

ECNS 316

Benefit/Cost Analysis of the  
Enforcement Decision

## Building upon the rationale for criminalizing behavior

- Q. What was missing from the reckless driving analysis in the last lecture? What unrealistic assumption were we making?
- Ans. In the previous analysis, we were assuming enforcement costs were zero.

[insert benefit/cost analysis of the reckless driving problem with consideration of enforcement costs]

## Optimal Enforcement and Limits on Technology and Sanctions

- Enforcement costs function,  $E(R)$ , plays a major role in determining whether to criminalize an activity as well as the optimal level of enforcement and violation.
  - As enforcement becomes more expensive, criminalizing becomes less attractive, and the net benefit obtained, even under optimal enforcement, tends to decrease.
- Effect of enforcement depends on perception or reaction to expected sanction
  - Offender must estimate probability of arrest and conviction as a cost of crime and, hence, as a deterrent.
  - Deterrence is separated into two components:
    - 1.) probability of conviction
    - 2.) expected sanction if convicted

# Optimal Enforcement and Limits on Technology and Sanctions

- Formally, deterrence is based on expected sanction,  $p_c s$   
where  $p_c$  is the probability of conviction  
and  $s$  is the sanction expected, conditional on conviction
- Deterrent effect of enforcement can be increased if either or both  $p_c$  and  $s$  can be increased without raising the cost of enforcement.
- For the reckless driving example, how may we raise the probability of conviction?
  - Technological advancements
    - New vehicle systems require driver ID before vehicle is started
    - Cut off engine of a vehicle being driven recklessly
  - Changes in policing methods

## Optimal Enforcement and Limits on Technology and Sanctions

- How might we raise expected sanctions?
  - Fines could be raised
  - Driving privileges could be revoked
- Based on our cost-benefit analysis of reckless driving (and a host of other crimes), it is easy to conclude that taking steps to substantially increase  $p_c$  or  $s$  would enhance social welfare.
- What are some difficulties with this conclusion?
  - Many steps to raise  $p_c$  involve limiting privacy of offenders and non-offenders (e.g., traffic cameras, gov't access of private vehicle information)
  - Fines are collected by government...some might fear that fines become an attractive source of revenue
    - Makowsky and Stratmann (2011) found that municipal budgets in MA were inversely related to traffic citations
  - Harsh sanctions may make drivers extremely cautious to the extent that driving habits change, creating an externality of impeded traffic flow.
- In sum, raising  $p_c$  or  $s$  does not come without costs or possible unintended consequences for society