

# REASSESSING OUR FEAR OF CRIME: DETERMINANTS AND IMPACT

## SOME COMMENTS

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# The Economic Approach to Law

- The economic approach to law assumes that rational individuals view legal sanctions (monetary damages, prison) as implicit prices for certain kinds of behavior, and these prices can be set to guide these behaviors in a socially desirable direction.

# Criminological Approaches to Crime

- Early criminologists emphasized the role of biological factors in criminality. It described persons who engaged in criminal activity as atavistic beings, or reversions to primitive ages. It claimed that physical characteristics, such as heavy jaws and sloping foreheads, distinguish criminals from non-criminals.
- Society places a high value on material success but fails to provide some members of society the instruments to attain it. The individual experiencing a gap between aspirations and achievement suffer a “strain” and respond by engaging in crime.

# Criminological Approaches to Crime

- A third criminological approach considers the social processes through which criminality is learned or culturally transmitted. Differential association or excessive social contact with advocates of criminal activity predisposes an individual toward crime. Criminality is thus not the behavior of the physically abnormal, but an activity learned from social interactions with others. This approach predicts that an individual's propensity to commit crimes rises when his peers and family members are also engaged in criminal activities.

# Sociological Approaches to Crime

- Deprivation theory regards economic inequality as a source of crime. Relative deprivation can cause frustration and anger that unloads itself in violent crime.

# Economic Approach to Crime

- The economic approach to crime focuses on the effect of incentives on criminal behavior, the way decisions interact in a market setting, and the use of a benefit-cost framework to assess alternative strategies to reduce crime. An individual will commit crime if the expected benefits from participation in legal activities are less than the expected benefits from participation in illegal activities.
- The decision to engage in crime is influenced by the following factors (incentives): legitimate labor market experiences, sanctions including incarceration, and the risk of apprehension.

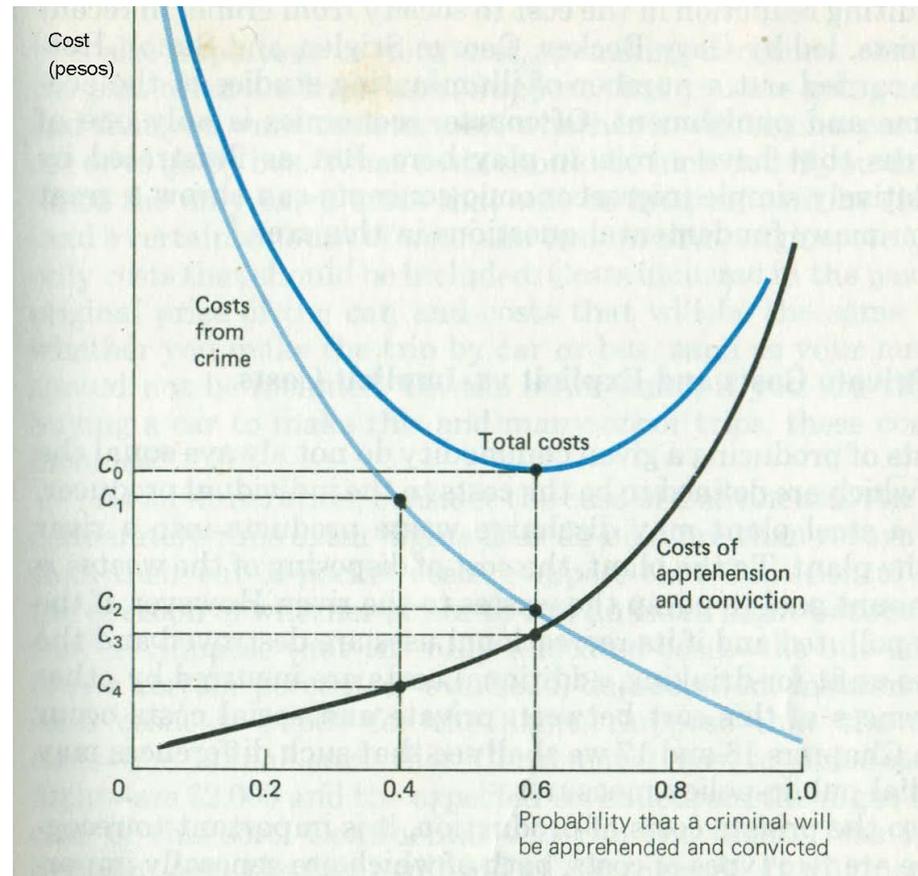
# Economic Approach to Crime

- The economic approach supports the “deterrence” of crime, that is, an increase in the probability of apprehension and the severity of punishment reduces the incentive to participate in criminal activity.
- Likewise, the economic approach supports the “incapacitation effect,” that is, the reduction in criminal activity achieved by removing the offender from the general population.

# Alternative Approaches to Crime

- Alternative approaches hold that variations in the certainty and severity of punishment do not significantly deter criminals. Rather crime is the result of a complex set of socioeconomic factors or possibly biological factors.
- The appropriate way to minimize the social costs of crime is to attack these causes of crime. For example, to devote more resources to job creation, income maintenance, family counseling, mental health, drug and alcohol counseling, and other programs designed to alleviate the social, economic, and biological causes of crime.

# Crime-Economy Interface



The Optimal Level of Law Enforcement

# Morality Versus Economics

- Morality is what people ought to do.
- Economics is what people actually do.

# Solving Puzzles: The Methods of Economics

- Two ways to study almost any subject:
  - (1) think logically about it, and
  - (2) gather evidence about it.

Economics use both methods.

- When economists think logically about an economic problem, they produce economic models. However logical thinking by itself is not sufficient to reach reliable conclusions about economics; logic needs the support of evidence.

# Models and Evidence

- An economic model is a description of logical thinking about an economic issue. It may state its conclusions in words, graphs, or mathematics.
- Economic evidence is any set of facts that helps convince economists that some positive statement about the economy is true or false.
- Statistical analysis is the use of mathematical probability theory to draw inferences in situations of uncertainty.

# Research Procedure

1. Pick a topic
  - What is it that you want to know?
2. Define the objectives of the study
  - What relationship or hypothesis are you trying to test?
3. Review the Literature
  - Learn what others have learned about this topic.
4. Have an Empirical Strategy
  - How will you do your analyses?
5. Gather Data
  - Describe the data you used and its limitations.
6. Analyze Your Data
  - What evidence is built or tested to answer the research question?
7. Write a Report
  - Interpret your results with a focus on the question you initially posed.
  - State your conclusions or recommendations.

# Issues to be Addressed When Data are Analyzed

- **Specification**
  - What are the range of sensible general forms for the relationship under evaluation?
  - What are the range of the relevant variables, and the way they could interact?
- **Observation**
  - How well do the measures approximate the variables they are intended to represent?
- **Estimation**
  - What do the data in the sample suggest as to the range of plausible relationships among variables?
- **Inference**
  - Is it reasonable to interpret the data as having been created by an implicit experiment?

# Relevant Literature: Economics of Crime

## (For Beginners in this Research Area)

1. Alfred Blumstein and Joel Wallman (eds.) The Crime Drop in America (New York: Cambridge University Press, 2006).
2. Lawrence Sherman (ed.) Preventing Crime: What Works, What Doesn't, What's Promising. A report submitted to the Congress of the United States.
3. Epictetus Patalinghug, "Identifying the Link Between Unemployment and Crime in the Philippines," International Journal of Comparative and Applied Criminal Justice, Vol. 33, Spring 2009, pp. 83-95.

# Relevant Literature: Economics of Crime

## (For Beginners in this Research Area)

4. Epictetus Patalinghug, “Crime Rates and Labor Market Opportunities in the Philippines: 1970-2008,” Economics Letters, Vol. 113, 2011, pp. 160-164.
5. Steven Levitt and John Donahue, “The Impact of Legalized Abortion on Crime,” Quarterly Journal of Economics, Vol. 116, 2001, pp. 379-420.
6. Mark Duggan, “More Guns, More Crime,” Journal of Political Economy, Vol. 109, 2001, pp. 1086-1114.

# Relevant Literature: Economics of Crime

## (For Beginners in this Research Area)

7. Steven Levitt, “Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime,” American Economic Review, Vol. 87, 1997, pp. 62-81.
8. Thomas Marvell and Carlisle Moody, “Specification Problems, Police Levels, and Crime Rates,” Criminology, Vol. 34, 1996, pp. 609-646.
9. Steven Levitt, “The Response of Crime Reporting Behavior to Changes in the Size of the Police Force: Implications for Studies of Police Effectiveness Using Reported Crime Data,” Journal of Quantitative Criminology, Vol. 14, February 1998, pp. 62-81.

# Relevant Literature: Economics of Crime

## (For Beginners in this Research Area)

10. Steven Levitt, “Why Do Increased Arrest Rates Appear to Reduce Crime: Deterrence, Incapacitation, or Measurement Error?” Economic Inquiry, Vol. 36, 1998, pp. 353-372.
11. Stephen Layson, “Homicide and Deterrence: A Reexamination of the United States Time-Series Data,” Southern Economic Journal, Vol. 52, 1985, pp. 68-89.
12. Ilyana Kuziemko and Steven Levitt, “An Empirical Analysis of Imprisoning Drug Offenders,” Journal of Public Economics, Vol. 88, 2004, pp. 2043-2066.

# Relevant Literature: Economics of Crime

## (For Beginners in this Research Area)

13. Isaac Ehrlich, "The Deterrent Effect of Capital Punishment: A Question of Life and Death," American Economic Review, Vol. 65, 1975, pp. 397-417.
14. Sudhit Venkatesh and Steven Levitt, "The Financial Activities of an Urban Street Gang," Quarterly Journal of Economics, Vol. 115, August 2000, pp. 755-789.
15. Roland Fryer, Jr., Paul Heaton, Steven Levitt, and Kevin Murphy, "The Impact of Crack Cocaine," University of Chicago, Working Paper, 2005.
16. Michael Greenwood and Walter Wadycki, "Crime Rates and Public Expenditures for Police Protection: Their Interaction," Review of Social Economy, Vol. 31, pp. 138-151.

# Vigilante Killings

- Many victims appear to be innocent
- None have been proved guilty in the court of law
- But the crackdown has struck a chord with the public
- Pres. Duterte's popularity has been soaring
- A weak state and a population desperate for security push everyone to bad decisions that culminate in violence

Amanda Taub, "When Vigilantes Take Over" (*New York Times*, September 26, 2016).

# The Campaign Against Illegal Drugs

- To people desperate for security, police violence seems preferable to waiting for a corrupt system to act.
- Political leaders have the political incentive to exploit this sentiment.
- This dynamic can drive leaders to encourage vigilante violence, even if the bloodshed only worsens insecurity and its targets are largely innocent.
- The point is demonstrated by a willingness to go any length to get results.

Taub (2016)

# The Campaign Against Illegal Drugs

- Local communities might believe things are improving. But the extrajudicial killings instead end up provoking a self-reinforcing cycle of ever-worsening insecurity and retaliation.
- Once the government makes it clear that no one will face legal repercussions for extrajudicial killings, then anybody with a gun and a grudge has free license to go and victimize people without worrying about the consequences.

# The Tagum, Davao Experience

- City government encouraged off-duty police officers and collaborators to murder petty criminals in the name of being tough on crime.
- Once its ability to operate with impunity was established, the death squad began engaging in contract killings for money.
- People who opposed the death squad were deemed enemies and often attacked.
- The city became more dangerous and lawless, with devastating results for ordinary citizens.

# Crime Statistics: 2009-2014

Year	Total Crime	Index Crime	Violent Crime	Property Crime	Police	Population
2009	502,665	301,703	143,420	158,283	124,752	92,226,600
2010	400,514	204,979	86,036	118,943	134,328	92,337,852
2011	246,958	156,882	59,909	96,973	143,104	94,823,800
2012	217,812	129,161	51,069	78,092	147,190	96,510,900
2013	1,033,833	457,944	245,821	212,123	144,023	98,196,500
2014	714,632	259,990	88,755	171,235	149,333	99,880,300

Source: Philippine Statistical Yearbook, various years.

# Philippine Crime Statistics

A. TOTAL CRIME = INDEX + NON-INDEX CRIMES

B. Index Crimes

1. Violent Crime

- Murder
- Homicide
- Physical Injury
- Rape

2. Property Crime

- Robbery
- Theft
- Carnapping
- Cattle Rustling

# Philippine Crime Statistics

## C. Non-Index Crimes

- Drug-related activities
- Arson
- Fraud
- Driving under the influence
- Vandalism

There are approximately 240 police officers per 100,000 population (representing approximately 80% of total police employees).

Figure 1

TOTAL CRIME RATES, INDEX CRIME RATES AND NON-INDEX

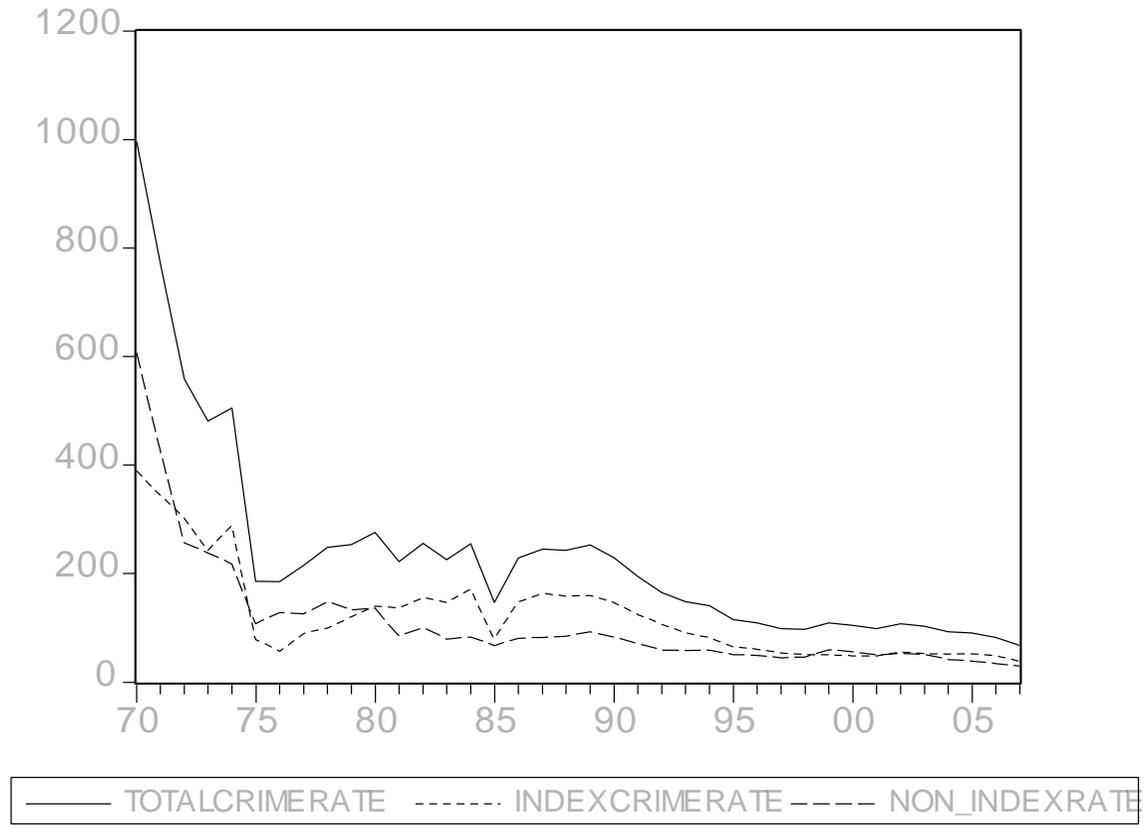
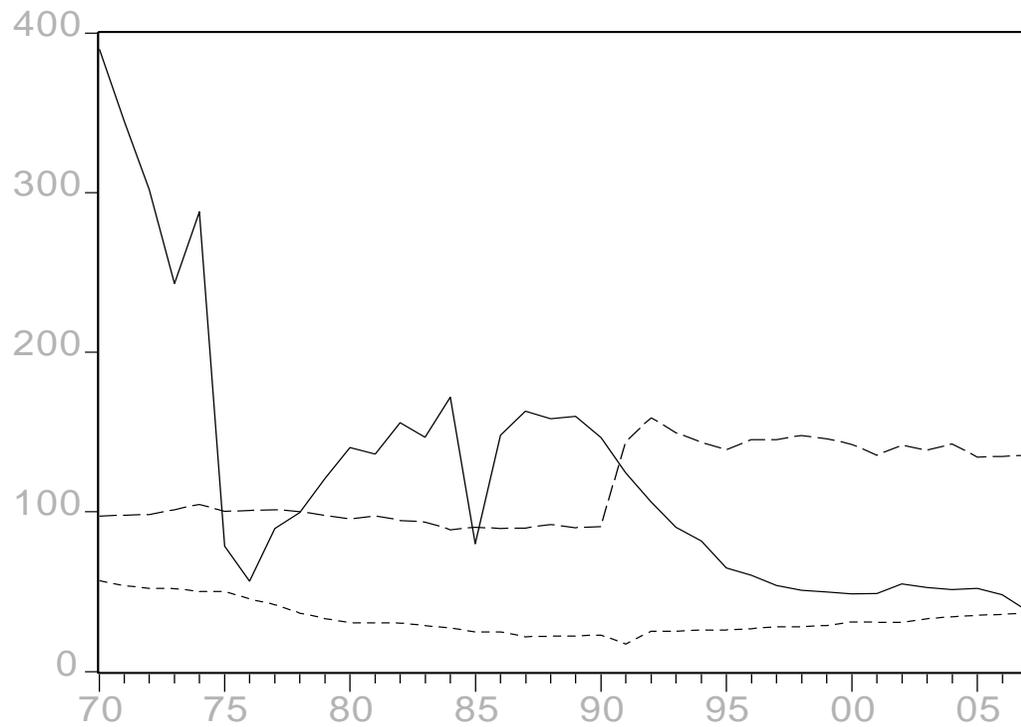


Figure 2

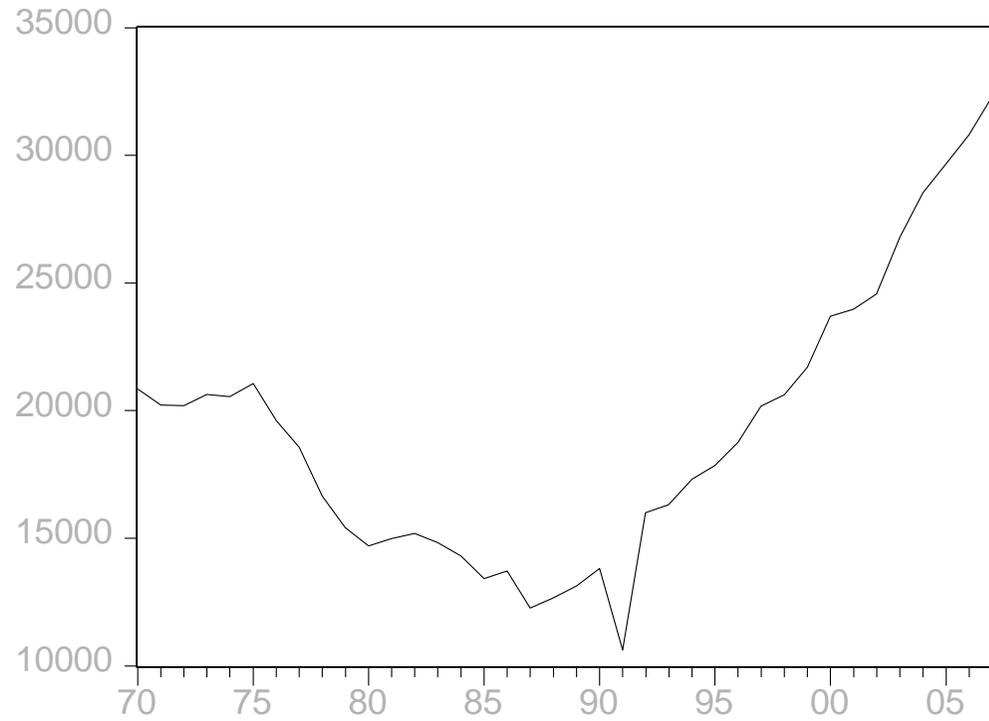
INDEX CRIME RATES, PRISONER RATES AND POLICE RATES



— INDEX CRIME RATE ..... PRISONER RATE ---- POLICE RATE

Figure 3

PRISON POPULATION: 1970-2007



# Crime Prevention Efficiency

- Substitution Effect (Replacement Effect)
- Displacement Effect
- Tournament Effect (from “Freakonomics”)

# Crime and Unemployment

- Economists have sought to model the nature of the relationship between crime and employment. These models predict that crime and work are substitutes. The implication is that increasing the availability of jobs and improving wages lower the level of criminal activity.
- Much of the early work on the relation between crime and the labor market focused on the effect of unemployment on the level of crime. In general, these studies found that higher rates of unemployment are associated with high levels of crime, but the relation is not particularly strong.

# Crime and Police

- Recently, the New York City Police Department implemented its controversial “stop, question, and frisk” strategy with mixed results. It was effective in reducing robbery, murder, burglary, and auto theft, but there was no citiwide impact on assault, rape, or grand larceny.
- On the other hand, the South African government saturated the country with more than 40,000 extra police officers during the June-July 2010 World Cup soccer tournament. Special courts solely dedicated to World Cup matters issued swift and harsh sentences. The crime rate fell by 60 to 70% around Johannesburg, but the high cost of maintaining this level of police and court operations cannot be sustained in the long term.

# Benefit-Cost Analysis: U.S. Crime Data

- The cost of crime to society is estimated at \$400 billion.
- The cost of adding 60,000 more police (14% increase) is estimated at \$8.4 billion.
- Police elasticity with respect to crime is estimated at  $-.4$ .

Thus, a 14% increase in police, reduces crime by 6% =  $(-.4)(14)$ , and the benefit to society is \$24 billion =  $(.06)(400)$  which is approximately 3 times the cost of hiring more police).

# Short-Run Police Elasticities

- With respect to violent crime: - 0.34 to - 0.38
- With respect to property crime: - 0.56 to - 0.61

# Long-Run Police Elasticities

- The long-term elasticity of police on crime is  $-0.41$ . This implies that a 10% increase in police will reduce crime by about 4.1%.
- The long-term elasticity of crime on police is  $0.13$ . This implies that for each 10% increase in crime, the government adds only 1.3% more police on the average.
- The number of crimes reduced for each additional policeman is equal to  $-0.9$  or approximately one crime reduced for each additional policeman.

# Crime and Police

- Results of the study reveal that police has a significant negative effect on all categories of crime. A 10% increase in police decreases violent crime by 16.3%, property crime by 44.2%, and index crime by 21.3%.
- Thus, police deterrence is more effective in property than in violent crime. On the basis of this result, there appears some statistical evidence to support the negative effect of police on crime in the Philippines.

# Crime and Police

- The new police recruit costs at least Php140,504.00 annually (excluding cash allowances and non-cash benefits). On a cost-effectiveness basis, the benefits of crimes reduced per police officer must be equivalent to at least Php140,504.00 annually to make hiring police more cost-effective.
- However, specific policies need to be formulated to effectively deter the occurrence of crimes in the Philippines.



**THANK YOU**