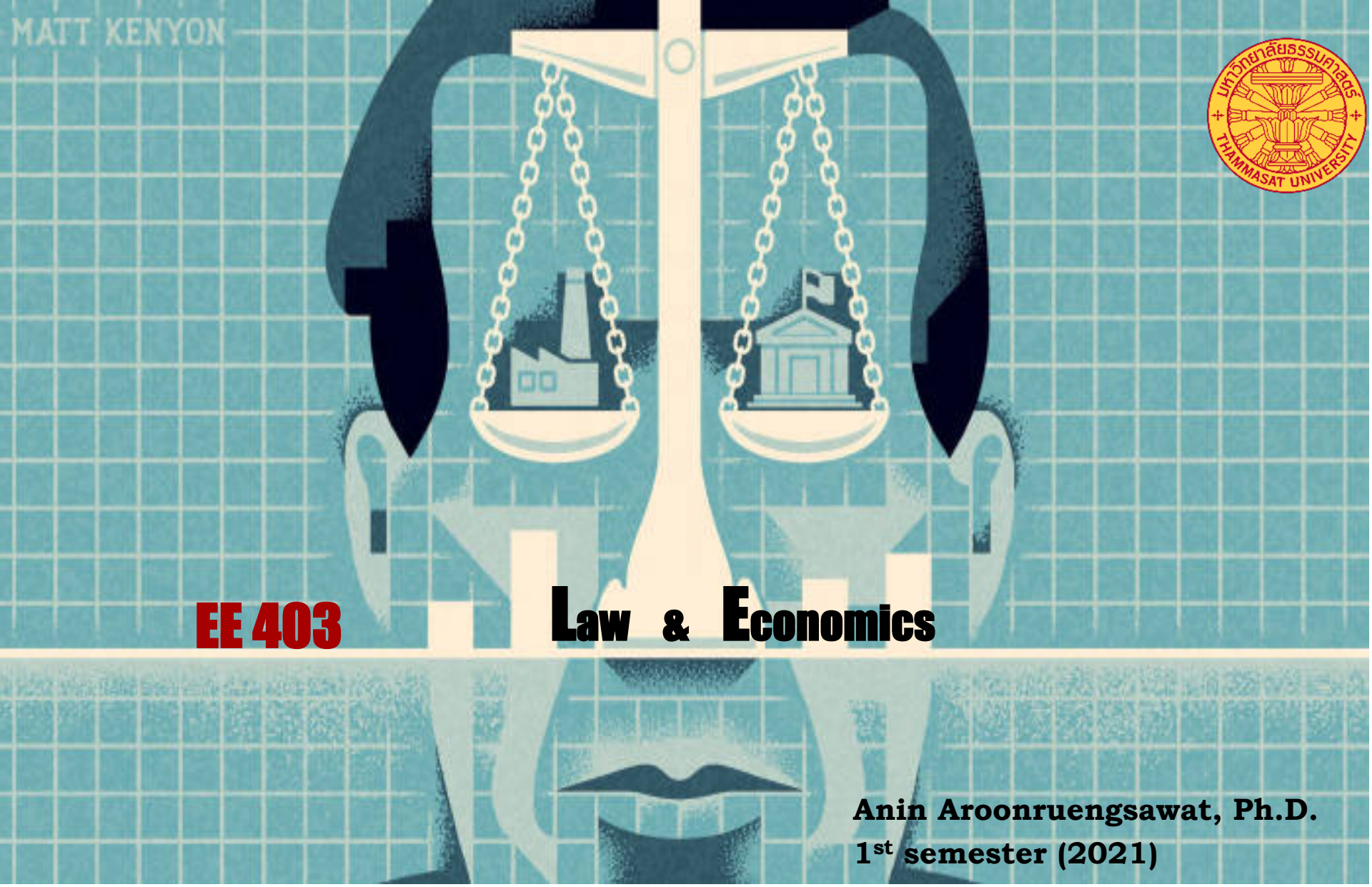


# EE 403 Law & Economics

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## Criminal Law I

# Criminal law (อาญา) differs from civil law (แพ่ง)

- Criminal **intended** to do wrong
- Case brought by **government**, not individual plaintiff
- Harm done tends to be **public** as well as private
- **Standard of proof** is higher at trial
- If found guilty, defendant will be **punished**

# What is the goal of criminal law?

- To achieve efficiency, **minimize total social cost**

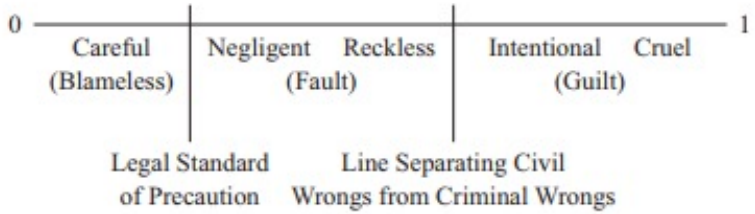
- Social costs consist of…
  - Social **cost of crimes** that are committed
  - Cost of **detecting (catching) criminals**
  - And cost of **punishing** offenders

**error costs**

**administrative costs**

# Intent

- Unlike a tort, a crime generally requires **intent**
  - **Mens rea** – a "guilty mind"
  - (เจตนาภายนอก และ เจตนาภายใน)




- (Literal intent occasionally not required)
  - You've been hired as a lifeguard or a nurse
  - You show up to work drunk, and as a result someone dies

- (Sometimes intent is enough even without harm)
  - Attempted murder

# Public Harm and Public Prosecution

- property, contract, and torts—most of the harm has been private. In criminal law much of the harm is public.
- In a criminal prosecution the plaintiff is society as represented by the public prosecutor or attorney general
- the idea that crimes harm the public implies the possibility of "victimless" crimes, such as gambling, prostitution, and the sale of illegal drugs. These transactions have victims—namely society.
- failed attempts at crime, a so-called *inchoate* crime, cause fear and other harm to the public. Criminal law holds that a person who tries to injure another and fails should be punished.

# Standard of Proof

- In a criminal case the prosecutor must satisfy a higher standard of proof than the plaintiff in a civil case.
- must prove the case *beyond a reasonable doubt.*
- convicting an innocent person seems worse than failing to convict a guilty person.
- Type I error : a false positive—that is, convicting an innocent person.

# Distinction between civil remedies and punishment

- In civil law: damages serve two purposes
  - Compensate the victim
  - Cause injurer to internalize cost of harm done
  - the goal wasn't to eliminate accidents, or eliminate breaches of contract – it was to get the efficient amount of them

# Distinction between civil remedies and punishment

- Criminal law: intention is to **deter** crimes – that is, **prevent them entirely not just to prevent the inefficient ones**
- we would like to eliminate murder, to the extent that it's not too costly and so punishment need not be limited to the magnitude of the harm done
- Civil remedies generally transfer resources from one party to another, without destroying anything
- Criminal punishments – imprisonment, execution – destroy resources
- So civil penalties are designed to make injurers **internalize the costs** of their harms, so that these harms only occur when they are efficient;
- but criminal punishments are designed to **deter** crimes, to discourage their commission in all situations.

# Are crimes ever efficient?

- Most crimes are clearly inefficient
  - To steal my laptop, you might break my car window
  - and, my laptop is worth more to me than to other people
  - Stolen cars are worth much less than legally-owned one.
- But Friedman offers examples of efficient crimes
  - Starving hiker lost in the woods finds cabin with nobody home, breaks in and steals food
  - Efficient murder
    - Rich guy decides he'd derive immense pleasure from hunting a human
    - Offers 10 people $1,000,000 each to draw straws, he gets to hunt and kill the loser
    - If they all agree, is this transaction efficient?

# Necessity of Criminal Law

- Tort law achieves efficient incentives by making injurers—and, in some cases, victims—internalize the cost of accidents.
- Most crimes are also torts.
- However, perfect compensation is impossible for some injuries, such as when someone loses a leg or a child.
- courts awarding damages deter unreasonable risks, but they do not compensate for actual harm. It would be better if these incompensable harms did not occur. Criminal punishment aims to deter intentional harms, not to compensate for them.

# Theory of criminal law

- A theory of criminal law must answer…
  - **Which acts** should be punished as crimes?
  - **How** should they be punished?
- Cooter and Ulen:
  - Acts should be **punished** when aim is **deterrence**
  - Acts should be **priced** when aim is **internalization**
  - Aim should be **deterrence** when…
    - **perfect compensation is impossible**
    - people want law to protect **rights instead of interests**

    (someone is free to cut off my arm, provided they pay me for it, then my **interest** in that arm is protected; but my **right** to have that arm is not)

# Economic model of crime and punishment

- Key assumption: **rational criminals**
  - Potential criminals weigh **private cost** – chance of getting caught, times severity of punishment – against benefit
- we develop a predictive theory of criminal behavior, first by explaining how a rational, amoral person might decide whether to commit a crime

# Rational Crime

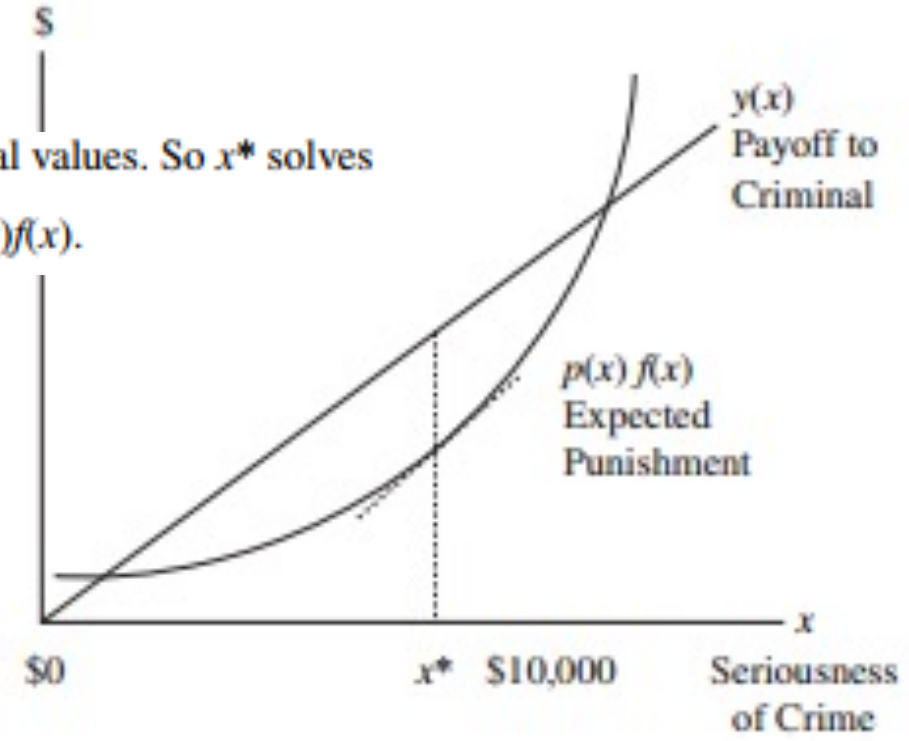
- Let x denote the seriousness of a crime where x =0 indicates no crime. Let y denote the criminal's payoff where y=y(x) and y(x) increases in x.
- Let f denote the severity of the punishment where f=f(x) and f(x) increases in x.
- To punish, the fine must exceed the criminal's payoff : f(x)>y(x)

- If every crime were punished with certainty, committing crime would not pay. Hence, the criminal would choose *x* to equal zero.
- In reality, punishment is probabilistic, not certain.
- The *expected* punishment equals the probability *p(x)* of punishment times its severity: *p(x)f(x)*.

# Rational Crime

This conclusion can be expressed in marginal values. So $x^*$ solves

$$\max y(x) - p(x)f(x).$$




- Efforts to detect, prosecute, and convict criminals normally increase with the crime's seriousness. Thus, the probability $p$ of a sanction is a function of the crime's seriousness, $p(x)$, and $p(x)$ increases in $x$

# Economic model of crime and punishment

- To deter crime, we need to do two things:
  - **Catch** offenders and **punish** them
- Catching a higher fraction of offenders is more costly
  - Requires more police, more detectives, etc.
- More severe punishment also tends to be more expensive
  - Most common punishments are fines and imprisonment
  - Fines cost nothing – state even makes money
  - But fines don't always work, because **not everyone can pay**
  - Besides fines, **most punishments are inefficient** – make offender worse off, and are costly to state

# Marginal cost of deterrence

- With rational criminals, raising the expected punishment should lead to fewer crimes being committed

- But as we increase expected punishment…
  - we get fewer crimes committed,
  - and maybe **fewer offenders we need to detect and punish**

- So the **cost of punishing** those criminals we do catch could go up or down

- Which means the **marginal cost of deterring another crime could be positive or negative**!

# "The marginal cost of deterring another crime could be positive or negative"

- Suppose a particular crime harms the rest of society $10,000 more than it benefits the criminal.
- Every time an offender is caught, he or she is tried, convicted, and imprisoned; the total (social) cost of trials and punishment is $100,000 per criminal caught.

Recall that the aim of criminal law is to minimize the sum of three things:

1. .
2. .
3.

A city is considering hiring additional policemen dedicated to detecting this particular crime. This change would increase the fraction of offenders who get caught from 15% to 20%.

- ➔ less criminals
- ➔ higher chance of being caught.

# "The marginal cost of deterring another crime could be positive or negative"

- Social cost of each crime: $10,000
- Cost of trial and punishment: $100,000
- Increase fraction of crimes detected from 15% to 20%
- (a) Suppose this increase in detection would result in a decrease in the number of crimes committed from 1,000 a year to 700 a year.

  i. Calculate the effect that hiring the new policemen would have on the social cost of crimes committed.

  ii. Calculate the effect it would have on the cost of trying and punishing offenders.

  iii. From an efficiency point of view, what is the most that the city should be willing to pay for the new policemen?

# "The marginal cost of deterring another crime could be positive or negative"

- Social cost of each crime: $10,000
- Cost of trial and punishment: $100,000
- Increase fraction of crimes detected from 15% to 20%
- (b) Now suppose instead that the increase in detection would decrease the number of crimes committed from 1,000 a year to 900 a year.

  i. Calculate the effect that hiring the new policemen would have on the social cost of crimes committed.

  ii. Calculate the effect it would have on the cost of trying and punishing offenders.

  iii. From an efficiency point of view, is there any positive amount that the city should be willing to pay for the new policemen?

# "The marginal cost of deterring another crime could be positive or negative"

- Social cost of each crime: $10,000
- Cost of trial and punishment: $100,000
- Increase fraction of crimes detected from 15% to 20%
- (c) Defend the following statement applied to this type of crime:

  "Even when detection is cheap, more detection is only efficient if the supply of crimes is elastic."

  - **When the supply of crimes is inelastic** (crime rate slowly responds to deterrence) , detecting more of them increases social costs – the number of crimes does not drop much, but more is spent punishing those who are caught.
  - **When the supply of crimes is elastic**, detecting more of them reduces social costs – fewer crimes get committed, and fewer criminals need to be punished.

# Does Punishment Deter Crime?

- The *deterrence hypothesis* holds that crime decreases significantly—in technical terms, the supply of crime is *elastic* with respect to punishment.
- If so, then increasing the resources that society devotes to the arrest, conviction, and punishment of criminals should reduce the harm caused by crime.
- Rather, crime is the result of a complex set of economic and sociological factors (or possibly biological factors). The appropriate way to minimize the social costs of crime is to attack these root causes of crime—for example, to devote resources to job creation, income maintenance, family counseling, mental health, and drug and alcohol counseling.

# Private Deterrence

**Example :** Yvonne wishes to increase the security of her home against burglars. She considers three alternatives: (1) install bars on her windows; (2) install a loud burglar alarm; or (3) buy a gun. How will each alternative affect burglaries of her house and of *neighboring* houses? For example, will bars on Yvonne's windows reduce crime in the neighborhood or merely redirect it to other houses? Will an alarm alert neighbors? Will burglars know that she has a gun? Which alternative should the state encourage Yvonne to adopt?

- The example raises the question of whether private citizens have incentives to invest optimally in deterring crime. In general, the answer is "no."

# Private Deterrence

- To illustrate, suppose that Yvonne installs a brand *X* double-bolt lock on her front door.
- Installing the lock has private value for her if it prevents the burglary of her house. Call this effect *private deterrence* because it benefits the private investor in precaution.
- Installing the lock has public value for Yvonne's neighbors if burglars tend to avoid neighborhoods in which some houses have brand *X* double-bolt locks. Call this effect *public deterrence* because it benefits the public.

# Private Deterrence

- Installing the lock has little social value if it prevents the burglary of Yvonne's house by causing a burglar to rob the house next door. Call this effect *redistributing crime*. Redistributing crime has no net social benefit.
- Private investment in preventing crime usually has all three effects:
  1. private deterrence,
  2. public deterrence, and
  3. redistribution.
- The state should encourage private investments that contribute to public deterrence.
- The state need not encourage private investments that contribute to private deterrence.
- The state should not encourage private investment that only redistributes crime

# Private Deterrence

- A simple condition determines whether the redistributive effect is small or large.
- Before committing a crime, the criminal can observe some private precautions.
- For burglary, examples of *ex ante observable precautions* include lights on walkways, bars on exterior windows, and exterior alarms. *Ex ante* observable precautions tend to redistribute crime—the mugger avoids lighted streets, and the burglar avoids houses with barred windows and visible alarms.

# Private Deterrence

- Criminals cannot observe other private precautions until they begin committing the crime. For burglary, examples of *ex post observable precautions* include locks on interior doors, interior alarms, identification marks on valuable objects, and guns owned by residents.
- *Ex post* observable precautions promote public deterrence by reducing the average profitability of crime. These facts lead to a definite prescription about private investment in preventing crime:
- *The state should encourage* ex post *observable precautions, and the state need not encourage* ex ante *observable precautions.*