trendline

Annex 1 Maximum Speed Limits

Country	Max. Speed Limits for passenger cars (km/h)			
	Motorways	Expressways	Rural Roads	Urban Roads
Austria	130	-	100	50
Belgium	120	-	70 & 90	30 & 50
Bulgaria	140	-	90	50
Croatia	130	-	90	-
Cyprus	100	-	80	50
Czechia	130	-	90	50
Hungary	130	110	90	50
Finland	120	100	80	50
Greece	130	-	70	50
Ireland	120	-	80	50
Italy	130	110	90	50
Latvia	-	-	90	50
Lithuania	130	-	90	50
Netherlands	100 & 80	-	80	50
Poland	140 & 120	120	90	50
Portugal	120	-	90	50
Slovenia	130	-	90	50
Slovakia	130	-	90	50
Spain	120	120	90	30 & 50
Sweden	110 & 120	-	70, 80 & 90	40-70

Trendline

Annex 2 Meta-data

Country	Method	Delivered datasets	Traffic Volume Data	Weighting
Austria	hand-held radar (motorways) & automated measurements	Raw Data	Traffic counts during measurements	Version 2 - minimum option
Belgium	Mobile radar camera	Weighted Results	Automatic traffic measuring points	Version 1 – recommended
Bulgaria	Cameras	Weighted Results	Traffic counts during measurements	Version 2 - minimum option
Croatia	Cameras & active infrared devices	Raw Data	Traffic counts during measurements	Version 2 - minimum option
Cyprus	Mobile radar camera	Weighted Results	Traffic counts during measurements	Version 2 - minimum option
Czechia	Automated measurements	Weighted Results	National mobility survey	Version 2 - minimum option
Hungary	Automated measurements & Active infrared devices (urban roads)	Weighted Results	Traffic counts during measurements	No weighting
Finland	Inductive loops	Weighted Results	National traffic volume data	Version 1 – recommended
Greece	Mobile radar camera	Weighted Results	Traffic counts during measurements	Version 2 - minimum option
Ireland	Inductive loops (motorways) & pneumatic tubes	Weighted Results	Traffic counts during measurements	Version 2 - minimum option
Italy	Radar system	Raw Data	Automatic traffic measuring points	Version 2 - minimum option
Latvia	Inductive loops (rural roads) & automated measurements (urban roads)	Weighted Results	Traffic counts during measurements	No weighting
Lithuania	Microwave radar sensors	Weighted Results	Traffic counts during measurements	Weighting within sessions
Netherlands	Inductive loops	Weighted Results	National mobility survey	Version 1 – recommended
Poland	Mobile radar cameras	Weighted Results	Automatic traffic measuring points	Based on traffic distribution
Portugal	Mobile radar cameras & LIDAR guns (urban roads)	Weighted Results	Traffic counts during measurements	Version 2 - minimum option
Slovenia	Inductive loops	Weighted Results	Traffic counts during measurements	Version 1 – recommended
Slovakia	Automated measurements	Weighted Results	Traffic counts during measurements	Version 2 - minimum option
Spain	Doppler-based microwave radars	Raw Data	Traffic counts during measurements	Version 2 - minimum option

Annex 3 Sample: total & per road type

Country	Sample of passenger cars			
	Total	Motorways	Rural Roads	Urban Roads
Austria	2522872	8968	1050167	1463737
Belgium	2209406	1011504	540674	657228
Bulgaria	77998	30644	26226	21128
Croatia	17756	5235	12521	-
Cyprus	18742	6983	4050	7709
Czechia	2934354	985409	972446	976499
Hungary	86209	52229	18075	1403
Finland	12024041	6257502	5124211	642328
Greece	3856	1282	1486	1088
Ireland	11179	4988	1953	4238
Italy	127756	53629	34056	40071
Latvia	357304		354298	3006
Lithuania	78780	17833	21209	39738
Netherlands	2274068	1248345	534094	491629
Poland	220065	118708	59252	42105
Portugal	58376	34878	19718	3780
Slovenia	24858	17366	3838	3654
Slovakia	16698	6579	4687	5432
Spain	996287	216063	168954	540307
Sweden	2911585	197891	1670409	1043285

Trendline

Annex 4 Sample per vehicle type

Country	Sample per vehice type (all road types)			
	Vans/LGVs	Trucks/HGVs	Motorcycles	Buses
Austria	367004	246927	41447	46373
Belgium	-	-	-	-
Bulgaria	-	-	-	-
Croatia	1407	2334	180	-
Cyprus	4282	1878	419	371
Czechia	119890	357893	9940	-
Hungary	10202	11727	96	343
Finland	-	4625363	-	-
Greece	721	433	602	134
Ireland	5599	3216	670	330
Italy	68279			
Latvia	-	-	-	-
Lithuania	9776	11319	1383	-
Netherlands	283190	269353	22623	22108
Poland	43642	861833	2278	1625
Portugal	-	18344	-	-
Slovenia	-	-	-	-
Slovakia	-	-	-	-
Spain	72493	86490	23837	-
Sweden	-	113466	16817	-

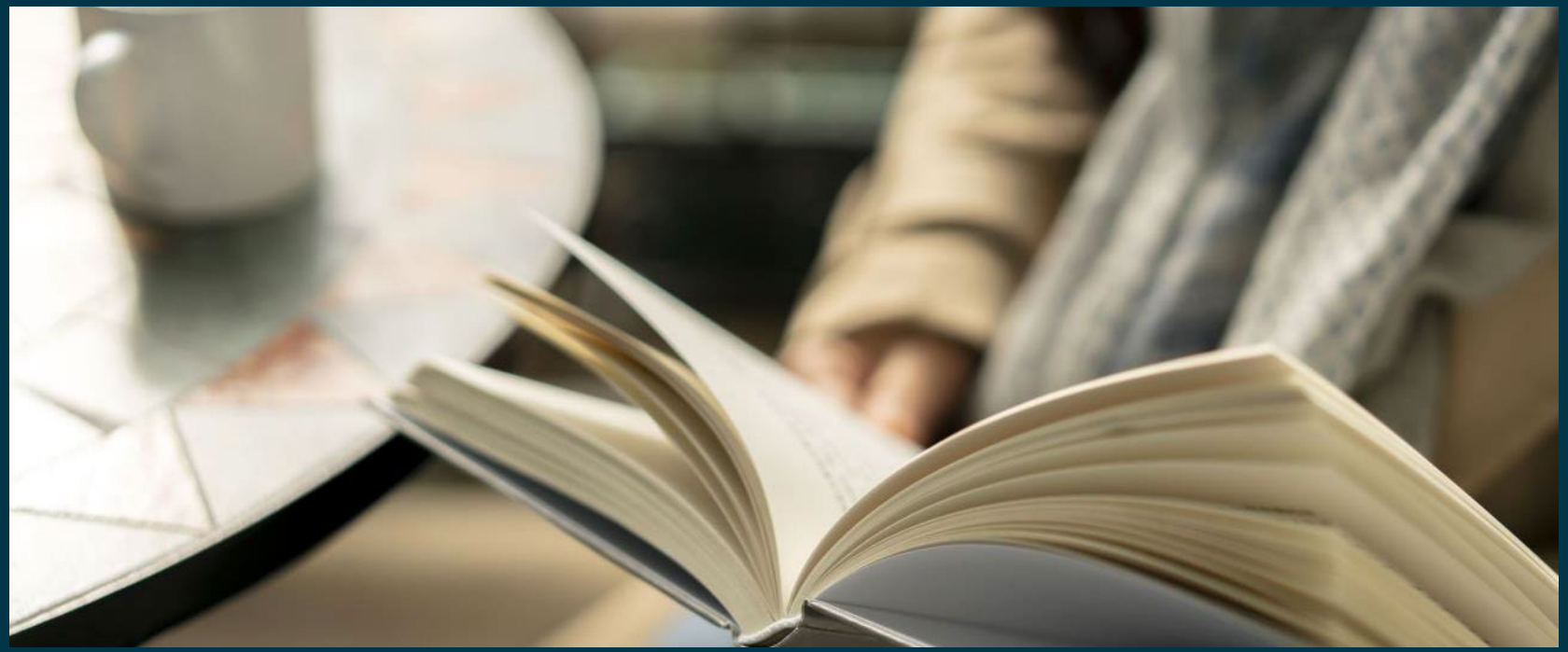
Trendline

Annex 5 Country Abbreviations

Country	Abbreviation
Austria	AT
Belgium	BE
Bulgaria	BG
Croatia	HR
Cyprus	CY
Czechia	CZ
Hungary	HU
Finland	FI
Greece	EL
Ireland	IE
Italy	IT
Latvia	LV
Lithuania	LT
Netherlands	NL
Poland	PL
Portugal	PT
Slovenia	SI
Slovakia	SK
Spain	ES
Sweden	SE

Trendline

References and further reading



Key documents and links

- Laiou, A., Vadeby, A., Riguelle, F., Van Schagen, I., Cardoso, J., Tutka, P., Usami, DS., Wardenier, N. (2023). KPI Speed. Methdological Guidelines. Report produced as part of the Trendline project, supported by the European Union. (https://www.trendlineproject.eu/media/pages/publications/5ee926dbe9-1738578545/methodological-guidelines-kpi-speed-2025_new.pdf)
- "Van den Broek B., Aarts, L. & Silverans, P. (2023). Baseline report on the KPI Speeding. Baseline project, Brussels: Vias institute" (https://baseline.vias.be/storage/minisites/baseline-kpi-speeding.pdf)
- Final report on Trendline
- Harkin, A. M., Nikolaou, D., Yannis, G. & Surges, F. (2024). Speeding. ESRA3 Thematic report Nr. 7. ESRA project (E-Survey of Road users' Attitudes). (2024-R-28-EN). Federal Highway Research Institute Germany (BASt) (https://www.esranet.eu/storage/minisites/esra2023thematicreportno7speeding.pdf)
- ERSO Thematic Report on Speed and Speeding (soon available at ERSO)

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Co-funded by the
European Union