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**What is the incentive in  
insurance premiums?**

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## Objective

- Discuss the mechanisms through which insurance premiums can be designed to incentivize insured individuals
- Discuss how those mechanisms can be applied in occupational safety and health

## Outline

- Insurance basics
- Range of insurance systems
- Insurance and moral hazard behavior
- How are insurance premiums determined in the presence of moral hazard
- Key issues for occupational health and safety systems

## What is the basic idea behind insurance?

- Form of risk management – hedging against the risk of contingent loss
- A transfer of risk occurs, in exchange for a payment (i.e., insurance premium)
- Key characteristics of an insurable loss:
  - Sufficient number of exposure units (so that the insurer can spread the risk)
  - Accidental, but definite loss (outside of control of beneficiary, but will occur with a given conditional probability)
  - Large loss potential, but limited ability of catastrophic losses
  - Affordability of premium
  - Ability to estimate the size of the loss

## Typology of insurance

- Differentiate by the type of loss/exposure, e.g., auto, health, unemployment, workers' compensation
- Differentiate by the degree of need to prove fault (from pure no fault to pure tort)
  - Mixed evidence whether no fault insurance reduces incentives to behave safely based on auto insurance (see Cummins et al. 1999)

## Moral hazard a key issue when transferring risk

- Occurs when the behavior of the insured changes because the insured no longer bears the full costs of behavior.
  - Example: because of health insurance, added incentive to ask for pricier and more elaborate medical service—which would otherwise not be necessary.

Two types of behavior can change:

- Risky behavior itself, resulting in potentially more negative consequences that the insurer must pay for
  - Not locking the car, thereby increasing the risk of theft or an accident for the insurer.
  - After purchasing fire insurance, being less careful about preventing fires (say, by smoking in bed or neglecting to replace the batteries in fire alarms)
- Response to the negative consequences of risk, once they have occurred and once insurance is provided to cover their costs.
  - For example, without full auto insurance coverage, not fixing a minor scratch due to its costs. If fully insured, asking an insurance provider to pay for the cost of repair that would not have occurred otherwise.

## How to incentivize to reduce moral hazard behavior?

- Basic idea is to provide rewards for safe behavior
- This can be done by building in reward mechanisms into insurance premium
- Practice known as experience rating

*A quantitative measure used to determine how much a given insurance policy should cost, calculated using historical data to determine the risk of future claims*

## Rewards in auto insurance premium that reduce moral hazard

- Community rating incentive: place of residence impacts premium paid  
*When choosing a place to live, choose safer areas, with less traffic*
- Car type incentive: safety features of the vehicle and likelihood of theft impact premium paid  
*Purchase cars that have good safety records and are not stolen frequently*
- Driving record incentive: history of traffic offenses impacts premium paid  
*Obey traffic laws and drive safely to reduce likelihood of accident*

## Can/Do these mechanisms work in OSH?

- Community rating incentive:

*In OSH: safety of industries is rated and companies in safer industries pay lower premium*

- Car type incentive:

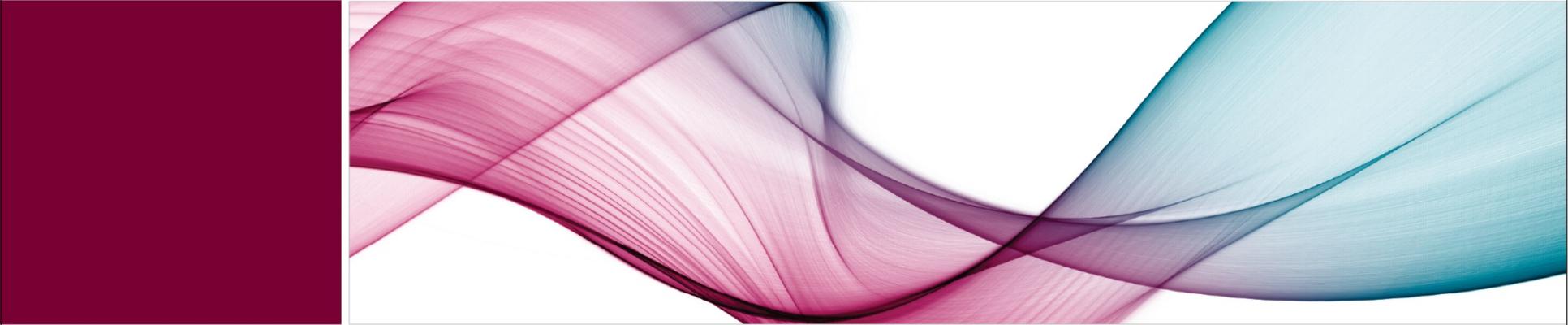
*In OSH: not directly applicable, works only if loss prevention activities are undertaken and these translate to employer's future safety record  
But discounts could be provided*

- Driving record incentive:

*In OSH: pure experience rating, present in North American systems, incentivizes employers to undertake loss prevention activities in order to reduce losses and premium in the future*

# Key issues for incentives in insurance premium in OSH

- Company size is important
  - Small and medium enterprises do not see many accidents to occur so experience rating is not a good mechanism for those companies
  - Community rating probably better mechanism for SMEs but this does not create an incentive for existing companies, rather an exit/entry incentive
- Who is responsible for safety
  - Employer bears the cost of insurance, so insurance premium provides an incentive for employer, but not for employees
  - How to incentivize safety behavior among employees?



**Questions/comments?**