ROAD ACCIDENTS IN GREECE

By: George D. YANNIS[1], Evangelos C. MATSOUKIS[2] and John C. GOLIAS[3]

Introduction

Greece, in the south-east of Europe, has 10,4 million inhabitants, and a road network of 9.400 km of national roads, 31.228 km of departmental roads and only 280 km of motorways. Greece has a mountainous mainland and a total area of 131.990 km^2. In 1995, the number of vehicles registered in Greece [excluding mopeds (<50cc)] was 3.375.607 consisting of 428.953 motorcycles, 2.040.521 passenger cars, 849.033 goods vehicles and 23.540 buses. The Mediterranean climate of Greece allows for a significant part of traffic to be carried out by motorcycles and mopeds, during the biggest part of the year.

Over the last twenty years, the number of persons killed in road accidents in Greece has almost doubled. According to the National Statistical Service of Greece, in 1994, a total of 1.909 road users were killed, and 30.297 injured in 22.222 road accidents involving deaths and/or injuries in Greece. When compared with other countries of the European Union (EU) Greece has the lowest car ownership per 10.000 persons. In contrast, it occupies one of the first places in the number of persons killed per 10.000 vehicles. The fatality rate (deaths per 10.000 vehicles) in Greece over the years has progressively decreased from 16,3 in 1975 (7,3 in the EU) to 10,8 in 1980 (5,4 in the EU) and 8,1 in 1995 (2,5 in the EU). However, during the last 8 years the situation seems to have been stabilised.

Injury accident characteristics

Even though the distribution of killed persons among men and women is 77% and 23% respectively, further breakdown of these percentages by road user type shows that 96% of killed drivers are men, whereas the corresponding percentages for killed passengers and pedestrians are 53% and 62% respectively. It is interesting to note that out of the total number of killed persons 52% are drivers, 24% are passengers and 24% are pedestrians. Variation within these three road user types, as far as age groups are concerned, is not significant for passengers; in contrast it presents important peaks for drivers (at the age group 15-35) and pedestrians (over 55). The age group distribution of killed pedestrians shows that a 52% of the total number are more than 64 years old, whereas killed pedestrians aged up to 44 years present very low percentages. Finally, the distribution of killed men drivers presents a peak percentage at the age group 15-24 while the peak percentage for killed women drivers is found at the age group 25-34.

The consideration of road accidents and related killed persons inside and outside built up areas in Greece (Table 2) reveals that accidents in the interurban network (national and regional roads) are, as expected, more serious, probably due to higher travel speeds. It is worth mentioning that even though 73% of injury accidents occur inside built up areas, only 45% of the total number of killed persons are killed in these accidents. Furthermore, it should be noted that accident severity inside built up areas increases when these areas are crossed by roads of the regional or national network. Only 9% of the total number of accidents occur in national or regional roads crossing a built up area, but the respective percentage of number of killed persons is 24%.

1 Research Associate, Dept. of Transp. Planning and Engrg., Nat.-Techn. Univ., Athens, Greece.
2 Associate Professor, Transp. and Traffic Eng. Study Unit, University of Patras, Patras, Greece.
3 Associate Professor, Dept. of Transp. Planning and Engrg., Nat.-Techn. Univ., Athens, Greece.

Table 3 presents the analysis of accident severity by vehicle type. It is worth mentioning that in 40% of the injury accidents a two-wheel vehicle (i.e. motorcycle or moped) was involved. Furthermore, it is interesting to note that the highest accident severity is found in accidents where lorries and buses were involved, whereas the lowest severity is observed in accidents where taxis were involved.

Road safety policy in Greece

It can be argued that the low level of road safety in Greece is mainly due to the inappropriate road infrastructure and the lack of persistent implementation of road safety measures, together with the behavioural particularities of the Greek driver.

It should be mentioned that a number of road safety measures (wearing of seat belts for car passengers and helmets for motorcyclists, intensification of alco-tests, sporadic upgrading of design elements in the road network, periodical technical tests of all vehicles, updates of the Road Traffic Code, et al) has been introduced in Greece during the last decade; however, their enforcement was neither systematic nor persistent. This applies particularly to the seat-belt wearing for the driver and the front seat passenger. Consequently, no serious impact of these measures towards the improvement of road safety in Greece has been identified.

Figure 1. Trends of basic road safety indices in Greece (1975=100)

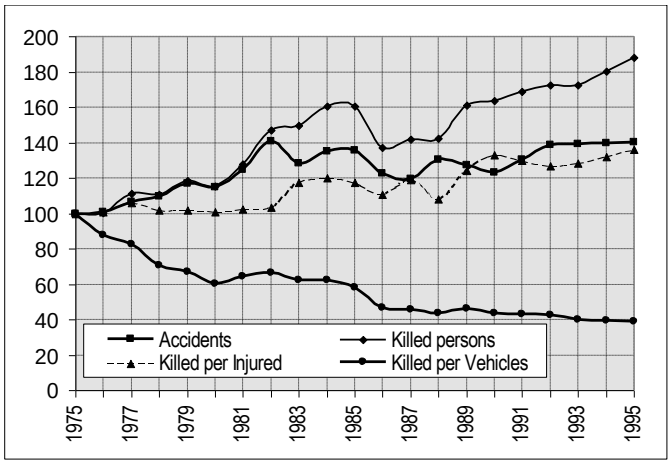

Table 1. Killed persons by age group, sex and road user type (1987-93)

Age	Drivers		Passengers		Pedestrians		Total	%
	M	F	M	F	M	F		
0-4	0	0	30	20	44	18	112	1%
5-14	51	3	106	63	80	65	368	3%
15-24	1.655	67	587	374	108	51	2.842	24%
25-34	1.415	77	289	222	120	45	2.168	18%
35-44	858	46	151	195	96	40	1.386	12%
45-54	747	31	142	168	136	85	1.309	11%
55-64	736	13	143	179	268	179	1.518	13%
65+	438	5	125	158	891	573	2.190	18%
Total	5.900	242	1.573	1.379	1.743	1.056	11.893	100%
%	96%	4%	53%	47%	62%	38%		

Table 2. Number of accidents and accident severity by road type (1985-93)

Road type	Inside built-up areas		Outside built-up areas		Total	
	accidents	severity*	accidents	severity*	accidents	severity*
National	7.301	10	27.455	14	34.756	13
Regional	9.604	7	22.426	9	32.030	9
Municipal	116.302	4	2.439	12	118.741	4
Total	**133.207**	**4**	**52.320**	**11**	**185.527**	**6**

*severity: nr of killed persons per 100 injured

Table 3. Accident severity by vehicle type (1985-93)

Vehicle type involved	Killed per 100 injured			Accidents
	Inside built-up areas	Outside	Total	
Passenger Car	2,4	8,0	4,4	145.716
Taxi	1,6	7,8	2,9	12.458
Lorry	4,6	9,6	7,1	47.826
Bus	3,9	11,2	6,4	7.623
Bicycle	3,4	14,2	5,1	3.874
Two-wheel	3,1	9,0	4,1	74.905
Total nr of accidents	**3,8**	**11,0**	**5,8**	**185.528**