

ECNS 316

# Risk Preferences and the Supply of Offenses

## To-do list

- Optional reading for this lecture:

Mungan, Murat and Jonathan Klick. 2014. “Forfeiture of Illegal Gains, Attempts, and Implied Risk Preferences.” *Journal of Legal Studies*, 43: 137-153.

# Risk Preferences and Criminal Activities

- To this point, we have introduced the notion of uncertainty in the expected sanction a criminal faces
- But, we have said nothing about the possible risk preferences of the criminal
- Here, we will explore the role of risk preferences in determining whether or not to commit crime
- Large literature on risk preferences in general
  - Vary with age and other demographic characteristics
  - Context in which risk tradeoffs are presented
  - Experiment evidence from tests of prisoners illustrates incarcerated individuals have lower aversion to risk than a control group of non-criminals
    - Q. Is this causal?

# Modeling of Risk Preferences and Criminal Activities

- Use basic model of utility maximization, where individual maximizes

$$u = U(x_1, x_2, \dots, x_n)$$

subject to a budget constraint

$$I = p_1x_1 + p_2x_2 + \dots + p_nx_n.$$

- This implies that each individual has an indirect utility function of the form

$$u = V(I; p_1, p_2, \dots, p_n)$$

where  $I$  is income and  $p_i$  is the price of good/service  $x_i$ .

- We assume that the indirect utility function is non-decreasing in income and can be written with prices omitted,  $u = V(I)$ .

# Modeling of Risk Preferences and Criminal Activities

- What are the three general possibilities for the shape of  $V(I)$ ?
  - 1.) Risk aversion:  $V'(I) > 0$ ,  $V''(I) < 0$ 
    - i.e., concave to the origin
  - 2.) Risk seeking:  $V'(I) > 0$ ,  $V''(I) > 0$ 
    - i.e., convex to the origin
  - 3.) Risk neutral:  $V'(I) > 0$ ,  $V''(I) = 0$
- Let's consider risk-averse individuals first...

[insert treatment of decision to offend for individuals who are risk averse]