**Analysis of Road Traffic Crash Cost in Kathmandu Valley**

**Samikshya Rizal 1, Hemant Tiwari 2**

 1Graduate Student, Nepal Engineering College, Lalitpur

2Secretary, Society of Transport Engineers Nepal, Kathmandu

ABSTRACT

The number of road crashes is increasing in the context of Nepal and Kathmandu Valley shares more than 50% of the total national crashes. These increasing road crashes are imposing social and economic burdens on the victims and various direct and indirect costs to individuals and the government. Lack of sufficient data on crash costing becomes essential on planning and budget allocation for road safety intervention, justification of investments, economic analysis of road projects, and overall burden of the cost of transport. In line with these contexts, this study seeks to review the crash data contribution of Kathmandu Valley and also calculate the road crash costing.

The detailed road crash database including fatal, major, and minor injuries along with the detail of involved vehicles obtained from Traffic police along with the primary data obtained from purposive convenient sampling was used to analyze the component associated with vehicle damage cost and medical cost. Human Capital Approach was used based on literature review and assessment of data in the context of Nepal. Similarly, insurance data was obtained from insurance companies is also used to the crash costs associated with different types of crashes. Kathmandu Valley covers 7.8 % to 9.2 % of fatalities and 52.5 % to 60.5 % of crashes of Nepal; based on the crash database for the fiscal year 2007 to 2020 for a 95 % confidence interval. Among various components of the road crash costing component, the average age of fatalities was found to be 34 years, which was subtracted from economically active age to calculate the total lost output. The total cost of road crashes in Kathmandu Valley for the fiscal year 2020 was calculated as NRs. 1827,675,227 (i.e., NRs. 1827.67 million) where the total cost of lost output share (46.28 %), Vehicle damage cost (36.27 %), Medical cost (2.16 %), Administrative cost (6.01 %) and Quality of life (9.25 %). These high contributions of road crash costing justify the investment in road safety intervention within the Kathmandu Valley.

**Keywords:** Crashes, Fatalities, Human Capital Approach, Road crash cost