

Session 3B: Pol. Cpt. Le Hong Hai

Presentation entitled: Road Accident Analysis in Hanoi

Biographic Data of Speaker



Le Hong Hai
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Education:

- Bachelor of law, Hanoi University of Law (1997 – 2000).
- Master of Law, The People's Police Academy (2007 – 2009)

Work Experience:

- 1- Lecturing in the Law Faculty of the People's Police Academy from 2001 to July 2009.
- 2- Working in the International Cooperation Division from July 2009 to now
- 3- Working as Project Coordinator such as: The Professional Master's degree program in Justice Leadership between The Vietnamese People's Police Academy and the University of Maryland, USA;
- 4- Research member of Traffic Safety Research Center Working Group, Project for Strengthening the Traffic Police Training in PPA and Various Police Training Institutes in Vietnam, the project was supported by Japan International Cooperation Agency (JICA)
- 5- Doing PhD of Law in the People's Police Academy from 2010 – 2013

Qualification:

- Bachelor of Law, especially in Civil Law granted by Hanoi University of Law in 2000
- Master of Laws, especially in criminal investigation, granted by the People's Police Academy in 2009
- Certificate of Education Management granted by University of Maryland, USA in 2010
- Certificate of Police Training granted by the Royal Police Cadet Academy of Thailand in 2009



Project for Strengthening the Traffic Police Training in PPA and Various Police Training Institutes in Vietnam



ROAD TRAFFIC ACCIDENT ANALYSIS IN HANOI 2008 - 2010

Le Hong HAI

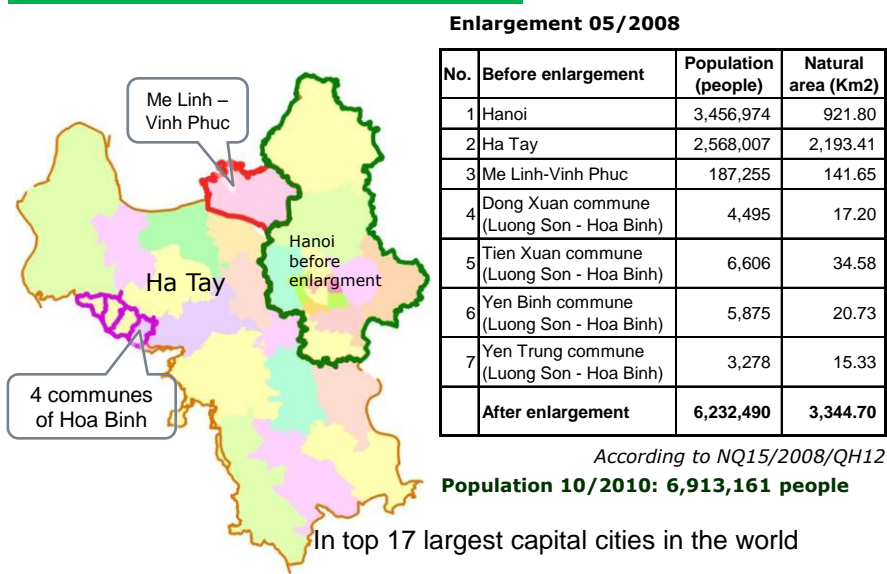
Member, Traffic Safety Research Center

*Presents at: Asia Transportation Research Society Symposium -
ATRANS Symposium
Bangkok, Thailand, 08 - 2011*

Content

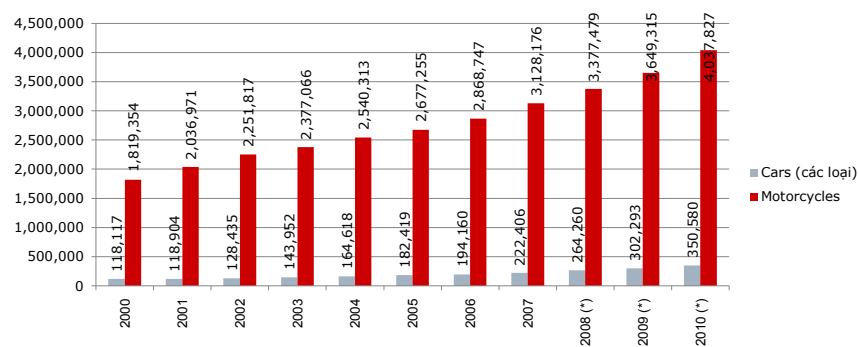
- Introduction
- Traffic accident database of Hanoi
- Some outputs of the analysis
- Findings
- Recommendations
- Further activities

About Hanoi city



3

Increasing rapidly of motorized vehicle ownership

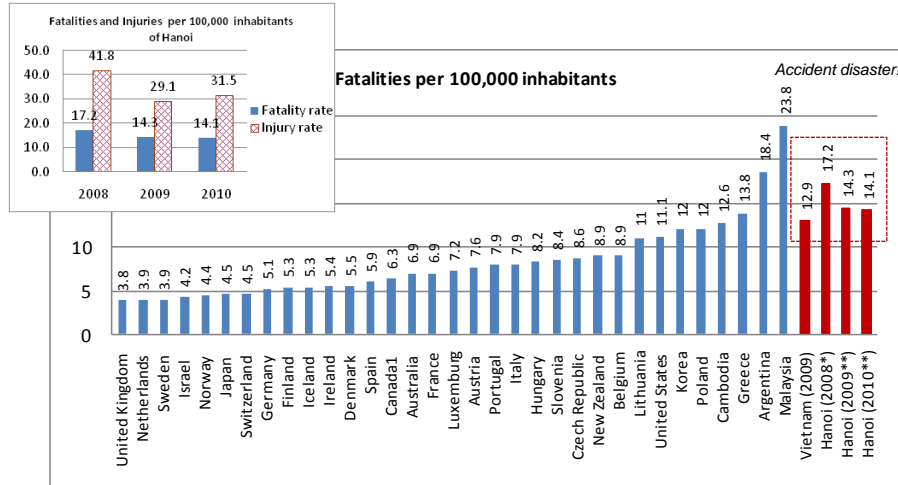


*: Hanoi after enlargement

- The average rate of registered vehicle in 2000-2010:
 - 4-wheel vehicles: 11.6%/year
 - Motorcycles: 8.3%/năm

4

Traffic accident situation



- High rate of fatalities (per 100,000 inhabitants)
- Seems not trend to reduce

Source: IRTAD 2009
 *: Hanoi 2008 before enlargement (HTPD)
 **: Hanoi 2009-2010 after enlargement (HTPD)

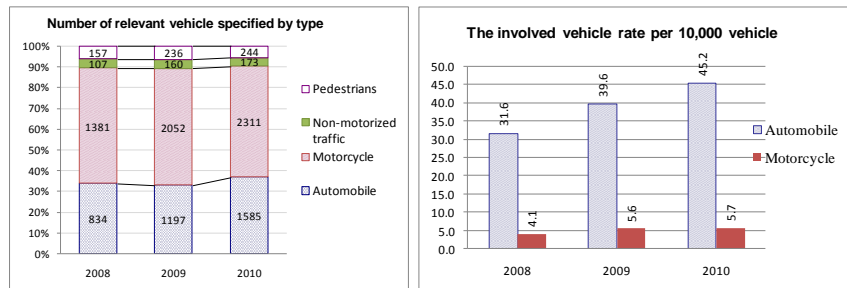
Traffic accident database

Form 02/TNDB issued by MoPS in 2009 Applied in Hanoi area since 2008

Includes 4 groups:

- Group of general information: time TA happened, locations of traffic accident, weather condition, lighting condition, infrastructure condition;
- Group of drivers' information: Age, gender, occupation, driving license information (expired date, issued date, type), driving fault, drink or not drink alcohol, injured statement...;
- Group of information related to riders or passenger
- Group of information related to involved vehicles

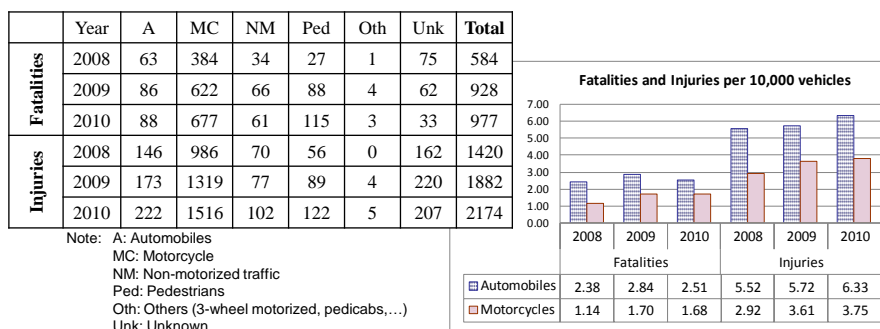
Traffic accident by type of vehicle



- In term of absolute number, motorcycle is the most relevant means to traffic accident with 53 – 56% of annual vehicle related
- But in term of the vehicle involved per 10,000 vehicles, automobiles related to traffic accident is as 7:- ~8 times as motorcycle
- Need more information related to the type of vehicle that made mistakes to know what kind of vehicle is more dangerous?

7

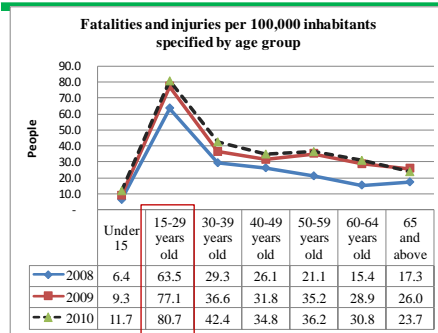
Fatalities and injuries by type of vehicle



- The number of fatalities and injuries related to motorcycle as from 6 to 8 times as cars, as 10 to 15 times as non-motorized vehicles and all types trend to increase every year
- But , the rate of fatalities and injuries related to automobiles per 10,000 vehicle are as 1.5-2 times as motorcycles

8

Characteristic of traffic accident by age group



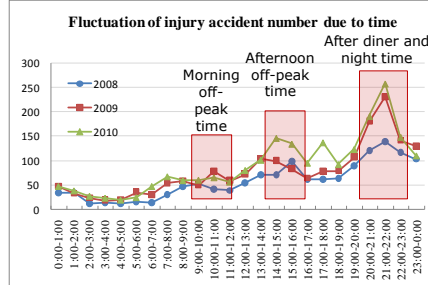
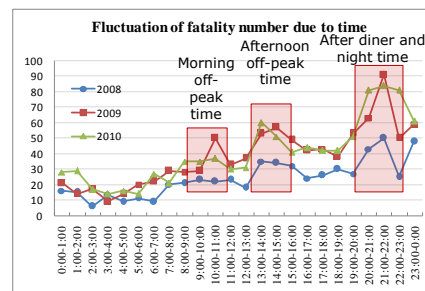
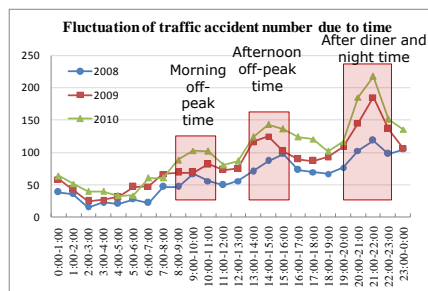
- The fatalities and injuries at the age of 20-29 years old are extreme high
- The rate of age group 15-29 years old is:
 - 7-10 times higher than the age group of less than 15 years old;
 - 2-3 times higher than the age groups of 30-39, 40-49, 50-59 years old,

2 age-groups are summed up

	Year	under 6 years old	7-12 years old	13-15 years old	16-19 years old	20-29 years old	30-39 years old	40-49 years old	50-59 years old	60-64 years old	Above 64 years old	Unknown	Total
Fatalities	2008	19	1	9	42	220	75	83	52	11	43	29	584
	2009	18	7	12	79	360	118	115	79	23	68	49	928
	2010	17	9	11	94	399	128	115	92	24	63	25	977
Injuries	2008	50	20	15	153	612	214	152	77	12	33	82	1420
	2009	90	17	37	266	681	250	163	125	20	37	196	1882
	2010	140	21	30	244	828	330	210	139	26	39	167	2174

2.5-4 times higher than the remaining age groups.

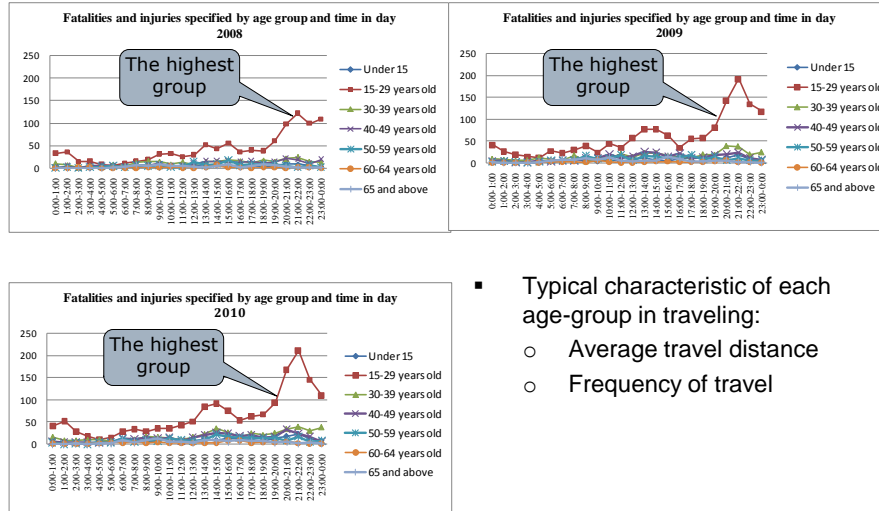
Time in day traffic accident happened



Influence of:

- Traffic flow rate?
- Driving after drinking in diner?
- Lighting?
- Racing?

Characteristic by time and age of involved road users



- Typical characteristic of each age-group in traveling:
 - Average travel distance
 - Frequency of travel

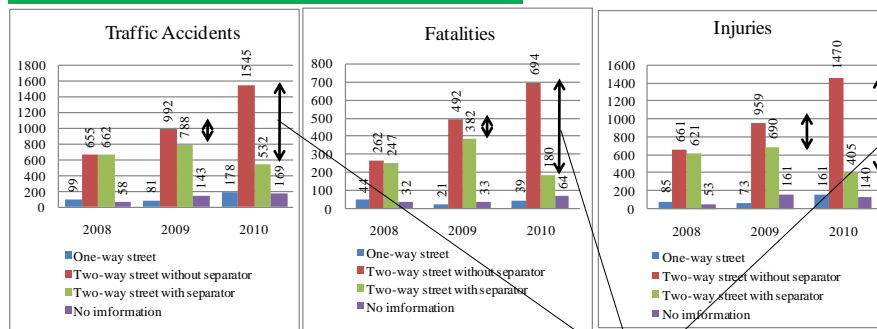
Age violation rate in motorized vehicle driving

- High proportion of age violation
- The increasing of age violation

Year	Driver under 18 years old (people)			Driver from 18 years old or above (people)		
	Fatalities	Injuries	Sub-total	Fatalities	Injuries	Sub-total
	(1)	(2)	(3)	(4)	(5)	(6)
2008	16	41	57 5.0%	306	769	1075 95.0%
2009	16	96	112 7.0%	538	961	1499 93.0%
2010	19	122	141 7.5%	596	1140	1736 92.5%

People under 18 years old are not permitted in operating motorized vehicle

Accident characteristic by type of traffic control/management



- Need to consider:
 - The traffic safety degree of different kinds of road?
 - The structure of road in term of management ?

The sharp change of accidents, fatalities, and injuries in 2010 in comparison with 2008, 2009 due to information

Findings

- Traffic accidents, fatalities, and injuries in Hanoi are rising, and this seems to be an emergency situation with 14.1-17.2 fatalities and 29.1-41.8 injuries per 100,000 inhabitants
- Motorcycle is the most traffic means related to traffic accident with 53-56% out of total of traffic accident, 68-70% out of total related people were died and injured; But the rate of 4-wheel vehicle related to accidents is ~8 times higher than the rate of motorcycle
- The age group of 15-29 years old is the most related to the accident, there were 63.5-80.7 fatalities and injuries per 100,000 inhabitants in every year (2008-2010), which is 10 times higher than age group under 15 years old, from 2-4 times higher than other group
- There is a large proportion of age violation in driving every year, and this proportion seems to increase year by year
- Off-peak hours (9:00-11:00; 13:00-16:00), especially after dinner time and night time (20:00-24:00) are the time when the most frequency time traffic accident happens. Young people are main actors contributing to traffic accidents in these time periods.
- In Hanoi traffic situation, two-way streets without separator are the most potential places where traffic accident happen

Recommendations

- Improving the traffic safety situation after dinner and night time through education and enforcement in order to improve awareness and behavior among road users; Focal point is drinking
- Propagating on careless driving behaviors at off-peak time, after dinner time and at night, such as speeding, driving in wrong lane, especially illegal racing of the youth
- Improving the light condition at evening and night time
- Educating and training road traffic law, traffic safety culture and driving skill among road users, focus on young drivers
- The immediate task is to improve traffic safety facilities for two-way streets without separator and warning road users to avoid the behaviors that may lead to traffic accident, such as speeding, driving in the carriage way of opposite direction, changing direction, pass through the opposite vehicle flow, ...
- Improving awareness of road users such as pedestrians, to save space on sidewalk for pedestrians. Setting up signal and signs for pedestrians crossing, parallelly guide them to follow the zebra...
- Improving traffic management/organization to make the most suitable for road users.

15

Further activities

- Research on degree of mistake among vehicle type drivers to clarify which is the most dangerous vehicle type,
- Comparison traffic safety among road types, types of traffic control/management,
- Traffic behavior of different ages related to traffic safety
- Influence of speed to traffic accident in Vietnam among vehicle types
- Develop appropriate countermeasures in education and enforcement
- Develop database of traffic accident (collect more information, accuracy, sufficiency,...)

16

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Thank you very much for your attention!