# So far this semester, we've focused on civil law

- Not Civil (Napoleonic) as opposed to Common Law (British)…
- …but Civil as opposed to Criminal
  - Cases where one private individual is suing another…
  - …generally looking for monetary compensation…
  - …for some sort of wrong that was done
- Some cases are handled differently
  - Friedman quote we saw earlier: "When someone shoots you, you call a cop. When he runs his car into yours, you call a lawyer."
  - We've been dealing with the second case
  - Time to deal with the first

# Criminal law differs from civil law in several ways

- 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?

- Just like with civil 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”
- (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
  - Criminally negligent homicide
- (Sometimes intent is enough even without harm)
  - Attempted murder

# Criminal cases are brought by the state

- Wrongful death tort cases
  - Victim is dead, can't receive compensation
  - Family/friends can sue for lost wages, lost companionship, etc.
- Criminal cases don't require living victim
- This allows prosecution of "victimless crimes"
  - Theory is that all crimes harm the public – are "**public bads**"
  - That is, breakdown of law and order in society harms everyone
  - So public (represented by state) brings criminal actions

# Distinction between civil remedies and punishment

- Property law, contract law, tort law: damages serve two purposes
  - Compensate the victim
  - Cause injurer to internalize cost of harm done
  - When injurer internalizes harm, we get pollution, or breach, or accidents, only when they are efficient

- Criminal law: intention is to **deter** crimes – that is, **prevent them entirely**, not just the "inefficient ones"
  - Punishment need not be limited to magnitude of harm done
  - Criminal punishments – imprisonment, execution – destroy resources
    - Make criminal worse off, may not make anyone better off
    - "Ex post, punishment is inefficient"

# Criminal cases have higher standard of proof

- Most civil cases: **preponderance of the evidence**
  - Interpreted as: 51% certainty plaintiff is correct
- For punitive damages, **clear and convincing evidence**
  - Higher degree of certainty
- In criminal cases, prosecution must prove guilt **beyond a reasonable doubt**
  - Why so much higher?

# Why should standard of proof be so high in criminal cases?

- Think about error costs in either tort or criminal case:

**Probability of wrongful acquittal** X **Social cost of wrongful acquittal** + **Probability of wrongful conviction** X **Social cost of wrongful conviction**

- Type 2 Error (false negative)
- Torts: reduced precaution
- Criminal: reduced deterrence

- Type 1 Error (false positive)
- Torts: excessive precaution
- Criminal: reduced deterrence (?)

**and** social cost of excess punishment

- If "false positives" are more costly in criminal law, suggests conviction should require more certainty

# 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 ones
  - And if you value my car more than me, there's a legal alternative to you stealing it

# 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 ones
  - And if you value my car more than me, there's a legal alternative to you stealing it

- 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?

# Are crimes ever efficient?

- In 2001, Armin Miewes posted an ad online, “looking for a well-built 18-to-30-year-old to be slaughtered and then consumed.”
- And someone answered.
- They met, discussed it, and agreed Miewes would kill and eat the guy.
- So he did.  And videotaped it.

- At the time, cannibalism was not illegal in Germany
- Is it a crime to kill someone who has consented to be murdered?
  - In 2004, Miewes was convicted of manslaughter
  - In 2006, he was retried, convicted of murder, sentenced to life in prison
- But also… if Miewes and his victim agreed he should be killed and eaten, and no one else was harmed, was this crime efficient?

# Why not use tort law to cover crimes too?

- Tort law creates an incentive to avoid harms
  - If it worked perfectly, might be no need for criminal law

- Reasons tort law may not work for certain offenses
  - Relies on **perfect compensation**, which may be impossible
    - Loss of life, crippling injury
    - Even if possible in theory, might be impossible in practice
  - If **probability of being caught/convicted** is less than one, deterrence requires punishment **more severe** than benefit received
  - And if we made civil penalties severe enough, criminals might be **judgment-proof**

# 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**
    - or **enforcement errors undermine liability**

# General model of crime and punishment

# Origins

- Foundations: The Classical Theory
  - Hobbes (1588-1869), Rosseau (1712-1778), Locke (1632-1704): social contract; inalienable rights
  - Cesare Beccaria (1738-1794)*, "Dei delitti e delle pene"*, must read
  - Jeremy Bentham (1748-1832)
- The Modern Rational Theory
  - E.g. James Q. Wilson, Thinking About Crime (1975)
- The Economic Theory
  - Becker (1968, JPE), must read
  - Polinsky and Shavell (JEL 2000), link in the syllabus, must read

# 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
- If enforcement were free, we could eliminate crime
  - Hire enough police to detect nearly all crimes
  - Punish them very severely
  - Nobody rational would commit a crime
- But enforcement isn't free, making things interesting

# 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 (approximation)
  - But fines don't always work, because **not everyone can pay them**
  - Besides fines, **most other punishments are inefficient** – make offender worse off, and are costly to state

# Gary Becker, "Crime and Punishment: An Economic Approach"

- Suppose some crime is punished by 20% chance of being caught and convicted, and a punishment equal to $20,000
- We could save money by…
  - Fire half the police and judges, so probability of being caught and convicted dropped to 10%
  - Raise the punishment to $40,000
  - Punishing someone $40,000 may cost more than punishing them $20,000, but not more than twice as much…
  - …and half as many people to punish
  - So cost of punishing people would be same or lower
  - But we'd save money on detection/apprehension
- Repeating the argument, the "optimal" system is an infinitely low probability of an infinitely severe punishment!

# Marginal cost of deterrence

- With rational criminals, raising the expected punishment should lead to fewer crimes being committed
- On a **per-crime basis**, raising either the probability of being caught or the severity of the punishment is costly
- 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 is always inefficient: it 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) the social cost of the crimes that are committed (deterring crimes),

(2) the cost of detection (police, etc.), and

(3) the cost of trying and punishing the offenders who get caught.

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%.

# "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 per year.

  **before: 1,000 X $10,000 = $10,000,000**

  **after: 700 X $10,000 = $7,000,000**

  **effect: $3,000,000 reduction in social cost of crime**

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

  **before: 1,000 X 15% X $100,000 = $15,000,000**

  **after: 700 X 20% $100,000 = $14,000,000**

  **effect: $1,000,000 reduction in cost of trials and punishment**

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

  **$4,000,000, since this is how much social costs are reduced by having higher detection**

# "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.

  **before: 1,000 X $10,000 = $10,000,000**

  **after: 900 X $10,000 = $9,000,000**

  **effect: $1,000,000 reduction in social cost of crime**

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

  **before: 1,000 X 15% X $100,000 = $15,000,000**

  **after: 900 X 20% $100,000 = $18,000,000**

  **effect: $3,000,000 increase in cost of trials and punishment**

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

  **No – higher detection increases social costs, so even if the new policemen were free, from an efficiency point of view, we wouldn't want them!**

# "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, 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.**

# Optimal deterrence

- So depending on how much the crime rate responds to deterrence, increasing the likelihood of being caught could…
  - **Reduce social costs** – by reducing both the number of crimes committed and the number of criminals we have to punish
  - **Increase social costs** – by increasing the number of criminals we catch and have to punish (in addition to requiring more spending on detection)

- What does this say about the optimal level of deterrence?
  - Or, if you prefer, the optimal level of crime?
  - Or the optimal level of punishment?

# Optimal punishment – example

- Suppose there's some crime for which expected punishment (probability X severity) equals $900
- Suppose raising expected punishment from $900 to $901 would deter exactly one crime. Should we do it?
- Depends whether **social cost of that one crime** is more or less than the **social cost of deterring it**
- Suppose that…
  - Raising expected punishment from $900 to $901 would cost $50
  - "Marginal crime" does $1,000 worth of damage
  - To calculate social cost, also need to consider benefit to criminal (???)
  - Marginal crime gets committed when expected punishment is $900, but not when expected punishment is $901; so benefit to criminal is $900
  - So social cost of that crime is $1,000 - $900 = $100
  - If social cost of raising expected punishment enough to deter that crime is $50, we should do it!

# Optimal punishment – general theory

*at efficient level of deterrence:*

**Cost of deterring one more crime** = **Social cost of marginal crime**

**Cost of deterring one more crime** = **Harm to Victim** – **Benefit to Criminal**

*since "marginal criminal" is indifferent…*

**Cost of deterring one more crime** = **Harm to Victim** – **Expected Punishment**

*rearranging,*

**Expected Punishment** = **Harm to Victim** – **Marginal Cost of Deterrence**

# At efficient level of deterrence,

**Expected Punishment** = **Harm to Victim** – **Marginal Cost of Deterrence**

- When **deterrence is free**, expected punishment = damage to victim
  - Offender internalizes costs of his actions
  - Just like with tort law, leads to **only efficient crimes**
- When **deterrence is costly**, expected punishment < damage to victim
  - When preventing marginal crime is costly, we allow all efficient crimes…
  - …and some slightly inefficient ones, because it's **cheaper to allow them then to prevent them**
- When **marginal cost of deterrence is negative**, we should set expected punishment > damage to victim
  - When preventing the marginal crime saves money (because there are fewer criminals to punish)…
  - We prevent some efficient crimes too, because it's **cheaper to deter them than to allow them and have to punish them**!

# MORE ON BECKER

# BECKER'S MULTIPLIER PRINCIPLE

Sanction=Harm/Probability

HARM=€100

| PROBABILITY | SANCTION |
|---|---|
| 1 | 100 |
| 0.5 | 200 |
| 0.1 | 1000 |
| 0.01 | 10000 |
| 0.001 | 100000 |
| 0.0005 | 200000 |

# LIMITS OF MULTIPLIER

- Resistance to Inflating Sanctions
  - Punishment should ‘fit the crime’ & marginal deterrence
- Difficulty in estimating accurately the probability of punishment
- Individuals are not risk neutral

# BECKER'S BASIC RESULT

Fines are costless transfers

Resources devoted to punishment are socially costly

High Fine – Low Probability

Fine= Entire Wealth

Probability -> Zero

# BASIC PROPERTIES OF LAW ENF.

- Punishment should be based on harm to the victim and not on the gain to the criminal
- Acts that have a benefit higher than the external cost they cause SHOULD NOT be deterred and SHOULD be punished.
- Acts that have a benefit lower than the external cost they cause SHOULD be deterred.

# OPTIMAL LAW ENFORCEMENT I

- Choose probability and sanction to maximize social welfare

- Social welfare: Utilitarian Approach

  Criminals: Illegal Gains – Expected Punishment

  Victims: - Social Harm

  Government/Taxpayers:

  Expected Punishment – Enforcement Costs

  Total: IG – H – Enforcement Costs

# OPTIMAL LAW ENFORCEMENT

Total: IG – H – Enforcement Costs

- Fine equals entire wealth
- Probability equals
  Harm/Fine – Marginal Cost of Enforcement
- Expected Fine is less than Harm
- Some under-deterrence is efficient
- Complete deterrence is not efficient

# RISK AVERSION

- Risk averse individuals are not indifferent between any probability and fine equal to social harm;
- Risk premium is strictly increasing in the fine, but not in the probability;
- Efficient fine is usually less than the entire wealth: disutility of risk premium is a social cost!

# NON-MONETARY SANCTIONS

- Nonmonetary sanctions are different because:
  - They are socially costly to impose (NOT costless)
  - They create disutility (NOT transfer)

- Social welfare:

  Criminals: Illegal Gains – Expected Punishment
  Victims: - Social Harm
  Government/Taxpayers: – Enforcement Costs

  Total: IG – EP - H – Enforcement Costs

# Aside: why do we count the criminal's benefit?

- Why count criminal's payoff when calculating social costs?
  - We said fines cost nothing – make offender worse off, state better off
  - Why not just say, screw the offender, fines raise money?
  - And social cost of crime = damage to victim – benefit to offender
  - Why not: by committing certain acts, you give up right to be counted?

- Friedman argues it this way:
  - We want an economic theory for why things like murder and embezzlement should be treated differently than nuisances and torts
  - If we start out by assuming they're morally different, we're assuming the answer to our question
  - If we avoid making assumptions like that, and still come up with reasons they should be treated differently, then we've learned something

# What would efficient punishments look like?

- Friedman 2000:
  - "[The system] would be designed to squeeze the **largest possible fines** out of convicted criminals, using the threat of more unpleasant alternatives for those who failed to pay.
  - If the fines that victims can pay, even under such threats, are inadequate, they are supplemented by **penal slavery** for criminals who can produce more than it costs to guard and feed them, **execution** (with the organs forfeiting to the state) for those who cannot.
  - Any prisons that do exist and do not pay for themselves are as **unpleasant as possible**, so as to produce as much punishment as possible per dollar of imprisonment cost.
  - It is a consistent picture, and considerable parts of it can be found in the not very distant past, but not a pretty one."

# The problem with efficient punishments

- Punishments are designed to make someone worse off
- So if a punishment has social cost close to 0, it must make someone else better off
  - With fines: state gets the benefit of the money
- But this creates **incentive for abuse**
  - State benefits from convicting people!
  - Drug cases and forfeiture
  - Traffic cameras and yellow lights

# Deterrence

# EVIDENCE ON DETERRENCE HYP

- Criminology says no…
- Economics says yes… but…
  - Probability is more effective than severity of punishment;
  - Debate over death penalty…
  - Criminal justice is extremely costly…
  - Difficulty in separating deterrence and incapacitation…

# OTHER GOALS OF ENFORCEMENT

- Incapacitation
  - Benefit of incapacitation is the harm s/he would commit otherwise;
  - Imprisonment is more effective than fines;
  - Probability of detection and punishment is irrelevant.
- Rehabilitation
- Retribution
- Preference Shaping
  - Stigma

# Do harsher punishments deter crime?

- Hard to answer, because hard to separate two effects
- **Deterrence**
  - When punishment gets more severe, crime rates may drop because criminals are afraid of being caught
- **Incapacitation**
  - When punishment gets more severe, crime rates may drop because more criminals are already in jail
- Kessler and Levitt: natural experiment
  - Voters in California in 1982 passed ballot initiative adding 5 years per prior conviction to sentence for certain crimes
  - Found immediate drop of 4% in crimes eligible for enhanced sentences

# Probability versus severity

- Empirically, crime levels more sensitive to **probability** of being caught, than to **severity** of punishment
  - Might be that criminals discount future a lot, don't care as much about last few years of a long prison sentence…
  - …or, total cost of punishment may be more than "apparent" sentence
    - Punishment = time in jail…
    - …plus other costs – time spend in jail awaiting trial, money spent on a lawyer, stigma of being a convicted criminal…
    - …which may not depend on length of sentence
    - So 20% X (1 year in jail + C) > 10% X (2 years in jail + C)
    - not because 20% of 1 year is worse than 10% of 2 years
    - but because 20% of C is more than 10% of C
- Means Becker's idea – tiny probability, very severe punishments – may not work in real life

# Marginal deterrence

- Armed robbery vs. armed robbery plus murder
  - You break in to rob an isolated house, carrying a gun
  - Someone wakes up and confronts you; what do you do?
  - Punishment for murder is very severe
  - If punishment for armed robbery is not so severe, you might leave them alive
  - If punishment for armed robbery is very severe, you might be better off killing them

- "**As good be hang'd for an old sheep as a young lamb.**"

  - old English proverb

# Remember introductory example…

You live in a state where the most severe criminal punishment is life imprisonment. **Someone proposes that since armed robbery is a very serious crime, armed robbers should get a life sentence.**

A constitutional lawyer asks whether that is consistent with the prohibition on cruel and unusual punishment.

A legal philosopher asks whether it is just.

An economist points out that if the punishments for armed robbery and for armed robbery plus murder are the same, the additional punishment for the murder is zero –

**and asks whether you really want to make it in the interest of robbers to murder their victims.**

Friedman, *Law's Order*, p. 8

# Solutions

- Punishment (expected) fits the harm
- Can be achieved by changing detection probabilities (if enforcement is not completely general), instead of reducing sanctions for less harmful acts

# Determining guilt or innocence

# Criminal law

- We've been focusing on optimal enforcement
  - How much should we invest in catching criminals?
  - How should we punish them when we catch them?

- Very little on determining guilt or innocence
  - Get the facts, decide how likely it is they committed the crime
  - Based on relative costs of freeing the guilty and punishing the innocent, there's some amount of certainty above which we punish

# Motivation…

# Peter Leeson, "Ordeals" (forthcoming, *Journal of Law and Economics*)

- First in a series of papers on "the law and economics of superstition"

"For 400 years the most sophisticated persons in Europe decided difficult criminal cases by asking the defendant to thrust his arm into a cauldron of boiling water and fish out a ring.

If his arm was unharmed, he was exonerated.

If not, he was convicted.

Alternatively, a priest dunked the defendant in a pool.

Sinking proved his innocence; floating proved his guilt.

People called these trials ordeals.

No one alive today believes ordeals were a good way to decide defendants' guilt. But maybe they should."

# Ordeals

- Ordeals were only used when there was uncertainty about guilt or innocence
- Examples:
  - hot water ordeal
  - hot iron ordeal
  - cold water ordeal
- Leeson's point: ordeals may have actually done a pretty good job of ascertaining guilt/innocence

# Why would ordeals work to assess guilt or innocence?

- *iudicium Dei* – Medieval belief that the God would help the innocent survive the ordeal, but not the guilty

- If people believe this, then…
  - guilty won't want to go through with the ordeal, will instead confess
  - (confessing leads to a lesser punishment than failing the ordeal, plus you don't burn your hand)
  - the innocent agree to go through the ordeal, expecting to be saved by a miracle

- So administering priest knows if someone agrees to take the ordeal, he's innocent…

- …and rigs the ordeal so he'll pass

# The keys to this working

- Obviously, people have to believe that God will spare the innocent, judge the guilty
  - Ceremony reinforced this by linking the belief to other religious beliefs
  - Priests might have to let someone fail an ordeal once in a while, to keep people believing
  - (Again, this was only done in cases where normal evidence was lacking, so unlikely to be “contradicted”)

- And, priests must have a way to rig the ordeals
  - Leeson gives examples of how the ordeals were designed to make this easy: priests were alone before and after the ordeal, spectators couldn’t be too close, priests had to judge whether the person had passed or not, etc.

# “Evidence” to support Leeson’s view

- Historically, most people who underwent ordeals passed
  - Data from 13th century Hungary: 130 out of 208 passed
  - England, 1194-1219: of 19 for whom outcome was recorded, 17 passed

- And this seems to have been by design
  - Other historians: “the ordeal of hot iron was so arranged as to give the accused a considerable chance of escape.”
  - Others: “the average lean male has an 80% chance of sinking in water, compared to only a 40% chance for the average lean woman.”
  - England, 1194-1208
    - 84 men went through ordeals – 79 were given cold water ordeal
    - 7 women went through ordeals – all were given hot iron ordeal

# “Evidence” to support Leeson’s view

- Ordeals were only used on believers
  - “If the defendant was Christian, he was tried by ordeal.
  - If he was Jewish, he was tried by compurgation instead.”
- Once Church rejected legitimacy of ordeals, they disappeared entirely

# Leeson's conclusion

"Though rooted in superstition, judicial ordeals weren't irrational.

Expecting to emerge from ordeals unscathed and exonerated, innocent persons found it cheaper to undergo ordeals than to decline them.

Expecting to emerge… boiled, burned, or wet and naked and condemned, guilty persons found it cheaper to decline ordeals than to undergo them.

[Priests] knew that only innocent persons would want to undergo ordeals… [and] exonerated probands whenever they could.

Medieval judicial ordeals achieved what they sought: they accurately assigned guilt and innocence where traditional means couldn't."

# Punishment

# Punishment

- In U.S., most crimes punished by imprisonment
- Imprisonment has several effects:
  - Deterrence
  - Punishment
  - Opportunity for rehabilitation
  - Incapacitation
- When is incapacitation effective?
  - When **supply of criminals is inelastic**
    - (When there isn't someone else waiting to take criminal's place)
  - And when it changes **number of crimes** a person will commit, rather than just delaying them

# Punishment

- Fines are efficient
  - No social cost
  - But, greater threat of abuse, since state makes money
  - Friedman: “In a world of efficient punishments, somebody gets most of what the convicted defendant loses. It is in that somebody’s interest to convict defendants, whether or not they are guilty.”
- Other punishments tend to be inefficient
  - Direct costs of holding someone in maximum-security prison estimated at $40,000/year
  - In some states, prisoners do useful work
    - Attica State Prison (NY) had metal shop
    - Minnesota firm employs inmates as computer programmers
    - Medium-security prisons in Illinois make marching band uniforms

# Fines

- Western Europe: many crimes punished by fines
  - Textbook cites a study from 1977 examining certain crimes: 56% of selected defendants in England/Wales, 77% in Germany were punished only by a fine
  - U.S. federal court: 5% of defendants punished only by a fine
- In U.S., criminal fines are in dollars; in some European countries, “day fines”
  - Punishment = fixed number of days of salary
  - So, rich pay bigger fines than poor

# For example…

BBC News - Switzerland ...

news.bbc.co.uk/2/hi/europe/8446545.stm

BBC Mobile | News | Sport | Weather | Travel | TV | Radio | More | Search the BBC

NEWS

Watch ONE-MINUTE WORLD NEWS

News Front Page

Africa
Americas
Asia-Pacific
Europe
Middle East
South Asia
UK
Business
Health
Science & Environment
Technology
Entertainment
Also in the news

Video and Audio

Programmes
Have Your Say
In Pictures
Country Profiles
Special Reports

Related BBC sites
Sport
Weather
On This Day

Page last updated at 16:20 GMT, Thursday, 7 January 2010

E-mail this to a friend  Printable version

## Switzerland millionaire hit by record speed fine

**A Swiss millionaire has been handed down a record speeding fine of $290,000 (£180,000) by a court.**

The man was reportedly caught driving a red Ferrari Testarossa at 137km/h (85mph) through a village.

The tycoon was reportedly driving a Ferrari 57km/h (35mph) over the limit

The penalty was calculated based on the unnamed motorist's wealth - assessed by the court as $22.7m (£14.1m) - and because he was a repeat offender.

It is more than double Switzerland's previous record speeding fine - handed to a Porsche driver in Zurich in 2008.

In the latest case, the motorist was clocked speeding 57km/h (35mph) faster than the limit, according to the cantonal court in St Gallen, eastern Switzerland.

"The accused ignored elementary traffic rules with a powerful vehicle out of a pure desire for speed," the court said in its judgement.

Swiss media reported that the man owns a villa with five luxury cars, including the Ferrari.



SEE ALSO

- Cole guilty of speeding at 104mph
  04 Jan 10 | London
- Jermain Defoe fined for speeding
  04 Jan 10 | Hampshire
- 98mph policeman's speed challenge
  21 Dec 09 | Wales
- Life in the fast lane
  25 Jul 07 | Magazine

# Should the rich pay bigger fines than the poor?

- Some crimes have monetary benefits…
  - Stealing $100 has same **monetary** benefit for rich or poor
  - So penalty with same monetary equivalent – say, $1,000 – should have same deterrent effect
- …some have nonmonetary benefits
  - Punching someone in the face in a bar might have same **utility** benefit for rich or poor
  - Since rich have lower marginal utility of money, it would take a larger fine to have same deterrent effect
- But with costly enforcement, goal isn't to deter all crimes
  - Some examples: optimal to deter "most" crimes by both rich and poor, which requires higher fines for rich people
  - Some examples: optimal to deter poor peoples' crimes, not bother deterring crimes by the rich!

# Should the rich pay bigger fines than the poor?

- Society may have other goals besides efficiency
  - Might place high value on law treating everyone the same…
  - …even if we have to sacrifice some efficiency to achieve this
- Example: choice of a fine or jail time
  - Tend to put low dollar value on time in jail – might be sentenced to a $5,000 fine or a year in jail
  - Most people who can afford the fine will choose to pay; those who can't, will go to jail
  - So rich pay a small-ish fine they can easily afford, and poor go to jail

# Should the rich pay bigger fines than the poor?

- Society may have other goals besides efficiency
  - Might place high value on law treating everyone the same…
  - …even if we have to sacrifice some efficiency to achieve this
- Example: choice of a fine or jail time
  - Tend to put low dollar value on time in jail – might be sentenced to a $5,000 fine or a year in jail
  - Most people who can afford the fine will choose to pay; those who can't, will go to jail
  - So rich pay a small-ish fine they can easily afford, and poor go to jail
- John Lott: equal prison terms for rich/poor may make sense
  - The rich value their time more than poor…
  - …but the rich have better lawyers, may be less likely to be convicted

# Stigma

- Stigma of having been convicted of a crime
  - You're a corporate treasurer, and get caught embezzling
  - One consequence: you go to jail for a year
  - Another: when you get out, you can't get another job as a treasurer
  - Punishment = jail time **+ stigma**

- Stigma as a punishment has **negative social cost**
  - No wage at which firm would hire an embezzler as treasurer
  - So getting hired by that firm would be inefficient
  - But without the conviction, you might have gotten the job
  - So knowledge that you're an embezzler has value to society

# Stigma

- Stigma as a punishment
  - Very efficient when applied to a guilty person
  - Very inefficient when applied to an innocent person
- Suggests that maybe…
  - criminal cases, where conviction carries a social stigma, should have higher standard of proof than civil cases, where it doesn't

# Death penalty

- In 1972, U.S. Supreme Court found death penalty, as it was being practiced, unconstitutional
  - Application was "**capricious and discriminatory**"
  - Several states changed how it was being administered to comply
  - In 1976, Supreme Court upheld some of the new laws
- Since 1976, average of 41 executions per year in the U.S.
  - Texas and Oklahoma together account for half
  - Nationwide, 3,000 prisoners currently on death row
  - Since 1976, 304 inmates on death row were exonerated, many more pardoned or had sentences commuted by governors
- Does death penalty deter crime? Evidence mixed.

# Death penalty and race

- One concern about death penalty in U.S.: way it's applied is racially biased
- McCleskey v Kemp (U.S. Sup Ct 1987)
  - even solid statistical evidence of racial disparity does not make death penalty unconstitutional

***Fraction of convicted murderers sentenced to death in one study***

| | Overall | White Victim | Black Victim |
|---|---|---|---|
| Black Defendant | 7.9% | 22.9% | 2.8% |
| White Defendant | 11.0% | 11.3% | 0.0% |

source: see notes.

# Other topics

# “Victimless” crimes

- Many crimes don’t seem to directly harm anyone
  - Cannibalism (when victim is already dead), organ sales
- But in a world where cannibalism is legal, the private benefit of murder is higher
  - Might lead to more murders
- Same with organ sales
  - Once human organs become valuable, tradable commodities, value of killing someone becomes higher
- May make sense to outlaw certain practices that do no harm themselves, but encourage other harms

# Drugs

- Increasing expected punishment for dealing drugs will increase street price
- What happens next depends on elasticity of demand
  - **Casual users** tend to have elastic demand
  - If price goes up (or risk/difficulty in obtaining drugs goes up), demand drops a lot
  - **Addicts** have very inelastic demand
  - Price goes up, but demand stays about the same
  - So expenditures go up
  - Drug addicts who support their habits through crime, have to commit more crimes
- "Ideal" policy might be to **raise price for non-addicts without raising price for addicts**

# Guns

- **Violent crime** and **gun ownership** both high in U.S. relative to Europe, correlated over time
  - But causation unclear
  - Maybe more guns cause more crime
  - Or maybe more crime leads more people to want to own guns

- U.S., Canada, and Britain have similar burglary rates
  - In Canada and Britain, about 50% of burglaries are “hot” (occur when victim is at home)
  - In U.S., only 10% of burglaries are “hot”
  - So gun ownership doesn’t seem to change overall number of burglaries, but does change the composition

# Racial profiling

- Well known that black drivers are more likely to be pulled over and searched than white drivers
  - Jan 1995-Jan 1999, I-95 in Maryland: 18% of drivers were African-American, 63% of searches
  - One explanation: police hate black people
  - Different explanation: race could be correlated with other things that actually predict crime
    - Maybe people in gold Lexuses with tinted windows and out-of-state plates are more likely to be carrying drugs
    - Police stop more gold Lexuses with out-of-state plates
    - More African-Americans drive gold Lexuses
  - How to tell the difference?
    - Need more information about what drivers were stopped/searched
    - What to do if you don't have data?

# Knowles, Persico and Todd, "Racial Bias in Motor Vehicle Searches: Theory and Evidence"

- (2001, Journal of Political Economy)
- Game theory model of police and drivers
  - Police get positive payoff from catching criminals, pay cost each time they stop a driver
  - Drivers get some payoff from moving drugs, pay cost if they get caught
  - Police may use lots of info (race plus other things) to determine who to pull over, but we (researcher) may not observe all that info

# Knowles, Persico and Todd, "Racial Bias in Motor Vehicle Searches: Theory and Evidence"

- Suppose there's a certain set of attributes (race plus other information) that make it very likely someone has drugs
- Then…
  - Police will always search cars that fit those attributes
  - So chance of being caught is very high for those drivers
  - So drivers with those attributes will stop carrying drugs
- Only equilibrium is…
  - For each set of attributes, some drivers carry, some don't
  - For each set of attributes, police search some cars, don't search others

# Knowles, Persico and Todd, "Racial Bias in Motor Vehicle Searches: Theory and Evidence"

- Mixed strategy equilibrium
  - Police have to be indifferent between stopping and not stopping a given type of car/driver
  - So if police see the cost as the same for all types…
  - The payoff has to be the same, too
  - Which means that in equilibrium, if police are not racist, the chance of finding drugs has to be the same for every car stopped
  - Which means if we average over the other characteristics, black drivers should have the same probability of being guilty when they're stopped as white drivers
  - But this still might mean different search rates

# Knowles, Persico and Todd, "Racial Bias in Motor Vehicle Searches: Theory and Evidence"

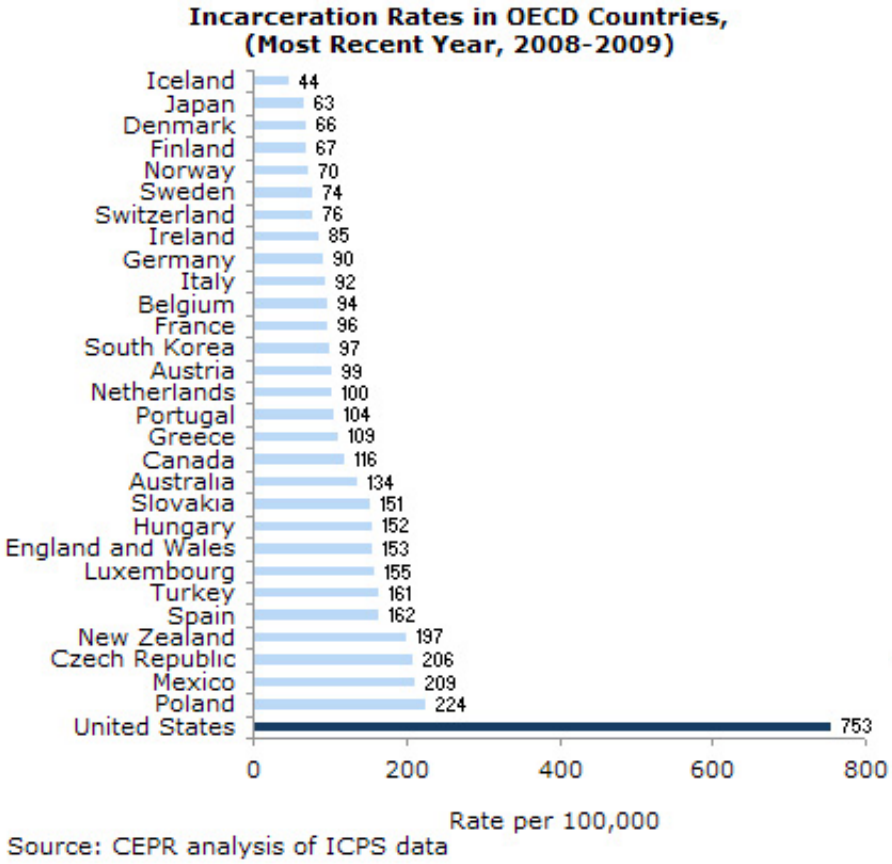
- Prediction: if police are not racist, each race could have different rates of being stopped/searched, but should have same rate of being guilty when searched
- Of drivers who were stopped in period they examine…
  - 32% of white drivers were found to have drugs
  - 34% of black drivers were found to have drugs
  - Close enough to be consistent with "no racism"
  - But only 11% of Hispanic drivers were found to have drugs, and only 22% of white women
  - So police seemed to not be biased against black drivers, but to be biased against Hispanics, and white women?
  - (If "guilty" defined as only hard drugs, or only felony-level quantities, then police seem to be biased against white drivers!)

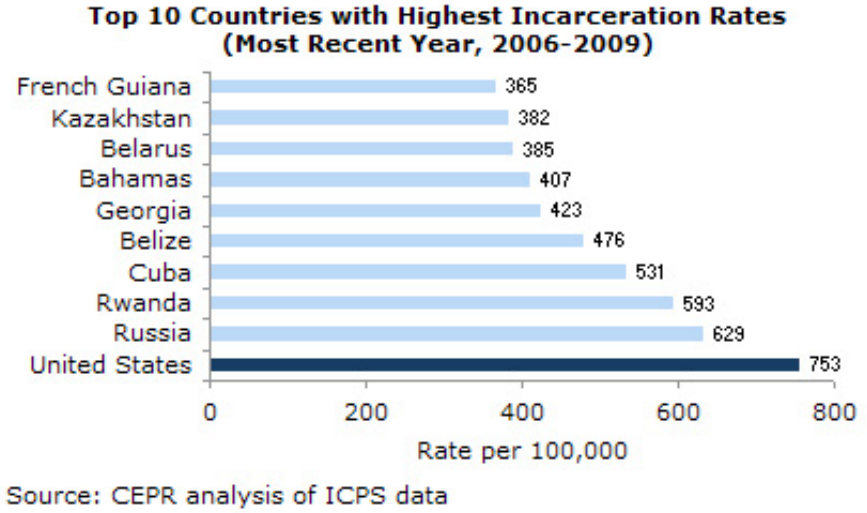
# Crime in the U.S.

# Crime in the U.S.

- As of 2005, over 2,000,000 prisoners, nearly 5,000,000 more on probation or parole
  - Up from ~500,000 in 1980
  - 93% male
  - In federal prisons, 60% are drug-related
  - Incarceration rate of 0.7% is 7 times that of Western Europe
- Cooter and Ulen estimate social cost of crime
  - $100 billion spend annually on prevention and punishment
  - 1/3 on police, 1/3 on prisons, 1/3 on courts, prosecutors, public defenders, probation officers, etc.
  - Estimate another $100 billion on private crime prevention
  - Estimate total social cost to be **$500 billion**, or 4% of GDP

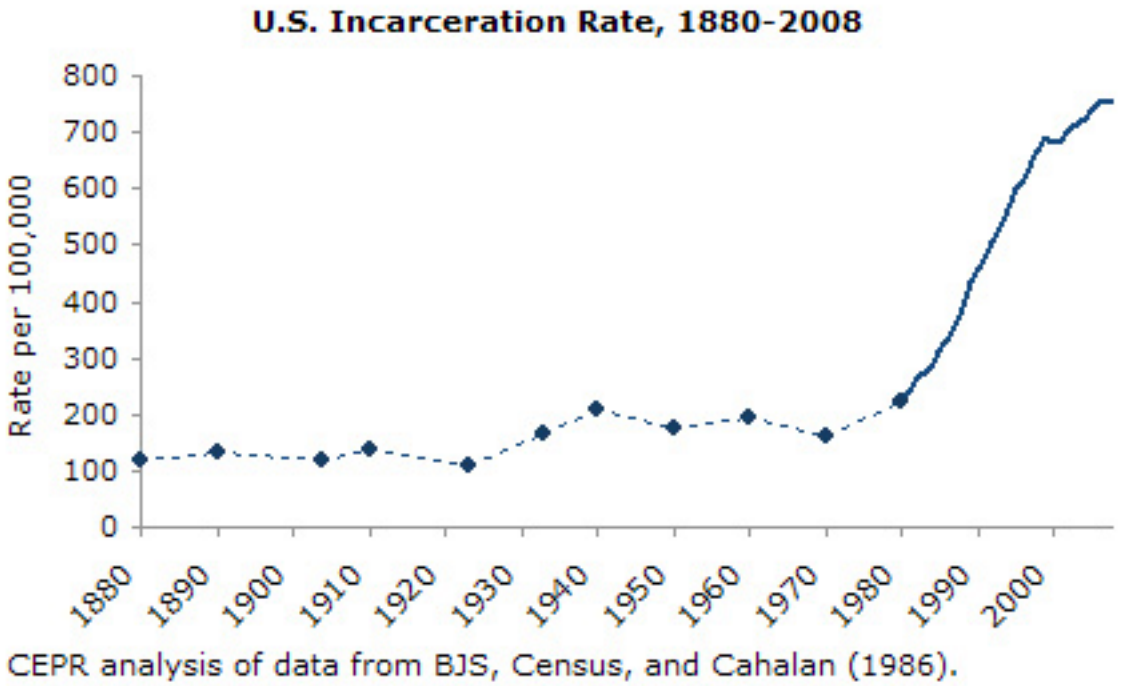
# U.S. incarceration rate in context



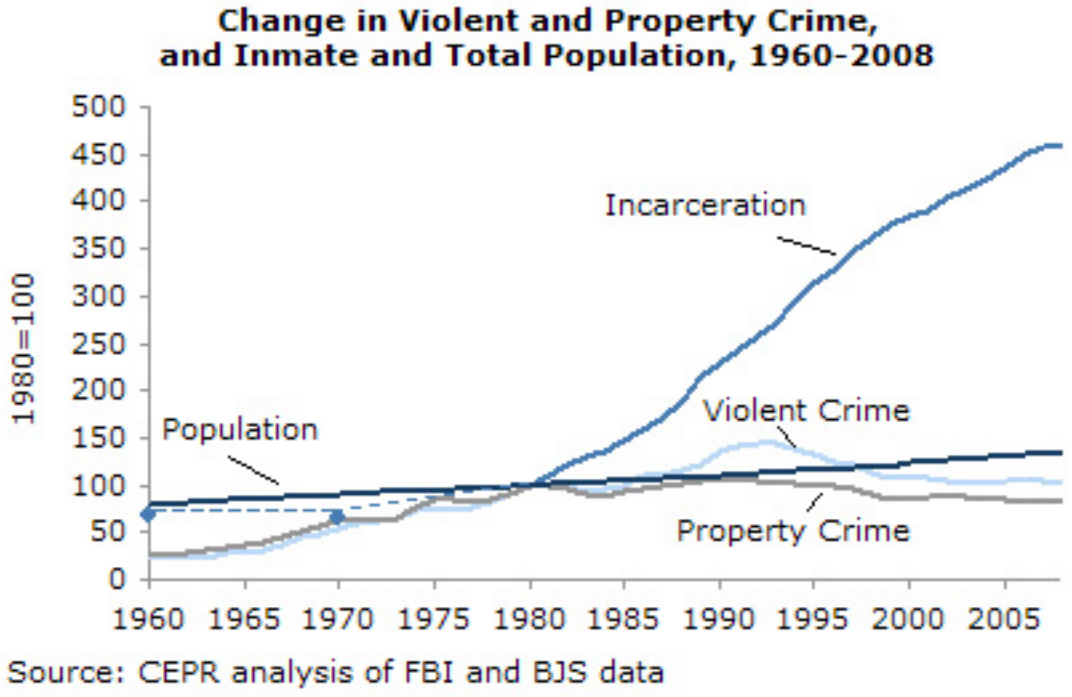

source: Center for Economic Policy Research
http://www.cepr.net/index.php/publications/reports/the-high-budgetary-cost-of-incarceration/

# U.S. incarceration rate in context



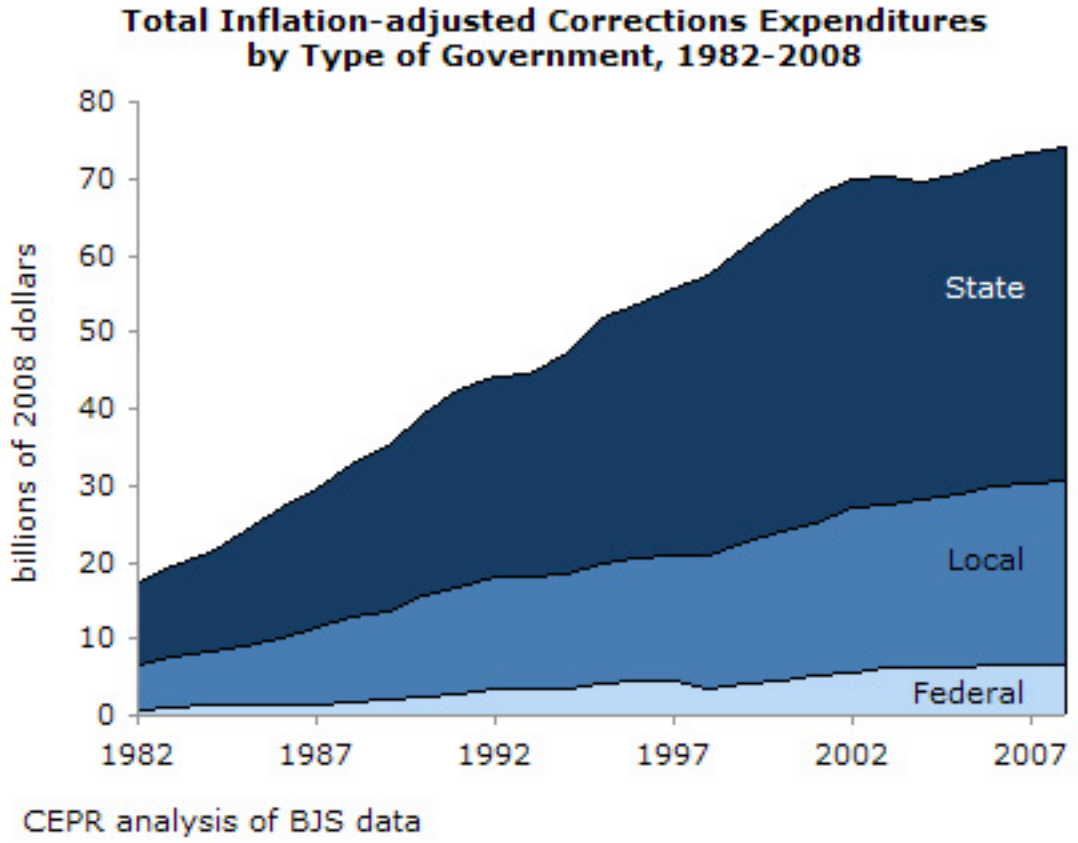

source: Center for Economic Policy Research
http://www.cepr.net/index.php/publications/reports/the-high-budgetary-cost-of-incarceration/

# U.S. incarceration rate in context



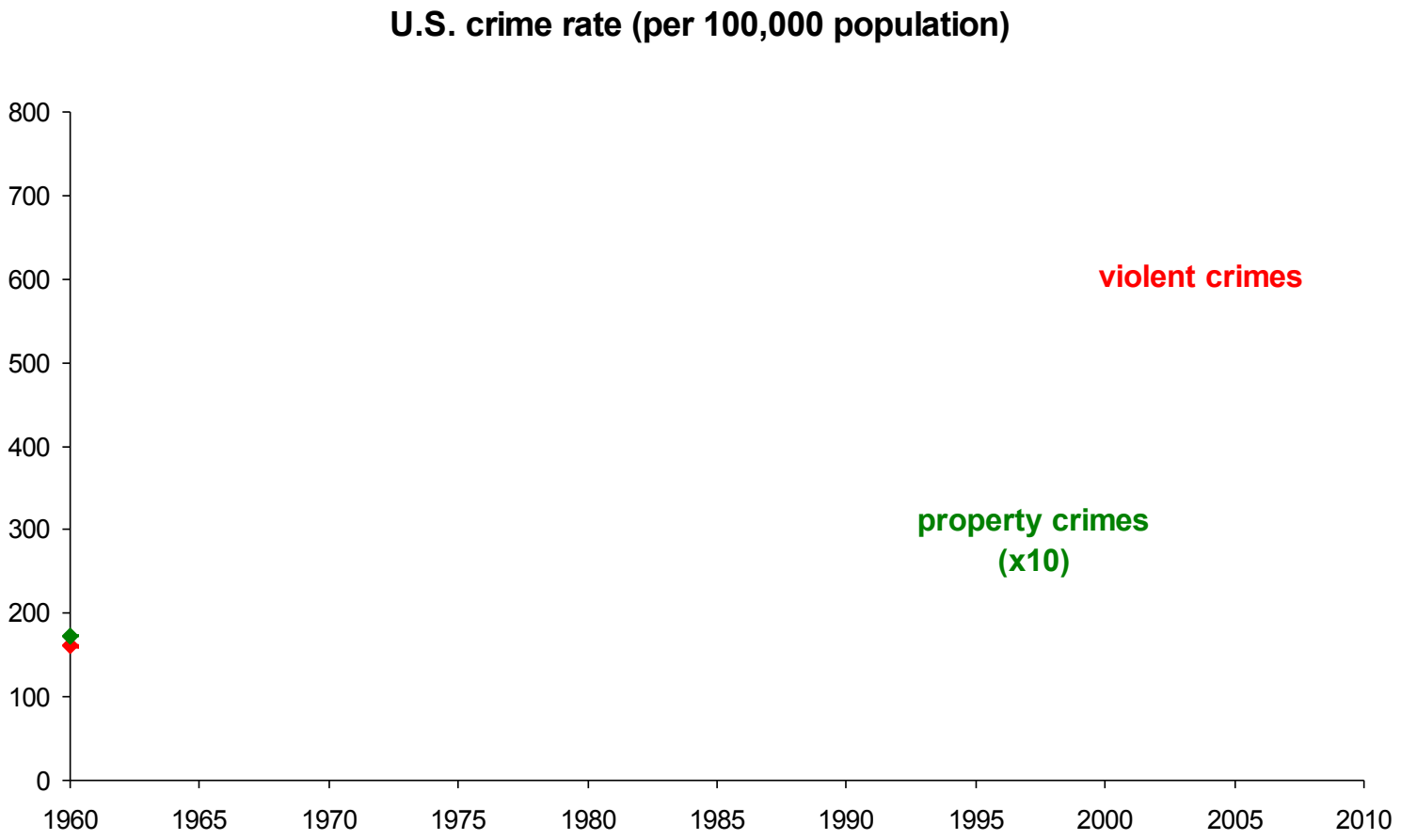

source: Center for Economic Policy Research
http://www.cepr.net/index.php/publications/reports/the-high-budgetary-cost-of-incarceration/

# U.S. spending on corrections



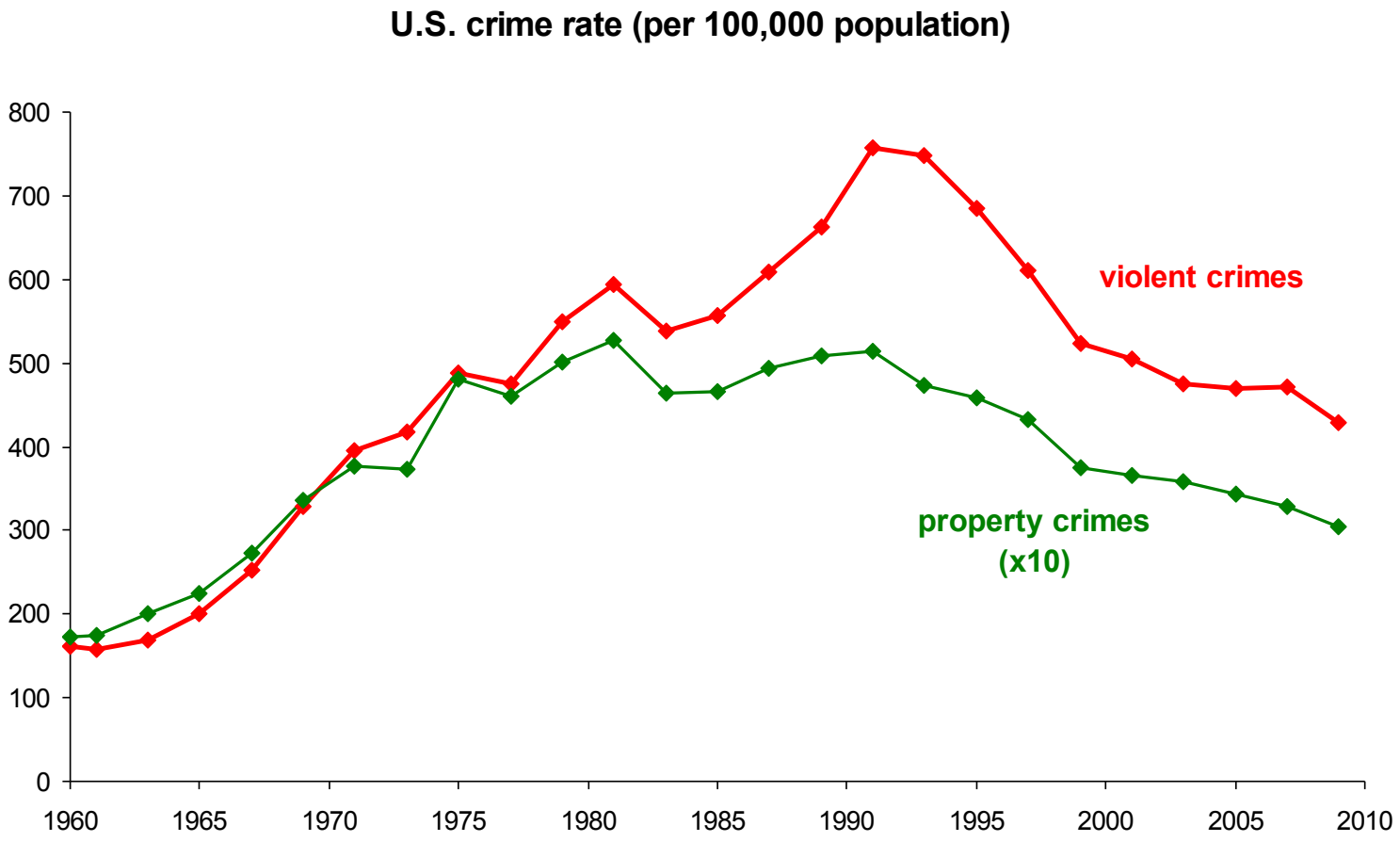

source: Center for Economic Policy Research
http://www.cepr.net/index.php/publications/reports/the-high-budgetary-cost-of-incarceration/

# Crime in the U.S.




source: Wikipedia http://en.wikipedia.org/wiki/Crime_in_the_United_States downloaded 11/28/2010

# Crime in the U.S.




source: Wikipedia http://en.wikipedia.org/wiki/Crime_in_the_United_States downloaded 11/28/2010

# Why did U.S. crime rate fall in 1990s?

- What explains sharp drop in violent crime in U.S. in 1990s?
- Several explanations:
  - deterrence and incapacitation
  - decline of crack cocaine, which had driven much of crime in 1980s
  - economic boom
  - more precaution by victims
  - change in policing strategies
- Donohue and Levitt give a different explanation: **abortion**

# Why did U.S. crime rate fall in 1990s?

- Donohue and Levitt
  - U.S. Supreme Court legalized abortion in early 1973
  - Number of legal abortions ~ 1,000,000/year (compared to birth rate of 3,000,000)
  - Violent crimes largely committed by males of certain ages
  - Donohue and Levitt argue legalized abortion led to smaller "cohort" of people in high-crime age group starting in early 1990s
  - Evidence:
    - Most of drop was reduction in crimes committed by young people
    - Five states legalized abortion three years before Roe v Wade, saw drop in crime rates begin earlier
    - States with higher abortion rates in late 1970s and early 1980s had more dramatic drops in crime from 1985 to 1997, no difference before
  - Argue this explains 50% of drop in crime in 1990s
    - Half of that from cohort size, half from composition

# COMPARATIVE LAW ENF.

NUMBER OF POLICES PER 100,000 POPULATION (2000)

Source: Francis Pakes, 2004

| COUNTRY | |
|---|---|
| US | 300 |
| England and Wales | 347 |
| France | 349 |
| Germany | 311 |
| Italy | 477 |
| Spain | 488 |
| Netherlands | 254 |
| Sweden | 309 |
| Japan | 207 |

# COMPARATIVE LAW ENF.

NUMBER OF JUDGES PER 100,000 POPULATION (2000)

| COUNTRY | |
|---|---|
| US | 12 |
| England and Wales | 5 |
| France | 11 |
| Germany | 29 |
| Italy | 13 |
| Spain | 10 |
| Portugal | 13 |
| Netherlands | 12 |
| Japan | 4 |

# COMPARATIVE LAW ENF.

NUMBER OF LAWYERS PER 100,000 POPULATION (2000)

Source: Council of the Bars and L aw Societies of EU

| COUNTRY | 1990 | 2000 |
|---|---|---|
| US | 261 | 338 |
| UK | 150 | 283 |
| France | 43 | 68 |
| Germany | 83 | 142 |
| Italy | 105 | 160 |
| Spain | 140 | 241 |
| Portugal | 123 | 188 |
| Netherlands | 43 | 77 |
| Belgium | 137 | 155 |

# COMPARATIVE LAW ENF.

NUMBER OF PRE -TRIAL CUSTODIES PER 100,000 POPULATION (1998)

Source: Francis Pakes, 2004

| COUNTRY | |
|---|---|
| Austria | 26.2 |
| England and Wales | 24.3 |
| Scotland | 19.8 |
| Northern Ireland | 26.9 |
| Italy | 42.5 |
| Denmark | 15.5 |
| Netherlands | 19.9 |
| Sweden | 11.7 |
| Portugal | 37.0 |

# COMPARATIVE LAW ENF.

PRISON RATES (2000)
Source: Francis Pakes, 2004

| COUNTRY | |
|---|---|
| Portugal | 130 |
| UK | 125 |
| Spain | 115 |
| Germany | 95 |
| Austria | 85 |
| France | 80 |
| Ireland | 80 |
| Denmark | 60 |
| Finland | 55 |

# COMPARATIVE LAW ENF.

DEATH PENALTY IN THE US 1977 -1999
Source: Francis Pakes, 2004

| STATE | Executions | Death Row at 1/1/2000 |
|---|---|---|
| TOTAL | 598 | 3,652 |
| Texas | 199 | 462 |
| Virginia | 73 | 31 |
| Florida | 44 | 389 |
| Missouri | 41 | 83 |
| S&N Carolina | 39 | 291 |
| Louisiana | 25 | 87 |
| Georgia | 22 | 134 |
| California | 7 | 561 |
| Pennsylvania | 3 | 232 |