

# Socio-Economic Costs associated to Road Traffic Accidents in the Islamic Republic of Iran

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## INTRODUCTION

According to the World Health Organization (WHO) [1] the burden of traffic related injuries is dependent on whether a country is low-income and middle-income or high-income. Traffic related injuries in low-income and middle-income countries represent a significant percentage of all trauma admissions. On the other hand, it is predicted that high-income countries will experience a decrease in deaths due to traffic injuries. The WHO indicates a huge escalation in road crash mortality between the years 2000 and 2020 in low-income and middle-income countries. Furthermore, on current trends the WHO believes that road crash injuries is likely to be the third leading cause of disability-adjusted life years lost.

Recently, the Islamic Republic of Iran reported to have lost over 26,000 people in the traffic accident which was more than any other death related illnesses. In other words, one person was killed every 20 minutes. 30% of deaths occurred within cities and 70% outside of cities on country roads. There were over 245,000 injuries. The accident cost has been estimated around 3.5% of GDP (in excess of US\$6bn). During the last 10 years, the fatality rate has increased from 17.6 to 38.6 deaths per 100,000 populations. Nonetheless, Australia, the UK and the USA have been reducing their accident rates rapidly. From 1970 until 2002 the Australian fatality rate dropped from 30.4 to 8.8 deaths per 100,000 populations together with the fatality rate per 10,000 registered vehicles has dropped dramatically from 8.0 to 1.4. This reduction has been achieved in spite of a huge increase in motor vehicle usage. Each accident carries both economic and social costs.

## METHODS OF ESTIMATING ROAD CRASH COSTS

According to the Australian Bureau of Infrastructure Transport and Regional Economics (BITRE)[2], there are two methods for estimating road crash costs:

1. The Human Capital approach
  - Characterizes people and life as a labor source & input to the production Process.
  - It uses Discounted Present value of a victim's future earnings as a proxy for the cost of premature death or injury.
2. The Willingness to pay approach
  - Estimate the value of life in terms of the amounts that individuals are prepared to pay to reduce risks to their lives.
  - It uses people's preferences to ascertain the value they place on reducing risk to life and reflect the values of intangible elements such as quality of life and joy of living.

The Human Capital Approach is the most popular method for study.

There are 3 types of Costs:

### 1. Type 1 – Human Costs:

Arising from the injury to a person

- a) Loss of output
- b) Loss of quality of life
- c) Medical costs and coronial
  - i. Ambulance costs
  - ii. Hospital In-Patient Costs
  - iii. Other medical costs (specialist, Occupational therapy, Physiotherapy)
  - iv. Long-term costs
  - v. Coronial costs
- d) Premature Funeral costs
- e) Legal and Prison costs
  - i. Legal from insurance claim
  - ii. Criminal Prosecution costs
  - iii. Correctional services costs
- f) Workplace disruption and staff repl. costs

### 2. Type 2 – Vehicle Costs:

Arising from damage to a vehicle

- a) Repair costs
- b) Towing costs
- c) Time lost due to vehicle unavailability costs

### 3. Type 3 – General Costs:

Not directly dependent on level of damage to vehicles or injury to persons

- a) Non-Vehicle Property damage costs
- b) Police Costs
  - i. Attendance time costs
  - ii. Administration of reported crashes costs
  - iii. Notification of next of kin costs
  - iv. Crash investigation costs
  - v. Coronial and investigation costs
  - vi. Administration of fines costs
- c) Fire services Costs
- d) Insurance administration costs
- e) Travel delay costs

## DISCUSSION

There are several difficulties in estimating economic costs of road traffic injuries in the Islamic Republic of Iran. This includes:

- a) Lack of Data availability and reliability
- b) Lack of Transparency and Administrative structure
- c) Lack of political will

In order to overcome the above difficulties, extension of collaborations with universities in the region together with contacting relevant authorities such as Police, hospitals, etc.

## REFERENCES

1. World Health Organisation 2004, *The World report on road traffic injury prevention*, Geneva.
2. BTE 2000, *Road Crash Costs In Australia Report 102*, Canberra.