

# STATISTICS





**Dept. of Computer Science of Engineering  
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Subject: Economics**

**Presentation on**

**A statistical analysis of road accidents in Bangladesh.**

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# PATTERNS OF ROAD ACCIDENTS

## TYPES OF ACCIDENT

- Accident can be categorized in these way
  - ✓ Head On
  - ✓ Rear End
  - ✓ Lost Control
  - ✓ Hit object on/off road

# PATTERNS OF ROAD ACCIDENTS

## ➤ Head On



# PATTERNS OF ROAD ACCIDENTS

## ➤ Hitting Object



# PATTERNS OF ROAD ACCIDENTS

## ✓ Lost Control



# PATTERNS OF ROAD ACCIDENTS

## ▪ Victims and perpetrators

| Victims                        |     | Accident types    |     | Perpetrators |     |
|--------------------------------|-----|-------------------|-----|--------------|-----|
| Pedestrians                    | 41% | Hit-and-run       | 42% | Bus          | 38% |
| Bus/car passengers             | 19% | Head-on collision | 19% | Truck        | 31% |
| 2/3 wheelers riders/passengers | 16% | Over-turned       | 13% | Motor-cycles | 12% |
| Truck/bus drivers/passenger    | 14% | Rear-end hit      | 9%  | Cars/jeeps   | 11% |
| Cyclists                       | 3%  | Side swipe        | 6%  | 3 wheelers   | 9%  |

## Causes of accidents in Bangladesh

Accident causes couldn't defined so precisely, it may happen due to-

- Faulty Geometry of Road
- Carelessness of Drivers as well as Road Users
- Faulty Intersections
- Overloading
- Poor Road Condition

# Causes of accidents in Bangladesh

## ➤ Overturning



## Causes of accidents in Bangladesh

**Poor  
Road  
Condition**



# Causes of accidents in Bangladesh

## ➤Over Loading



# Causes of accidents in Bangladesh

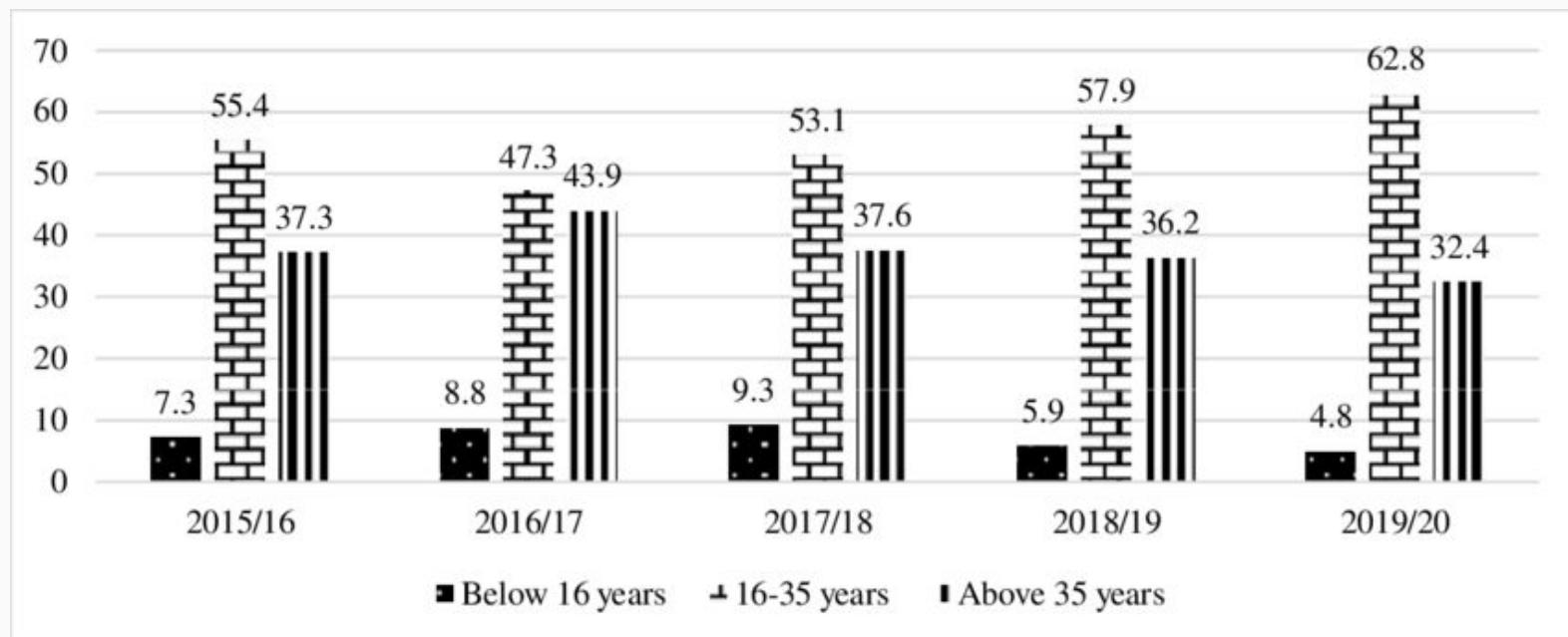
## ▪Driver characteristics

| Characteristic         | Finding   |
|------------------------|---|
| License                | <ul style="list-style-type: none"><li>• 97% report having license</li><li>• 20% report obtaining license without test</li><li>• 92% pay bribe and 54% face severe time delays in obtaining license</li></ul>              |
| Trade union            | <ul style="list-style-type: none"><li>• 80% are unionized</li></ul>   |
| Training               | <ul style="list-style-type: none"><li>• 81% learnt driving skills through informal process usually with a 'mentor' (us tad)</li><li>• Learning hours with ustads 1500</li><li>• Commercial learning hours is 93</li></ul> |
| Cost of training       | <ul style="list-style-type: none"><li>• Informal process: approx. Tk. 4000</li><li>• Formal process: approx. Tk 6000</li></ul>  |
| Confidence on learning | <ul style="list-style-type: none"><li>• 70% fully confident</li></ul>   |
| Work-load              | <ul style="list-style-type: none"><li>• About 20% extremely over-worked with 6-7 days weekly and 13-16 hours daily</li></ul>  |
| Accident penalty       | <ul style="list-style-type: none"><li>• 42% faced no penalty in case of accidents</li><li>• 58% of incurred accidents minor in nature</li></ul>   |

## road accident and demographic factors

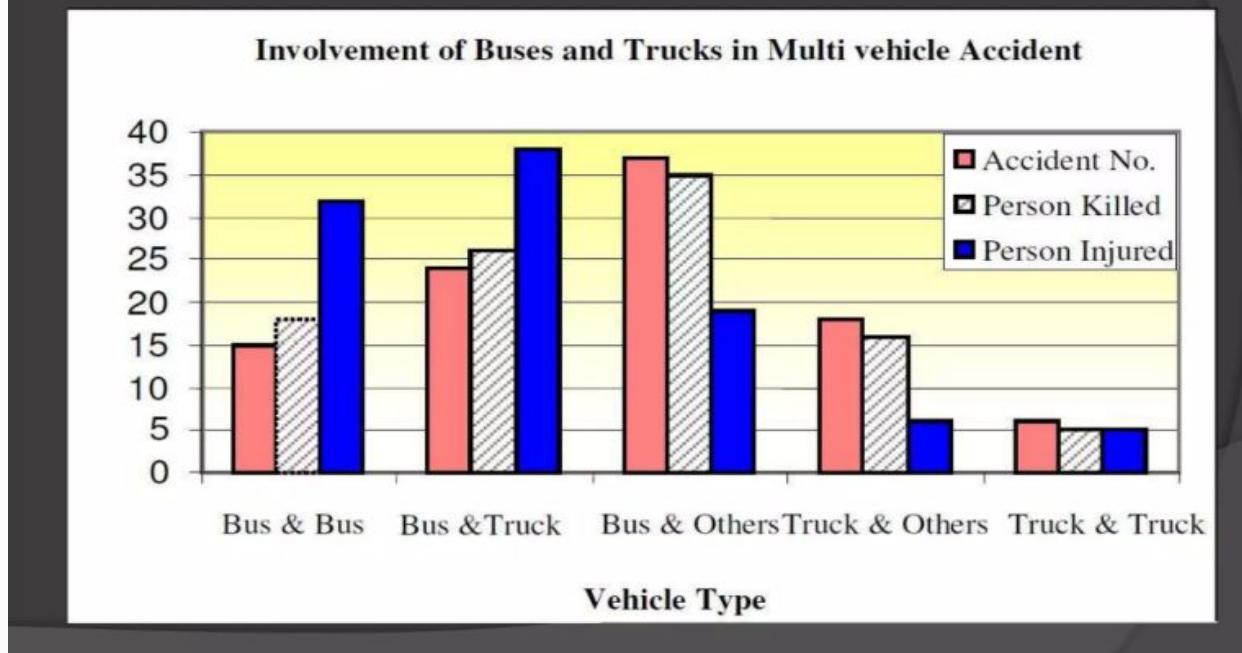
| Fiscal year | Road traffic deaths |      |        |      | Sex ratio |     |
|-------------|---------------------|------|--------|------|-----------|-----|
|             | Male                |      | Female |      |           |     |
|             | n                   | %    | n      | %    |           |     |
| 2015/16     | 130                 | 78.3 | 36     | 21.7 | 166       | 361 |
| 2016/17     | 121                 | 66.5 | 61     | 33.5 | 182       | 198 |
| 2017/18     | 147                 | 75.8 | 47     | 24.2 | 194       | 312 |
| 2018/19     | 196                 | 77.2 | 58     | 22.8 | 254       | 337 |
| 2019/20     | 83                  | 79.0 | 22     | 21.0 | 105       | 377 |

## road accident and demographic factors



## common vehicles involved in road accidents

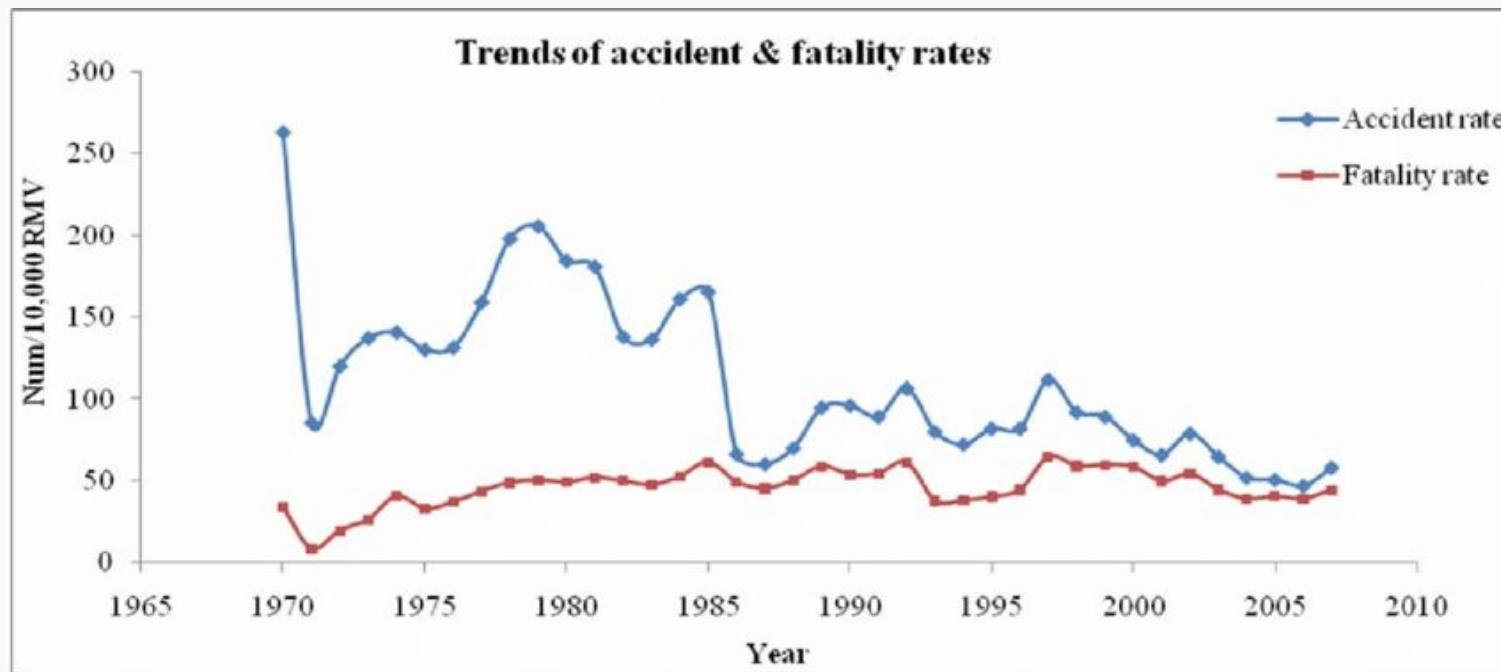
- Involvement Of Buses and Trucks in Multi vehicle Accident



## Trends of accident & fatality rates.

| Year | No. of registered vehicles | No. of accidents | No. of accidents per 10,000 motor vehicles | No. of fatalities | No. of fatalities per 10,000 motor vehicles |
|------|----------------------------|------------------|--|-------------------|---|
| 1995 | 409,215                    | 3,346            | 82   | 1,653             | 40  |
| 1996 | 455,734                    | 3,730            | 82   | 2,041             | 45  |
| 1997 | 488,017                    | 5,448            | 112  | 3,162             | 65  |
| 1998 | 519,498                    | 4,769            | 92   | 3,085             | 59  |
| 1999 | 552,001                    | 4,916            | 89   | 3,314             | 60  |
| 2000 | 583,105                    | 4,357            | 75   | 3,430             | 59  |
| 2001 | 623,275                    | 4,091            | 66   | 3,109             | 50  |
| 2002 | 624,696                    | 4,918            | 79   | 3,398             | 54  |
| 2003 | 736,417                    | 4,749            | 64   | 3,289             | 45  |
| 2004 | 758,571                    | 3,917            | 52   | 2,968             | 39  |
| 2005 | 785,370                    | 3,955            | 50   | 3,187             | 41  |
| 2006 | 812,858                    | 3,794            | 47   | 3,193             | 39  |
| 2007 | 841,308                    | 4,869            | 58   | 3,749             | 45  |

## Trends of accident & fatality rates.



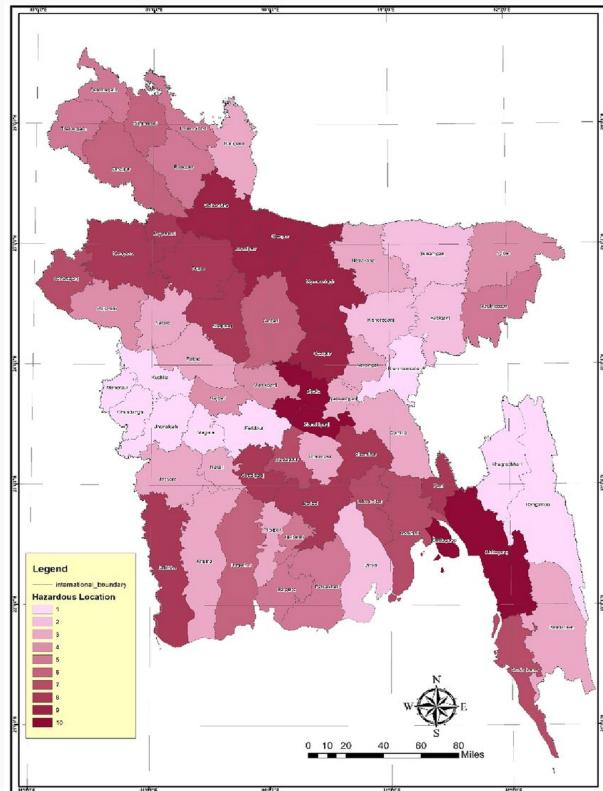
## **Weather condition and road accident .**

- ➡ Weather conditions such as rain, snow, fog, ice, and strong winds can create hazardous driving conditions.
- ➡ slippery roads during rain or snow can lead to skidding, while reduced visibility in fog can result in collisions.
- ➡ the relationship between weather conditions and road accidents helps in developing appropriate safety measures like warning systems, speed restrictions, and improved road maintenance.

## Road conditions and road accident .

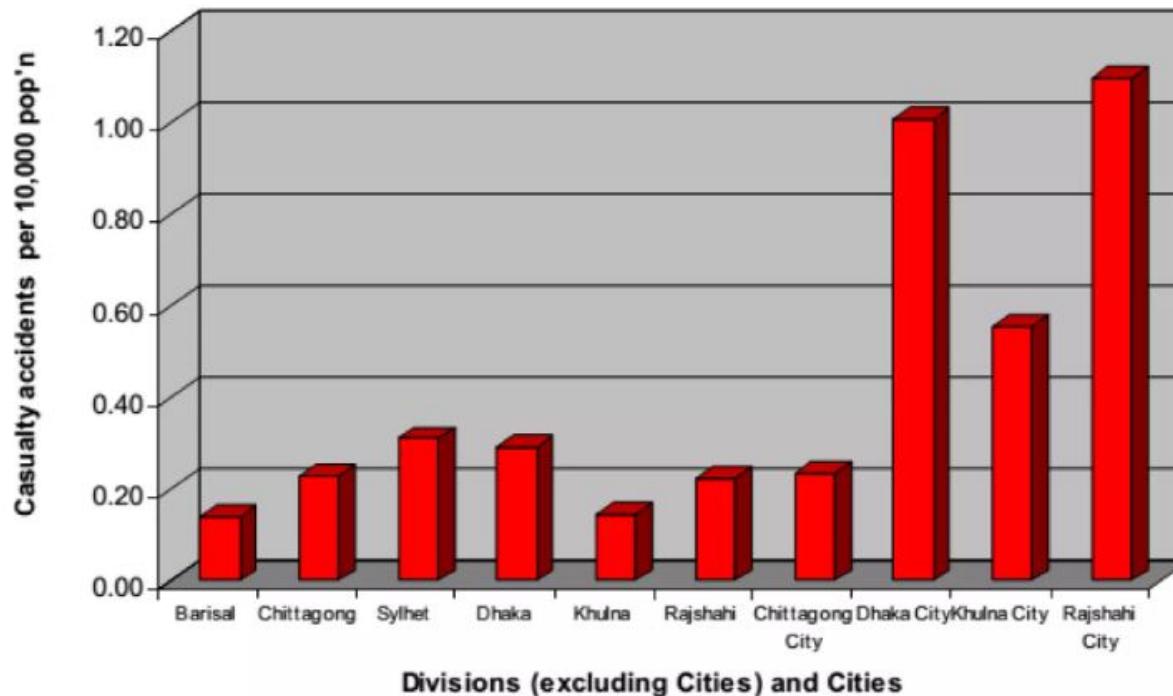
- ▶ potholes, uneven surfaces, debris, lack of road markings, and inadequate signage can contribute to accidents.
- ▶ Poorly maintained roads can affect vehicle stability and maneuverability, increasing the risk of collisions.
- ▶ Regular road inspections, timely repairs, and proper signage can mitigate accidents caused by road conditi

hotspots or areas with higher accident rates.



hotspots or areas with higher accident rates.

## ACCIDENTAL DATA



## STEPS TO REDUCE ROAD ACCIDENTS

- Strict Enforcement of Traffic Laws.



- Improve Driver Education and Licensing.



## STEPS TO REDUCE ROAD ACCIDENTS

→ Enforce Seat Belt and Helmet Usage



→ Increase Pedestrian Safety



## STEPS TO REDUCE ROAD ACCIDENTS

### → Improve Emergency Response



### → Promote Community Involvement



**Thank you**