Experiments on Law Enforcement: Deterring Organized Crime

Giancarlo Spagnolo

SSE-SITE, Tor Vergata & Cepr

IBE Mini-Course

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The Theory of Optimal Law Enforcement

- It all started with rational philosophers during the Enlightenment, trying to derive rational theoretical foundations to the organization of Justice (see in particular Cesare Beccaria 1764 ; but also Montesquieu 1748, and Bentham 1789)
- Then (in economcs) Becker (1968) and Stigler (1970)
- Then hundreds of papers refining the theory (See the beautiful survey by Polinsky and Shavell, JEL 2000)
- Then came Behavioral Law and Economics, starting in the late 80s (Cass Sunstein is th contributor…)
- Huge empirical literature in criminology, from early criminology to freakonomics and beyond

Policy Debates & Empirical/ Experimental Puzzles

- Lively Current Debate on Behavioral Law and Economics, Paternalism and Debiasing in the US. See e.g. Wright and Ginsburg (2012) vs Jolls (2010).

- Fines, deterrence and crowding-out. Rustichini & Gneezy (JLS 2000): small fines may be counterproductive for deterrence, give high fines or not at all. See Gneezy et al. (JEP 2011).

- There is empirical evidence of deterrence effects of prisons, although elasticity highly debated

- Much less evidence that fines have sizable effects

Lab Experiments may Help...

- Empirically, examining the degree of effectiveness of specific enforcement mechanisms can be problematic, even for individual crimes:
  - simultaneous changes in multiple enforcement tools
  - knowledge of change in enforcement mechanisms uncertain
  - many lighter not reported (victims do not realize)
- Particularly true for collusion, corruption, etc., hence challenging to test effects of details of policies
- Natural experiments in limited supply

…if Theory is Taken Seriously

- However, the theory is not often taken seriously by experimentalists

- Most recent lab experiment on deterrence: Horish and Strassmeir (2012), "An experimental test of the deterrence hypothesis," in JLEO

- Why do you think I say this?
- Do you see any problem in that paper?

Problems

- They want to test “the theory of deterrence” experimentally

- 1. **Becker’s (1968)** optimal expected fine equals the harm the criminal generates (so that it only ‘inefficient’ crime is deterred), expected fine grows with severity of crime

- In the experiment there is a constant expected fine for different amounts stolen
- Moreover, net of expected fine subjects steal less so that the behavioral interpretation of he results is also questionable…

Marginal Deterrence Predicts the Outcome

- 2. Stigler (1970, and before him Beccaria, Montesquieu, and Bentham) discusses another reason why the punishment must be proportional to crime, assuming that worse crimes are more profitable:

- If same punishment whatever the crime, as in the experiment, the punishment induce non-deterred criminals to undertake the most profitable/worse crimes.

- This is what seems to be happening in the experiment, much like the old theory of deterrence predicts.

- And after Becker (1968) and Stigler's (1970) path-breaking but somewhat naïve first papers, many hundreds of additional papers refined and developed the theory

Better Recent Experiments on Fines Deterrence of Individual Crime

- Charness and DeAngelo (2011), "Deterrence, Expected Cost, Uncertainty and Experimental Evidence," (speeding, expected fines, voting on law enforcement regime)
- Or Rizzolli and Stanca (2009), on Errors and Deterrence

- Methodological conclusions: don't run experiments if you do not know well the theory…

ORGANIZED ECONOMIC CRIME

Our Focus: Eliciting Information to Deterring Organized Crime

- Martin already presented Apesteguja, Dufwenberg and Selten (2007), we go on here on the same theme

- I will present Bigoni (2012a, 2012b) and maybe Serra (2012), and discuss some issues open

- I'll give you references to the (few) relevant economic theories

Why Organized, *Economic* Crime?

- Because it is increasingly pervasive: corruption, collusion, fraud, illegal trade…
- …it is less understood/analyzed, very few theories, very little *policy relevant* evidence....
- We exclude violent crime – gangs and mafia – in which case economic incentives are likely to matter less (independent of psychology).

This Definition Includes:

- Large financial fraud (Enron, Madoff, Libor…),
- Corruption
- Collusion (cartels and similar)
- Smuggling/trading of “bads”
- Large Tax evasion schemes

What's Different from Standard Crime?

- Standard individual crime has been traditionally analyzed as an individual's decision (or sequence of decisions)

- the theory of deterrence then deals with how to affect that decision, akin to decision theory

- With organized crime, multiple agents are involved in transactions/organizations and the strategic interaction between them is crucial, it is *game theory*.

Cooperation Needed

- Agency problems, as in any organization or transaction, need to be governed
- Cooperation is needed (between briber and bribee, fellow price-fixers, CEO and financial officers…).
  - There will then be "gains from defection", i.e. temptations to betray: "running away with the cash", not delivering after cashing a bribe, Stigler's secret price cuts…
  - to govern opportunism court-enforced contracts cannot be used

Cooperation Must be Reached and Sustained

- Criminal organizations/transactions must be self-enforcing, which requires repeated play/ reputation/reciprocity
  - An additional constraint, the incentive constraint (also called 'self-enforcement' or 'no deviation' constraint) to satisfy
  - And with multiple equilibria, coordination/trust necessary

An Additional Crucial Difference

  - There is always (at least) a witness, your partner in crime
  - So the question is not “are there witnesses?”, as for individual crimes…
  - but how to induce existing witnesses/partners in crime to betray and testify
- Different deterrence channels
- Opposite of fostering cooperation/public good contributions

- Leniency, Whistleblowers, PD, Bounties, Divide… history

Good Reasons to use Experiments

- Many of these Organized Crimes are not observable
- How do you infer deterrence effects of policies then?
- Miller AER 2009
- Harrington and Chen JEEA 2010