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Engineering and Manufacturing North America, and TRW. Additional support for this research was received from Autoliv, IBM, and Visteon. Information about Strategic Worldwide Transportation 2020 is available at: <u>http://www.umich.edu/~umtriswt</u> 16. Abstract

This report examines some recent explanations for the rising road fatality rates in developing countries. A key insight of these recent studies is that road fatalities per capita follow a Kuznets curve (an inverted-U shaped pattern with rising income per capita). The rising fatalities per capita in developing countries can be expected to reach a peak and then fall. However, if present trends continue, the already high fatality rates in developing countries could rise for several years before peaking.

The report adopts the road fatalities Kuznets curve as a framework, and decomposes the per capita fatality rate into two terms that are multiplied together: vehicles per capita and fatalities per vehicle. Reducing either term, holding the other fixed, would lower fatalities per capita. Reducing motorization (vehicles per capita) is unlikely to be used as a policy to reduce fatalities because it is inextricably linked to economic growth. Consequently, the focus should be on reducing fatalities per vehicle.

The report concludes with an economic analysis of the costs and benefits of using new vehicle technologies to reduce fatalities per vehicle in developing countries. To illustrate potential benefits, the report estimates the number of lives that could be saved in China and India as functions of the rate of improvement in fatalities per vehicle.

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