

# Motorcycle Accidents in Vietnam

Dr.-Eng. Vu Anh Tuan, Director of VGTRC

A Roundtable on safety of two-wheeled vehicles, Geneva, 23-26 March 2015

Hanoi



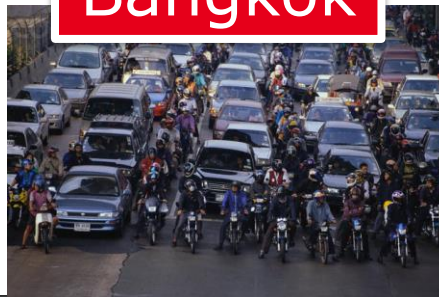
Taipei



Jakarta



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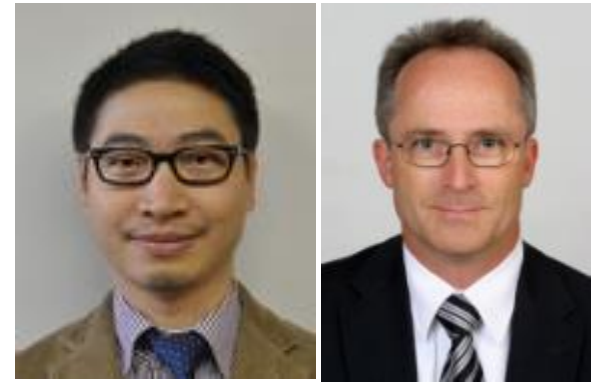
- **Introduction of VGTRC**
- Accidents involving motorcycle in Vietnam
- Regulatory and legal instruments
- Recommendations

## Introduction

# Vietnamese-German Transport Research Centre

- Founded in **August 2010**
- In cooperation with **Technische Universitaet Darmstadt**
- Located in **Binh Duong (Southern Vietnam)**
- **VGTRC Staff** (May 2013):

Director: Dr.-Eng. Vu Anh Tuan  
Academic Advisor: Prof. Dr.-Ing. Manfred Boltze (TUD)  
Special Advisor: Dr.-Ing. Khuat Viet Hung (NTSC)  
7 Doctoral Candidates & Researcher (15 as plan)  
33 Master Students (Intake 2012, 2013 & 2014)



# Vietnamese-German Transport Research Centre



## Vision

VGTRC = a **Centre of Excellence** in innovation and technology transfer in the field of traffic, transport, mobility, and logistics.

## Areas of Focus

- Transport Planning Methods
- Traffic Management Schemes
- Intelligent Transport Systems (ITS)
- Road Traffic Signal Systems
- **Traffic Safety and Environment**
- Freight Transport and Logistics
- Quality Management (QM)



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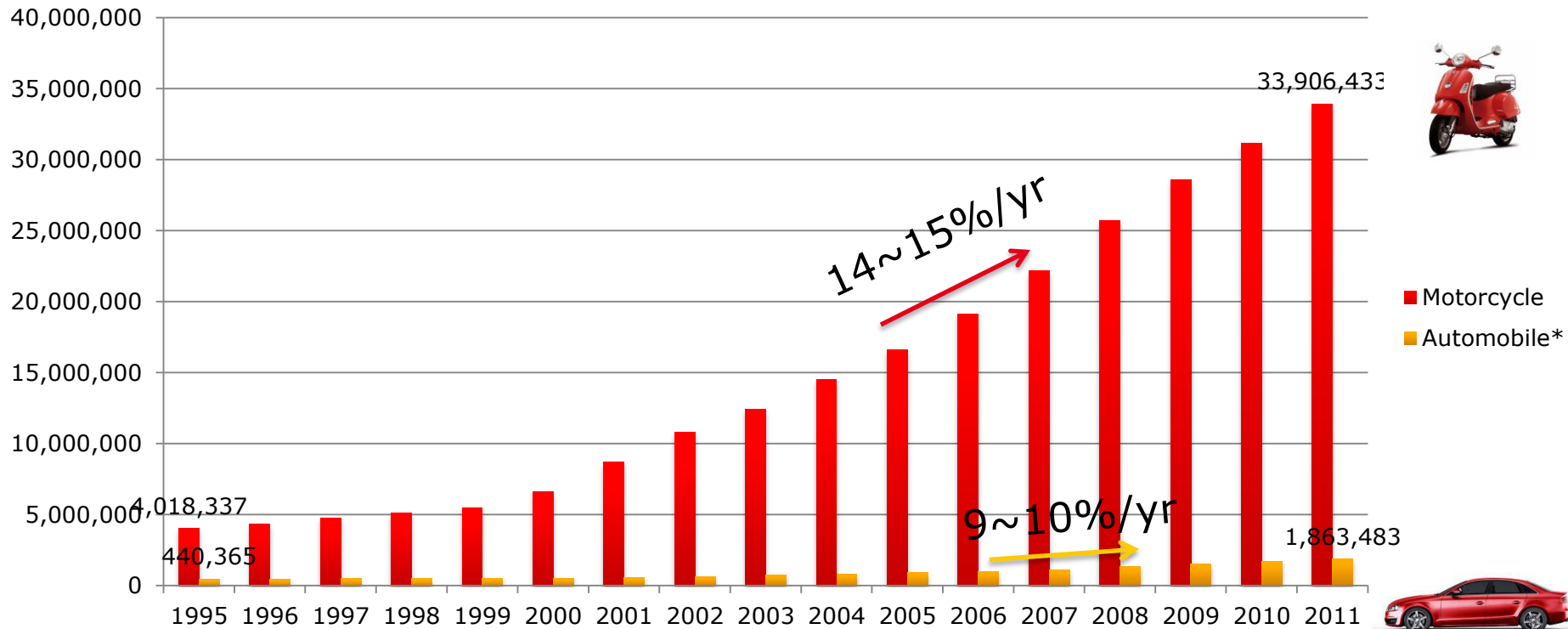
## Vietnam's Facts

- Area = **332,698** km<sup>2</sup>
- Population (2014) = **90.6** million
- Urban pop. (WB, 2013) = **32%**
- GDP/cap (2014) = **2,072** US\$



## Accidents involving motorcycle in Vietnam

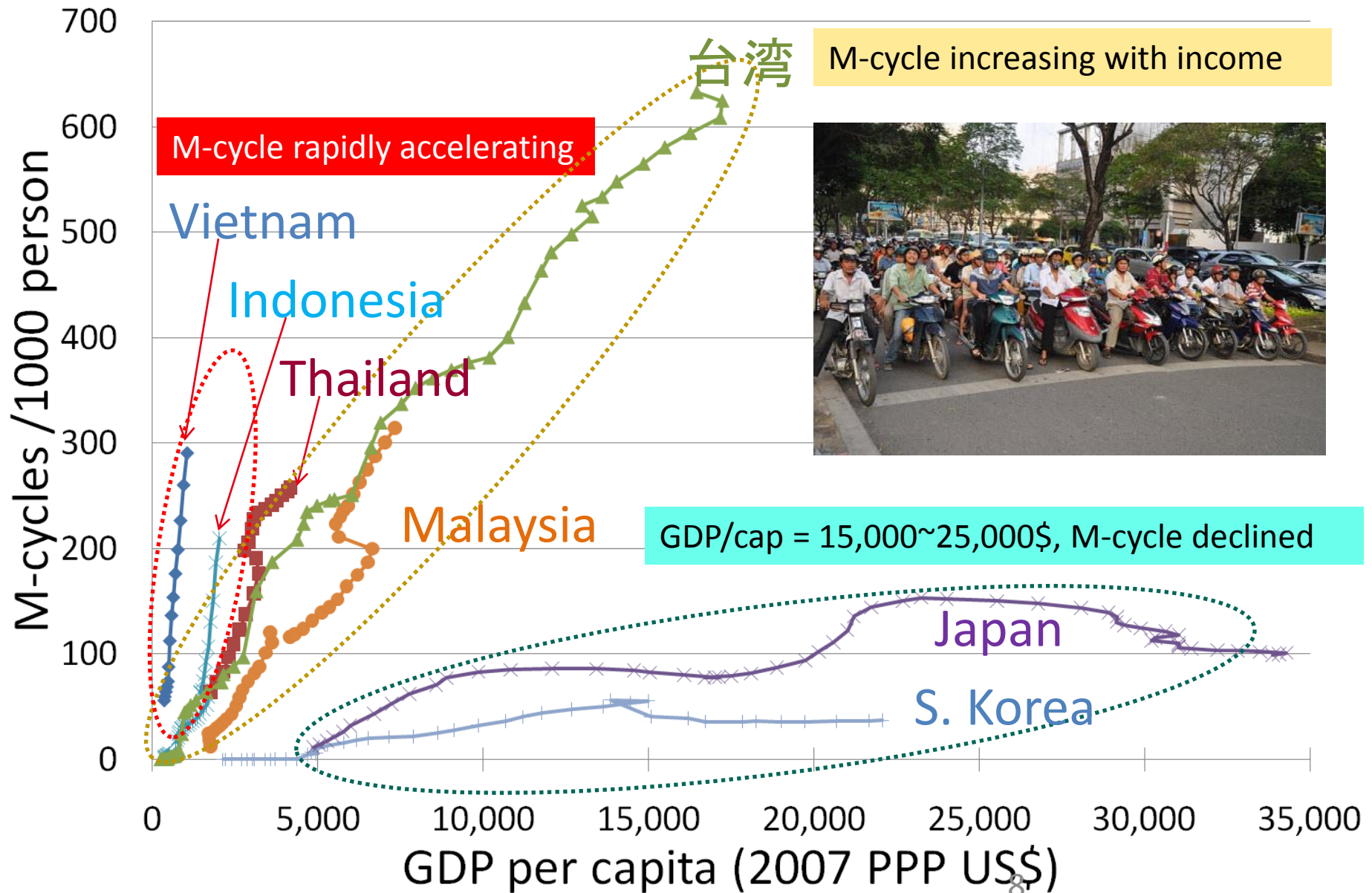
# Motorization in Vietnam



Source: Vietnam NTSC (2014)

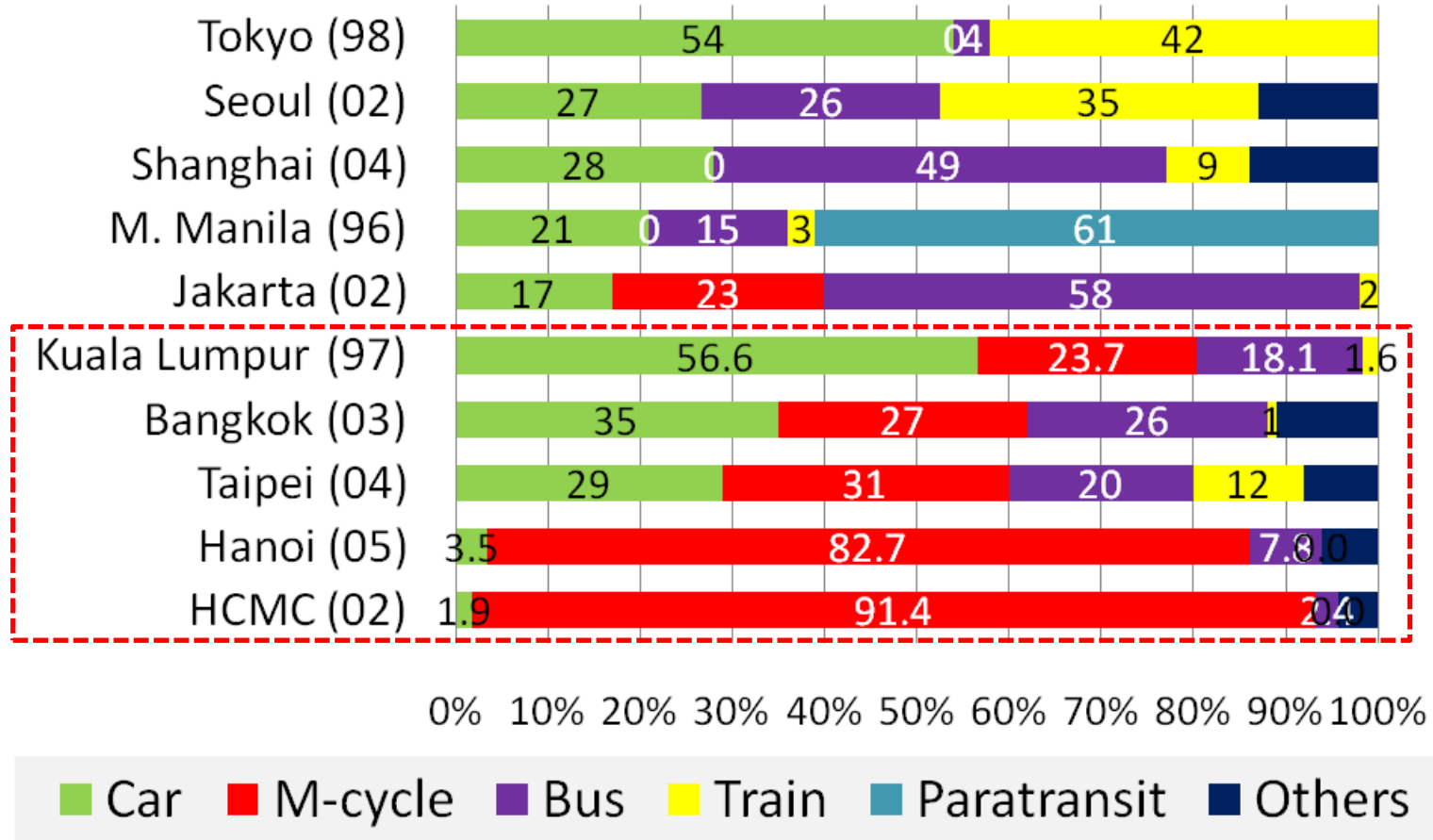
- Motorcycle ownership rate ~ 400 MC/1000 pop.
- Automobile ownership rate ~ 20 car/1000 pop.

# Motorcycle Ownership vs GDP per capita in Asia





# Modal splits of selected Asian cities

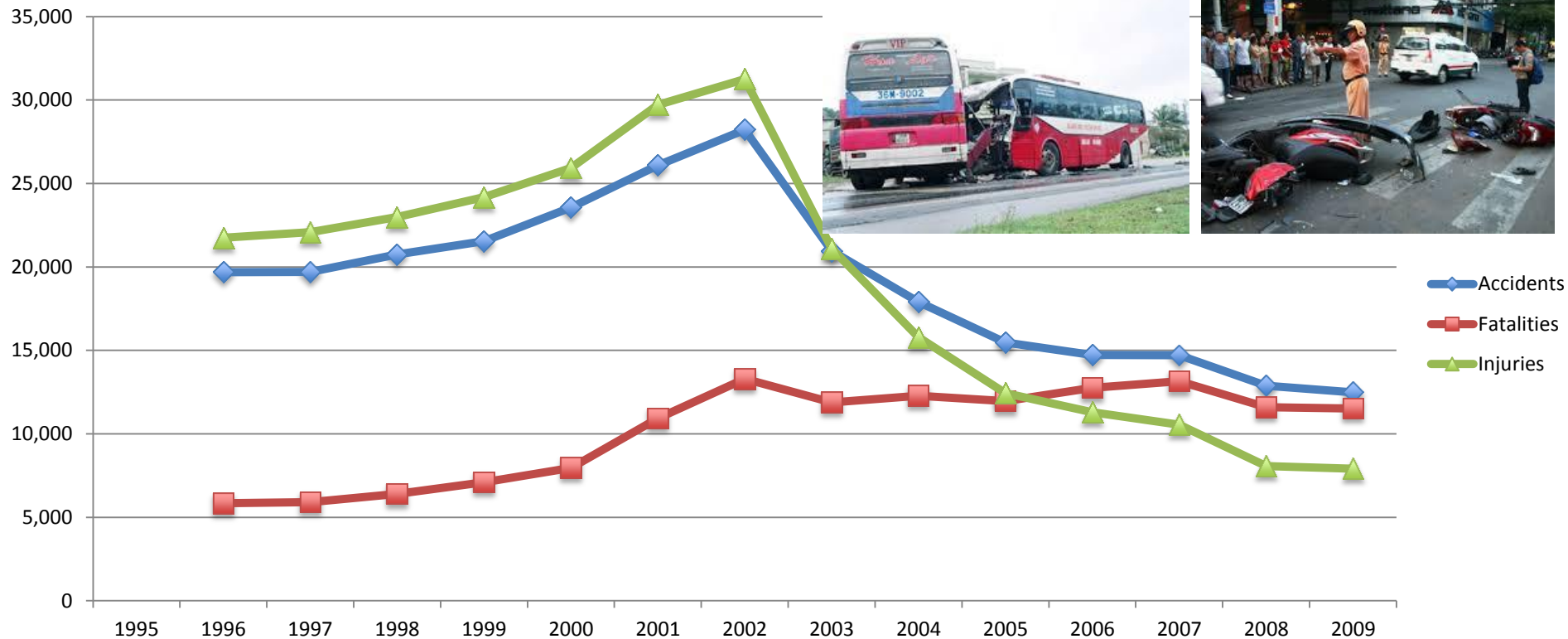


Source: ITPS 2007 (STREAM project) with updated data



**Extremely high share of M-cycle, low share of Public Transport**

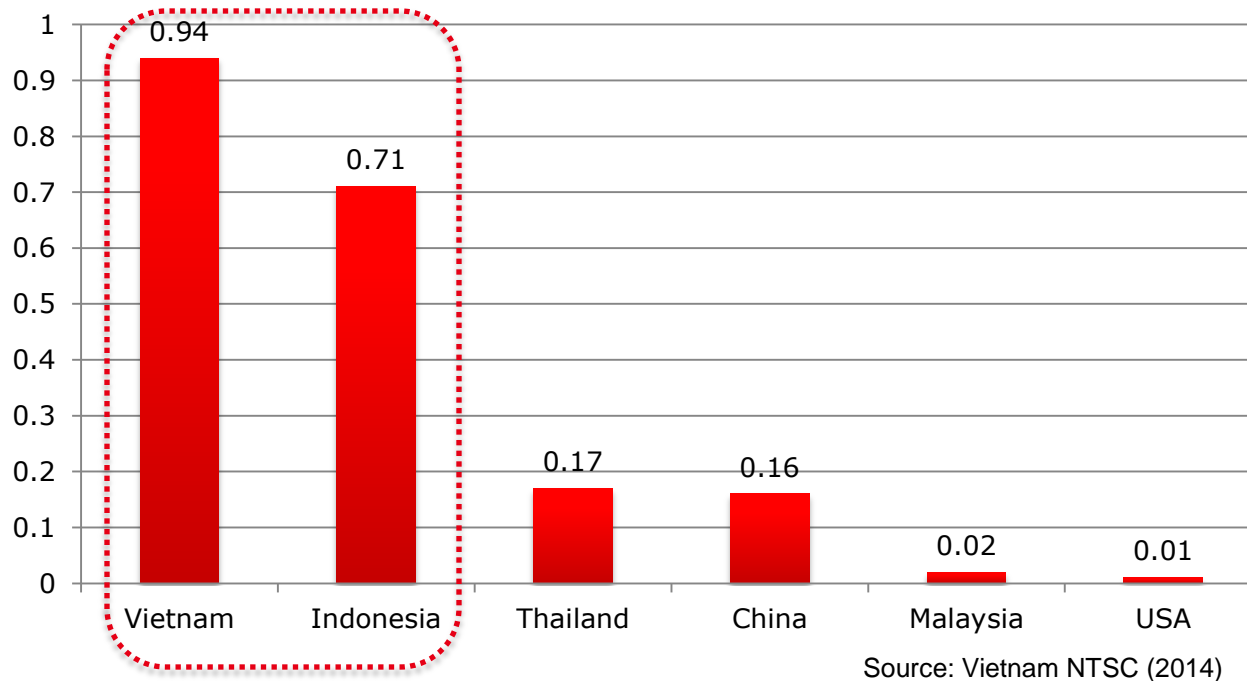
# Accidents, Fatalities and Injuries in Vietnam



Source: Vietnam NTSC (2014)

- High fatal rate: 13.4 deaths/100,000 pop.
- Fatality reduction is a big challenge

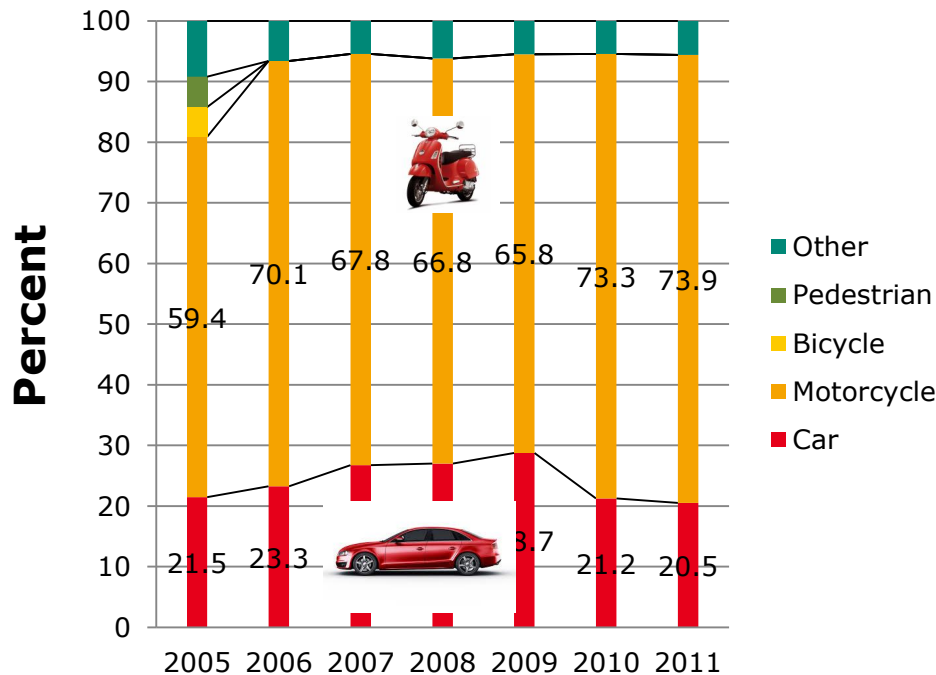
# Fatal rate per accident in comparison



- The high share of motorcycle traffic in Vietnam & Indonesia  
→ extremely high rate of traffic fatality

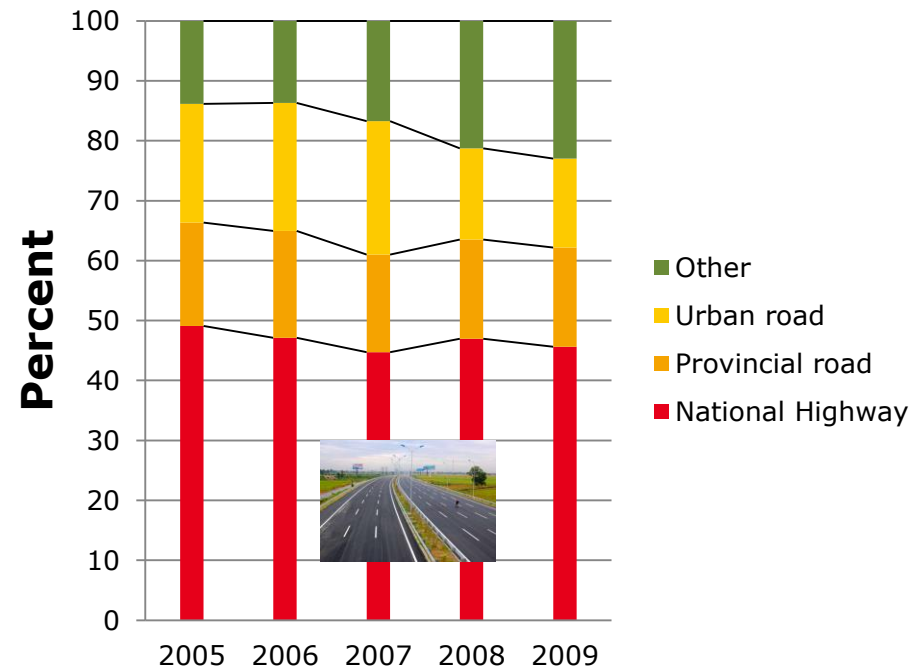
## Causing Vehicles & Locations

### Accident % by Causing Veh.



Source: Vietnam NTSC (2014)

### Accident % by Road Type

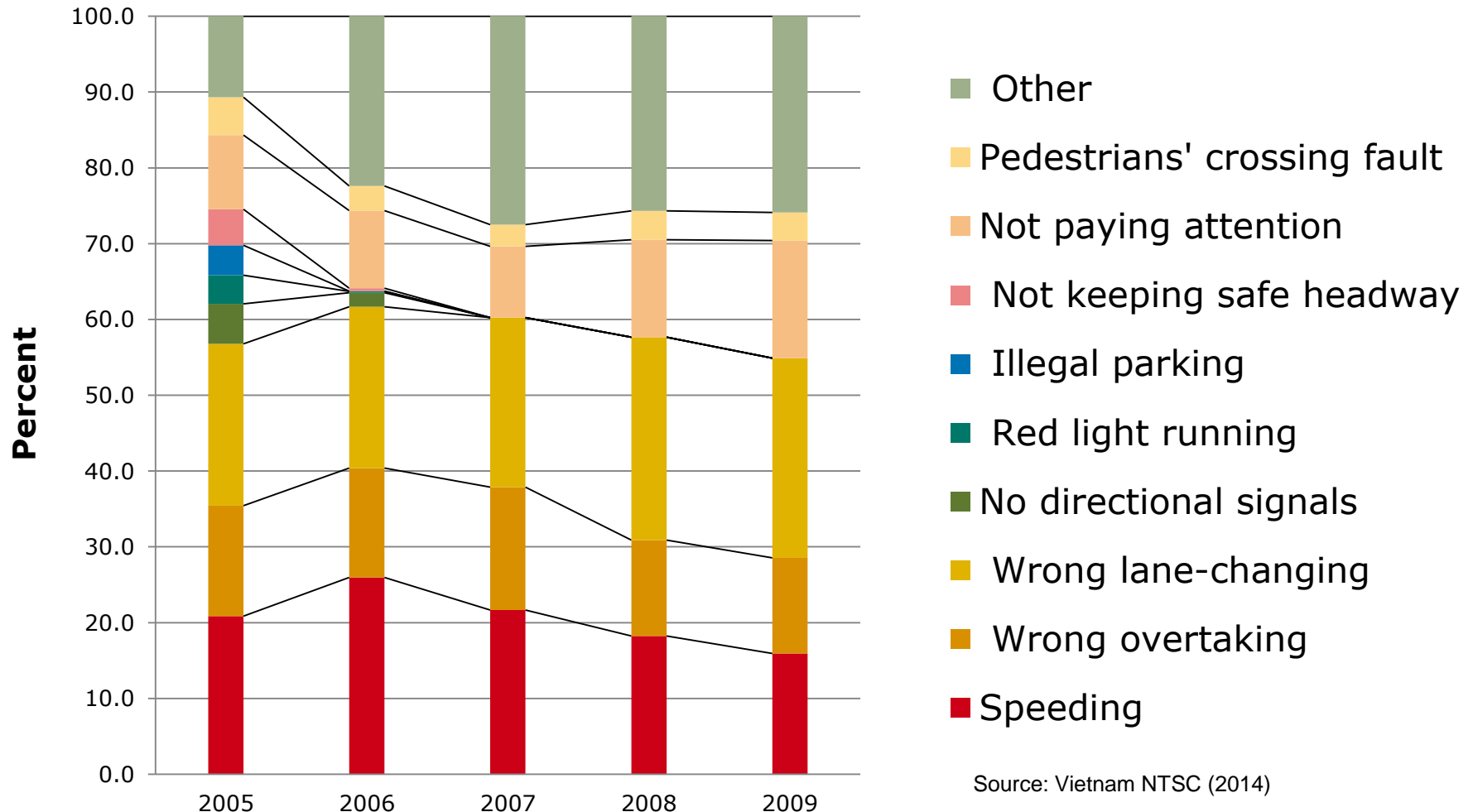


- MC contributed to 75% total accidents
- 45% accidents on National Highways (6-7% total road lengths)



## Accidents involving motorcycle in Vietnam

# Accident % by Main Cause



Source: Vietnam NTSC (2014)

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# Speed Regulation

- Designed Speed regulated by Road Type
- Speed Limits regulated by Vehicle Type
  - e.g., car and bus are allowed to run at higher speeds → more serious or fatal accidents with motorcycle
- Lack of signs and facilities to support safe overtaking on highways, particularly for MC drivers



# Road Signs and Marking

- Standards & guideline for road signs and markings are generally existed.
- Road users find it difficult to recognize traffic sign boards (small and inappropriately located).
- For motorcycle/scooter users, sign boards need to be easily recognizable and understandable



The Highway Code for Young Drivers.  
Road signs and markings

According to traffic signs, road signs and markings give essential information to road users and help them to navigate safely.

The most important and widespread information is given by signs and markings. These signs and markings give information about the road conditions and the behavior of road users.

Signs giving orders





# Engineering & Enforcement Solutions

- Lack of standards nor guidances for designing motorcycle lanes, sign boards/markings & traffic signal systems for the mixed traffic.
- Weak enforcements on major national highways and at night.
- Lack of routine enforcements for traffic violations (e.g., speeding, wrong lane use, dangerous overtaking, illegal parking, red light running, and no helmet wearing, etc.)



# Research Need for Vietnam

- Need to support scientific research
- To deeply understand the local traffic behaviors, particularly motorcycle behaviors, and
- To develop infrastructural engineering solutions, including road signs/markings and traffic signal system for motorcycles.



***Thank you for your kind attention***

Any question, please email to

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