

Road Safety Situation of Hungary Reflected by National and International Objectives

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1. Some national and international time series

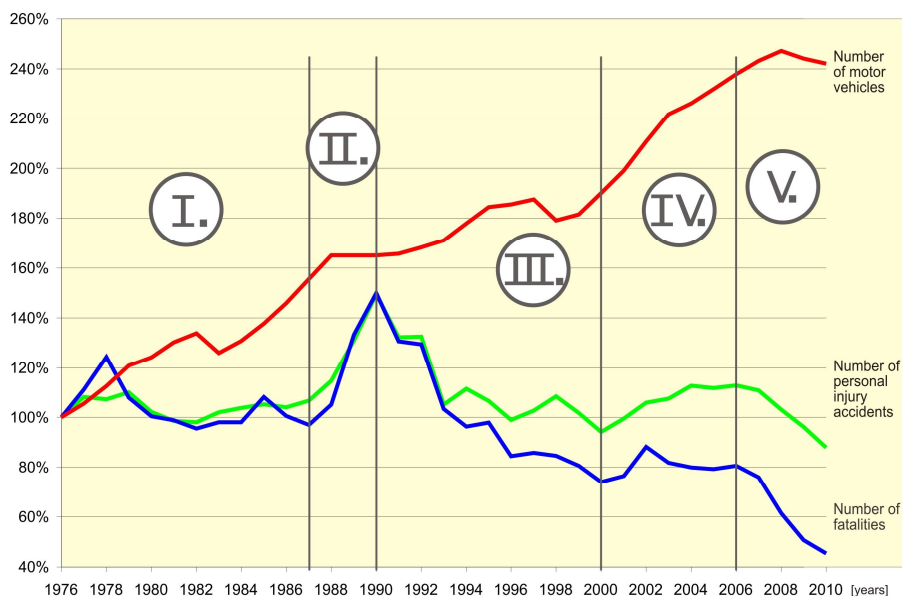


Figure 1: Number of road motor-vehicles, personal injury accidents and of fatalities. Main periods of the national road safety

In Figure 1 one can observe the development of the number of road motor vehicles, personal injury accidents and fatalities in the period between 1976 and 2010. The Figure also shows distinctive periods of the national road safety situation. (Data before 1976 are also illustrated in the time series applied by some authors, however it must be borne in mind that at that time the 48-hour- and not the 30-day-definition was in force for

those killed.) For the time being particulars for different periods have not been detailed but we note that – apart from phase I, apparently stable – periods of improvement and deterioration of different length alternate with each other. At present – as from 2006 – national road safety is improving, which is also continuing in 2010.

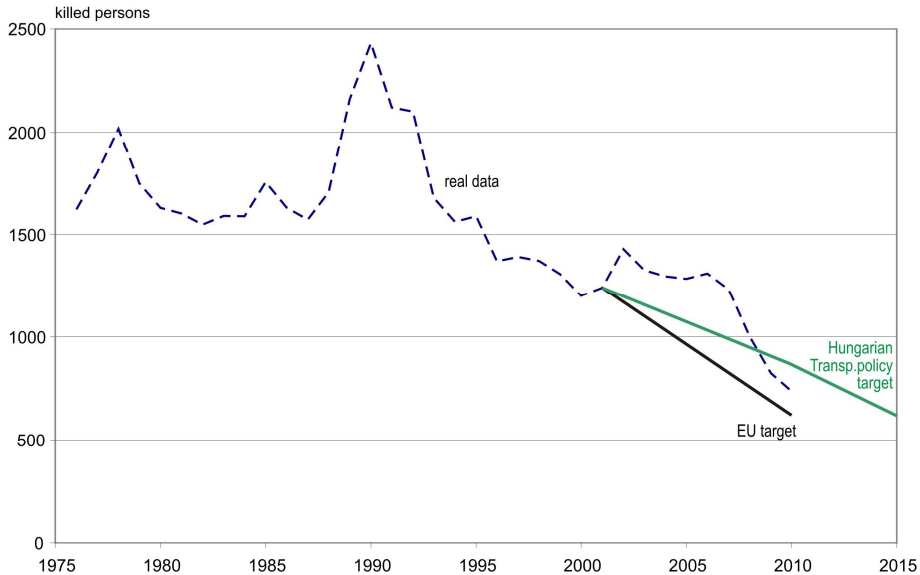


Figure 2: Number of fatal victims of road accidents in Hungary in the years between 1976 and 2010 as reflected by the objectives of transport policy in the EU and Hungary

In Figure 2 the number of fatal victims of road accidents between 1976 and 2010 in Hungary is shown as reflected by the transport policy objectives of the EU and Hungary.

2001 being the basis year of the objectives, the number of fatal victims of road accidents should have been reduced either to 620 (–50%, EU White Paper) or to 867 (–30%, Hungarian transport policy) by 2010.

Since in 2009 this number decreased already to 822, one can say that the objective of the national transport policy has been „over-fulfilled”. According to the final data of KSH (Hungarian Central Statistical Office) [1] in 2010 in Hungary 739 persons were killed in road accidents. This means that in comparison with 2001, more than 40% reduction could be achieved. 739 is almost the arithmetical mean (744) of the objectives of the EU (620) and of the national transport policy (867).

Following the significant improvement in the years 2008 and 2009, in 2010 [1] the number of:

- personal injury accidents decreased by 8.7%,
- killed decreased by 10.1%,
- serious injuries decreased by 12.0%,
- slight injuries decreased by 9.4%.

In the same period the number of accidents caused by drivers under the influence of alcohol decreased by 17.2% in comparison with the previous year. The real and the “planned” development of the number of fatal victims of the road traffic accidents can be seen in Figure 3 in the period between 1990 and 2010 in the EU member states.

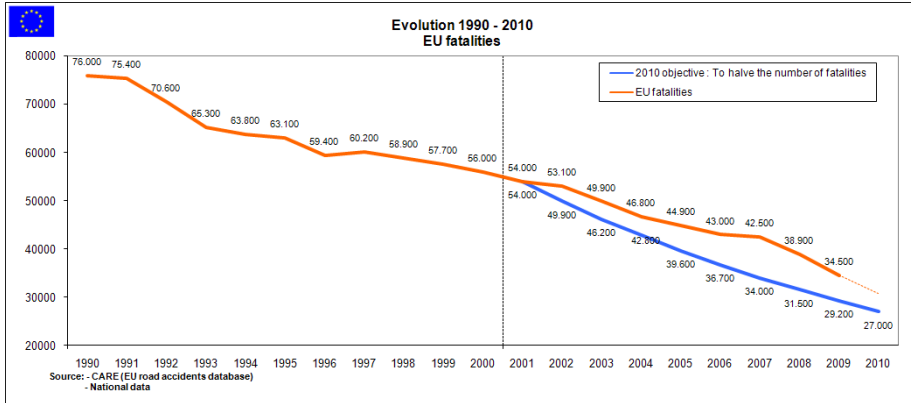


Figure 3: Real and „planned” development of the number of fatal victims of road accidents between 1990 and 2010

From 2001 until 2009, overall the number of fatal victims of road accidents lessened by 36% (from 54,000 to 34,500) in the EU member states.

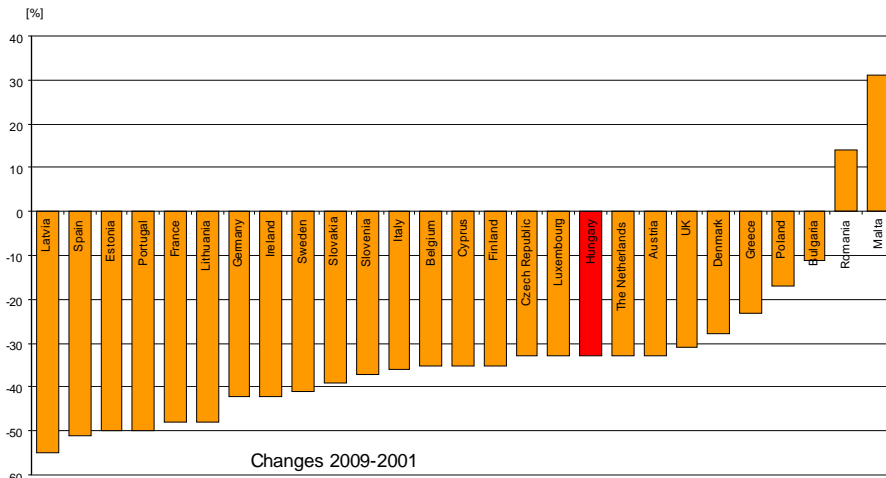


Figure 4: Change in the number of killed in road accidents between 2001 and 2009 in the EU member states

In the same period in Hungary this reduction equalled to 34.0% (from 1,239 to 822). This is all the same more noticeable, because essentially in Hungary in 2 years the reduction achieved in the number of killed equalled to the other countries’ 8 years’ achievement.

This, as well as the ranking of different countries is well demonstrated on the basis of the change resulting from the number of killed due to road accidents. (Figure 4).

2. How many years should we „go back” in time when the number of fatalities was as low as in 2010?

Since 22 February 2011 the final statistics for 2010 are also available: in 2010 739 persons were killed in road accidents. The 30-day-definition for road accident fatalities has been used since 1976 in Hungary. Before 1976 only the 48-hour-outcome was in force. After 1976 both data were recorded for a long time; accordingly from these data the so-called correction coefficient could be determined. This was used as a multiplier of the 48-hour-figure. So the 30-day-numbers for the periods before 1976 could be “produced” as well. In the database of the OECD member countries, the IRTAD (**I**nternational **R**oad and **T**raffic **A**ccident **D**atabase) this coefficient is 1.2. I.e. the number of 30-day-fatalities is usually higher by 20% in comparison with that of the 48-hour-cases. For example the 48-hour-figure was 1398 in 1975.

The 30-day-data estimated for the same year was: $1398 \times 1.20 = 1678$ persons

Making calculations for the previous years:

	Number of deaths after 48 hours	Estimated number of deaths after 30 days
1974	1353	1624
1973	1419	1703
1972	1507	1808
1971	1527	1832
1970	1356	1627
1969	1130	1356
1968	1013	1216
1967	784	941
1966	761	913
1965	725	870
1964	859	1030
1963	763	916
1962	685	822
1961	622	746
1960	558	670

Consequently, it was in 1961 when the number of road accident fatalities (746) was only by 7 higher than in 2010 (739).

The fact itself, that it was exactly a half century ago (in 1961) when seven more people died (746) in road accidents than in 2010, is a **huge result**.

However one must not forget, that reduction of fatalities to almost the level of the 50 years earlier period was mainly due to immense progress achieved by vehicle technology. Significant increase of the occupants' passive safety provides for survival even in cases, which seemed unimaginable before.

(Airbags, automatic safety-belts with tensioners, vehicle bodies tested with crash tests, with energy impact zones designed with survival spaces, etc.)

Of course, during such a long time the process of accident severity has been affected favourably, too by the huge progress achieved in the rescue work, and by medical sciences. After studying Figure 1, one may draw the conclusion that not the number of personal injury accidents but that of their fatal victims slackened significantly. I.e. in the last decades it was not the active safety that mainly improved, nor the accident risk that outstandingly decreased, but the outcome, the accident severity. Not only fatal injury, but also the risk of personal injury lessened, even if not to the same degree as the number of killed did.

To sum it up: **accident severity** decreased decisively.

As injury risk lessened, the number of registered (personal injury) accidents reduced as well, although in a lesser degree than that of people killed.

3. Has economic crisis any role in road safety improvement?

Several researches [2], [3], [4] demonstrated that economic revival or recession (the rate of the GDP) may influence directly road traffic and through it the road safety trends.

According to annual KSH figures in 2009 [5] as compared to 2008 the following declines were experienced:

- **mass of goods** carried by **road in domestic traffic**, by **12.9%**;
- **performance of goods ton-kilometres** in domestic road traffic by **6.7%**;
- **number of bus-passengers** transported in interurban domestic traffic by **6.2%**;
- **performance of passenger-kilometres** in interurban domestic traffic by **5.0%**;
- **number of bus-passengers** in local domestic traffic by **6.4%**;
- **performance of bus-passenger-kilometres** in local domestic traffic by **7.0%**.

In 2009 in Hungary the number of road motor vehicles with first **registration** (entry into traffic) was 106343, **by 53% less** than in 2008 (227251).

Since a long time it was in 2009 that for the first time the national fleet of road vehicles **decreased** as well. While in 2008, at the end of the year the registered number of road vehicles was 3685677, this number declined to 3640115 in 2009.

In comparison with the same period of the preceding year, in 2010 the following changes could be observed [6]:

- **mass of goods** transported by domestic **road** traffic decreased by **15.1%**;
- **performance of goods ton-kilometres** in the domestic road sector decreased by **6.8%**;

- **number of bus-passengers** transported in interurban domestic traffic increased by **3.2%**;
- **performance of bus-passenger-kilometres** in domestic interurban traffic increased by **4.5%**;
- **number of bus-passengers** in local traffic decreased by **6.3%**;
- **performance of bus-passenger-kilometres** in local traffic decreased by **5.7%**.

In Hungary the number of road motor vehicles with first **registration** (entry into traffic) in 2010 was 88463, which in comparison with the data registered in 2009 (106348) indicates a **decrease** of 16.8 %.

The national motor vehicle fleet was 3608834 in 2010, less by 31281 than in 2009 (3640115).

4. Conclusions

Between the years 2001 and 2009 in Hungary and in all EU member states the number of fatalities resulting from road accident decreased by 34% and 36%, respectively.

In 2008 a real breakthrough was achieved in road safety improvement, which continued in 2009 and in 2010, too.

The breakthrough (2008) was mainly the result of consistent and strict measures (so-called “objective” responsibility (owners’ liability) , “zero-tolerance” against drinking and driving, rendering more stringent demerit point system, automated speed cameras, etc.), admitting that economic recession also contributed to this improvement, especially in 2009, but in 2010, too, although in a lesser extent.

During evaluation a special attention should be paid to the methodological questions as well (e.g. the difference between the 48-hour- and the 30-day-outcome.)

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