

Abstract

Traffic accidents cause, apart from considerable injuries of casualties, an essential economic damage in the Federal Republic of Germany every year. In order to work against this, it is necessary to take sensible measures to recognise accident amassments. This can be effected by the improvement of traffic management and/or traffic conditions.

Task of this thesis (diploma) is to give a comprehensive view of the methods to analyse accidents and the evaluation of the efficiency and effectiveness of traffic-securing measures. These methods of road safety analysis serve as basis. Special attention is dedicated to the work of the accident commissions. These commissions are usually formed by experts of different functions, for example, members of the traffic authority, policemen and members of the road construction and maintenance. A main target is to make these commissions more efficient. It still exists a lack in practice. This should be illustrated particularly by the comparison of the guidelines for the commission work and the practical work of the accident commissions in reality. A fundamental task of the accident commissions consists in finding suitable measures to reduce the risk of accidents and controlling and analysing the effectiveness of them. The evaluation of the effectiveness is made frequently by the empirical comparison of the accident numbers. By this means, traffic-securing measures can be evaluated only insufficiently. Results from the empirical comparison only concern the effectiveness. They serve only as basic approach. The efficiency calculation however finds use in the rarest cases. In the time of scarce financial resources the efficiency evaluation however is a fundamental condition for careful measure identification.

From this it becomes evident that additional tests for a proper evaluation and analysis of measures are necessary. Therefore the next section of the thesis (diploma) analyses the suitability of economic (use cost analysis) and statistic-mathematical procedures (significance tests) based on examples of the Rhein-Erft-Kreis. By means of the analysis of these examples the choice of the suitable method of calculation is to be confirmed. Also, the effectiveness by traffic-technical and road-structural measures are represented and compared with one another.

The selected procedure will simplify the analysis and/or the controlling of the accident commissions. This helps to evaluate road-safety-measures to eliminate accident amassments in the future. With the increase of experience, identification of suitable measures can be arranged more effective. Transparent results should help to convince politics and municipalities to realise concrete measures for road-safety faster.