

A Comprehensive Analysis of Factors Leading to Fatal Road Accidents in France and Its Overseas Territories

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Abstract : In road accidents in French overseas territories have been understudied, with relevant data often collected late and incompletely. Although these territories account for only 3% to 4% of road traffic injuries in France, their unique characteristics merit closer attention. Despite lower mobility and, consequently, lower exposure to road risks, the actual road risk in Overseas France is as high or even higher than in Metropolitan France. Significant disparities exist not only between Metropolitan France and Overseas territories but also among the overseas territories themselves. The varying population densities in these regions do not fully explain these differences, as each territory has its own distinct vulnerabilities and road safety challenges. This analysis, based on BAAC data files from 2005 to 2018 for both Metropolitan France and the overseas departments and regions, examines key variables such as gender, age, type of road user, type of obstacle hit, type of trip, road category, traffic conditions, weather, and location of accidents. Logistic regression models were built for each region to investigate the risk factors associated with fatal road accidents, focusing on the probability of being killed versus injured. Due to insufficient data, Mayotte and the Overseas Communities (French Polynesia and New Caledonia) were not included in the models. The findings reveal that road safety is worse in the overseas territories compared to Metropolitan France, particularly for vulnerable road users such as pedestrians and motorized two-wheelers. These territories present an accident profile that sits between that of Metropolitan France and middle-income countries. A pressing need exists to standardize accident data collection between Metropolitan and Overseas France to allow for more detailed comparative analyses. Further epidemiological studies could help identify the specific road safety issues unique to each territory, particularly with regard to socio-economic factors such as social cohesion, which may influence road safety outcomes. Moreover, the lack of data on new modes of travel, such as electric scooters, and the absence of socio-economic details of accident victims complicate the evaluation of emerging risk factors. Additional research, including sociological and psychosocial studies, is essential for understanding road users' behavior and perceptions of road risk, which could also provide valuable insights into accident trends in peri-urban areas in France.

Keywords : multivariate logistic regression, overseas France, road safety, road traffic accident, territorial inequalities

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