

From Fines to Imprisonment: The Efficiency of Criminal Penalties through an Economic Lens

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Abstract

This article examines the role of criminal law in promoting economic efficiency, focusing on its function as a deterrent against coercive transfers. By framing criminal behavior through the lens of economic theory, it argues that market transactions are more efficient than coercive actions and that criminal law's primary purpose is to maintain this efficiency. The article explores various enforcement strategies, including monetary fines, imprisonment, and non-monetary sanctions, considering how these mechanisms deter both financial crimes and crimes of passion. The analysis further delves into behavioral economics, examining how discount rates and risk preferences influence the effectiveness of different types of criminal sanctions. In light of this, the article proposes an optimal framework for criminal penalties, balancing severity and probability, and highlights the practical implications for policymakers, the judiciary, offenders, and victims.

1. Introduction

1.1 What is criminal law?

Criminal laws are a set of rules that must be met to declare an event as a crime, but primarily their role is to act as a deterrent. Criminal law is a wide field ranging from crimes of passions such as murder to white collar crimes such as monetary frauds. The central aim of criminal law is to discourage individuals from committing offenses, and this is where economics plays a vital role. By applying economic analysis, we can assess whether the severity of a punishment generates enough disutility for the offender to act as an effective deterrent.

There has been enormous amount of work on the economics of criminal law majorly focusing on three aspects

- The tradeoff between the probability of apprehension and conviction and the severity of punishment
- The economics of law enforcement and criminal procedures

- The deterrent and preventive effects of criminal laws

1.2 Why criminal law?

It is often questioned why we need a separate body of law for certain acts when we already have tort laws in place. In tort law, the person harmed can sue for compensation, so why not extend this to criminal matters? The distinction is more apparent in some cases, such as in victimless crimes (like drug offenses or prostitution), where no one is directly harmed, and there is no obvious victim to file a claim. In essence, the existence of criminal law, rather than relying solely on tort law, is justified by the challenges of detection and enforcement, especially in cases where there is no immediate victim to report the crime. Hence we can not deny that criminal law is an important and much required set of rules for the society to function in a civil as well as economically sound manner.

2. Research methodology

For this paper, I conducted an in-depth study of two sections from Richard A. Posner's work, *An Economic Theory of the Criminal Law*. In the following section, I will examine and analyze his insights on *The Functions of Criminal Law* and *Optimal Criminal Penalties*.

3. Analysis

3.1 Functions of criminal law

The main function of criminal law that economists are concerned with is, it promotes efficiency. The burden of this section is to prove that criminal prohibitions lead to efficiency. While it is widely accepted that certain actions should not be committed due to moral and ethical dilemmas, I aim to set aside this conventional view and argue that acts deemed inefficient should not occur, independent of their moral or ethical implications. For the purposes of this article, it is essential to approach the issue from an academic and analytical standpoint.

Crimes are often categorized into two types: *crimes of passion* and *crimes for money*. Following is the analysis of how criminal law leads to efficiency in both types of crimes.

3.1.1 Crimes for money

- Tort fails due to coercive transfers

According to the Coase theorem, market is the most efficient way of allocating resources when the transaction costs are low. Laws (tort) that prevent this bypassing of the market promote efficiency. For example, if you want your friend's phone then it makes more sense to talk to your friend and pay her a price with which you both are comfortable rather than stealing it from her and later paying the amount that the court decides. This is because a voluntary negotiation allows both parties to reach an agreement that reflects the true value of the product to both parties. But this argument alone does not provide enough evidence for the credibility of criminal law, because when a thief steals a phone or anything for that matter, it's not because he wants the phone but rather, he wants the money that he can get by selling it. The market transaction that he bypasses is the exchange of his labour for money in a lawful occupation. As mentioned earlier the primary role of criminal law is to act as a deterrent, for which the punishment needs to be higher than the victim's loss. This ensures resource allocation through market interactions when transaction costs are low. For instance, if someone steals a valuable item, the penalty must cover both the loss to the victim and ensure that the offender cannot profit from the act. This discourages people from engaging in coercive transfers by making it less profitable than participating in the market. This reasoning underscores the importance of criminal law in maintaining economic efficiency by preventing coercive, non-market transactions. This extra fine ensures that stealing is always a losing proposition for the thief, thus reinforcing market transactions over coercive transfers.

To effectively deter coercive actions, punitive damages must consider the possibility that offenders may try to conceal their misconduct. While accidents, which are unintended consequences of lawful behavior, are harder to hide, intentional torts like theft are often carried out with efforts to avoid detection. Therefore, the optimal level of damages (D) must be determined by the formula:

$$D = L/p$$

Here, L represents the harm caused, and p is the probability of detection and punishment. If the probability of being caught is less than 1, damages must be increased accordingly to reflect the full extent of the harm caused.

For example, if the harm caused is \$10,000 and the likelihood of being caught is 0.1 (meaning only one in ten offenders is caught), the optimal damages should be set at

\$100,000. This ensures that the expected cost to the offender (pD) is equal to the harm they cause, discouraging coercive behavior by making it unprofitable to bypass lawful means.

- Tort fails due to solvency issues

Criminal law also comes into action when tort law fails due to solvency issues, i.e. the offender does not have enough resources to pay the fine. If a defendant's financial situation prevents them from fully compensating the victims or society through civil penalties, the criminal justice system can impose additional sanctions like imprisonment or higher fines.

3.1.2 Crimes of passion

A similar argument extends to crimes of passion as well. While crimes of money bypass explicit markets, crimes of passion bypass implicit markets such as love, marriage, and respect. These implicit markets, which are explored in growing economic literature such as Becker's work on family economics, also function on voluntary exchange and mutual benefit, just in less tangible ways. If an individual gains satisfaction from harming others (e.g., through violence) without compensating them, they are bypassing the explicit market system that would otherwise require voluntary exchange. However, we often overlook this explicit cost because the victim might not be the same person with whom the offender might have done legal transactions with. For example, when A rapes B, he is bypassing the market of marriage (he may or may not have married B) and the act of committing such a crime still disrupts the fundamental principles of market-based exchanges, where all parties are supposed to benefit. Hence, we can conclude that criminal laws lead to efficient outcomes even for crimes of passion.

3.1.3 Allowing crimes is inefficient

Crimes driven by interdependent negative utilities occur when an individual derives satisfaction from harming another, not for material gain, but purely out of malice or hatred. For example, murdering someone out of hatred rather than for financial reasons. Empirically, it's a safe assumption that such actions typically result in net disutility, as the harm inflicted on the victim rarely results in an equal or greater level of satisfaction for the offender.

Allowing these kinds of crimes is economically inefficient. When harm is caused purely because one person's disutility brings utility to another, it does not increase the overall wealth of society, even if—by some unlikely measure—the total happiness seems to rise.

Moreover, permitting coercion would lead to significant inefficiencies. Potential victims would invest heavily in self-protection, while potential aggressors would expend resources to overcome these defences, with little to no productive value for society. This arms race would divert resources away from activities that could increase societal wealth.

Some crimes of passion are costly and inefficient efforts at self-help. A slanders B, and B, instead of suing A, kills him. The suit would have given B almost the satisfaction that killing A did, and at far lower social cost.

There are three key enforcement responses to the challenge of deterring antisocial behavior in society, given the impracticality of relying primarily on fines.

1. **Non-Monetary Punishments:** The first response is to impose punishments that create disutility in non-monetary forms, such as imprisonment or even the death penalty.
2. **Enhancing Crime Detection:** A second approach is to reduce the probability of offenders concealing their crimes by maintaining a police force. This lowers the D in the deterrence formula ($D = L/p$), as the likelihood of being caught increases.
3. **Preventive Measures:** The third response is to prevent criminal activity by punishing preparatory acts (category (4)), which involves both law enforcement and proactive policing to stop crime before it happens. Public policing is generally considered more efficient than private due to economies of scale and concerns about the potential for private armies undermining political stability.

As a result, fines are paid to the state instead of the victim, though victims can still seek damages if the crime qualifies as a tort. This system balances public enforcement with victim compensation.

This argument may appear to align with left-wing views, suggesting that "criminal law keeps the lid on the lower classes," but it is actually grounded in efficiency. It argues that different sanctions should be used depending on an offender's wealth. Fines, which are common in criminal cases, are often lower than the damages awarded in tort cases for two reasons. First, the government invests resources to increase the probability of criminal punishment

compared to tort suits, which allows for a lower optimal fine. Second, fines carry additional non-pecuniary disutilities, such as stigma and restrictions like losing the right to vote, making them more severe punishments than their monetary value suggests. Tort judgments, on the other hand, do not carry this level of stigma.

3.2 Optimal criminal penalties

I shall assume that most potential criminals are sufficiently rational to be deterrable- an assumption that has the support of an extensive literature.

3.2.1 Limitations on Severity, with Special Reference to Fines

In this section we explore why criminal punishments aren't always death? There is a three-step logic to this answer, first, someone might violate the law accidentally, such as getting into a car accident, if punishment of such accidental crimes is death, then people would avoid driving completely which is socially inefficient. Second, even though law provides safeguards like intent and necessity, there can be errors. Third, the system can solve this issue by choosing less severe punishments while making it easier to prove guilt. This way, even if errors occur, the consequences aren't too severe, and people won't over-avoid certain activities.

Hence, there is a need to balance the severity and the probability of punishment in order to deter people from committing crimes at lowest costs. An existing model suggests:

Expected punishment = amount of fine * probability of getting caught

This formula implies that high fines and low probability of getting caught yield the same deterrent effect as low fines and high probability of getting caught. It is understood that increasing the fine puts no additional costs on the legislative system, hence we should choose a combination with high fines and low probability of getting caught. The economics models would then imply that the maximum deterrent effect at lowest cost would be attained by a combination of very low probability of apprehension (close to zero) and an extremely high fine (close to infinity).

However, the model fails to account for multiple behavioral factors leading to numerous drawbacks and logical flaws in the model. Some of the factors are stated below-

- a) For risk-averse individuals, raising fines is particularly costly because, according to prospect theory, the pain of losing a large amount outweighs the satisfaction of gaining an equivalent amount. This heightened sense of loss increases the overall social cost, even though the extra burden isn't reflected in physical money going to the state.
- b) For risk-seeking criminals, a low probability of getting caught does not sufficiently counterbalance the increased cost of the fine. As a result, the deterrent effect of fines is weaker for them, as they are more inclined to take the gamble despite the higher potential penalty.
- c) Raising fines excessively can lead to a solvency issue, where criminals unable to pay are excluded from the system. In such cases, non-monetary sanctions like imprisonment become necessary. These penalties not only reduce the individual's future wealth but also work in situations where the offender is extremely wealthy and unaffected by fines. After serving jail time, the person's lawful business prospects are likely to diminish, adding to the deterrent effect.

3.2.2 Non-monetary sanctions - afflictive punishment and imprisonment

Afflictive punishments:

These are punishments meant to provide disutility to the offender by inflicting pain upon them, such as, death penalty, flogging, whipping, the strappado, picketing, the wooden horse, ducking, etc. such punishments were prevalent all over the world before and during the pre-nineteenth century, but today we majorly focus on death penalty. The economic logic behind the inefficiency of afflictive punishments is that momentary pain does not deter a person from committing the crime, especially if they have never suffered that pain even once.

The punishment for a murder cannot be just fine. Suppose, the probability of getting caught is less than 1, say 0.5%, then a wealthy individual with ₹1 lakh, willing to commit a crime would only perceive the cost of the crime as ₹50,000 when deciding to commit it, which is far less than their total wealth. This also shows that harsher punishments for violent crimes compared to white-collar crimes shouldn't automatically be seen as class bias; rather, they reflect the need to adjust penalties to account for the lower likelihood of apprehension, ensuring sufficient deterrence. The key point isn't that the punishment for murder should match the victim's loss, but rather that it should be severe enough to make the crime

unprofitable. Imprisoning the murderer for life or, if they are wealthy, confiscating their assets would impose a cost far greater than any potential gain from the crime. This ensures that the punishment outweighs any possible benefit, making the act not worth committing.

The issue of determining the appropriate punishment for murder presents a complex dilemma, with two opposing arguments:

1. **High Initial Penalty:** This view suggests that if the first murder is punished severely, such as with the death penalty, it will dissuade individuals from committing any murder at all. The severity of the penalty serves as a strong deterrent.

2. **Higher Punishment for Additional Murders:** This perspective argues that if the punishment increases with each additional murder, it will discourage further killings. For instance, a murderer may avoid killing witnesses if they know the penalty for multiple murders will escalate. On the other hand, if the punishment for the first murder is already extreme, they may feel there is no additional cost to committing more murders.

Additionally, a murderer serving a life sentence has little disincentive to commit further violence in prison, as their punishment cannot escalate further.

Both approaches highlight the challenges in crafting a punishment system that effectively deters murder at different stages.

Imprisonment:

The dilemma of choosing between low probability of getting caught with longer sentences and high probability of getting caught with shorter sentences has already been discussed in the previous sections. Both approaches result in similar imprisonment costs, but the former saves on police and trial expenses. Extending on this argument is a view that lower probability of getting caught is unfair, as it leads to inequality amongst criminals. However, this is like saying lotteries are unfair because they lead to inequality amongst the players. In both cases, fairness can be maintained if the expected costs and benefits are equal for participants. Just as participating in a lottery is voluntary, so too is engaging in criminal activity—one can opt out by simply not committing a crime, making it, in this sense, a voluntary system.

In economics, a **discount rate** refers to the rate at which individuals value future outcomes compared to immediate ones. Long prison sentences may provide less disutility to offenders if their discount rate is high. For example, if an individual's discount rate is 10% then, 10 years of jail time feels only 6.1 times worse than one year of jail time instead of 10 times.

Similarly, twenty years of jail time feels only 8.5 times worse. Hence, this economic analysis claims that long sentences with less probability of getting caught are inefficient in terms of deterring a person from committing crimes.

Criminal penalties—whether fines, imprisonment, or even death—carry significant costs. Despite these costs, criminal sanctions remain the most effective means of deterring coercive transfers, which are a key focus of criminal law. These considerations have crucial implications for the development of substantive criminal doctrines.

Conclusion

This study provides a comprehensive analysis of criminal law through the lens of economic efficiency, offering a novel perspective that moves beyond conventional moral and ethical arguments. By categorizing crimes as either financially motivated or crimes of passion, and examining the role of criminal law in deterring coercive transfers, this study demonstrates the centrality of economic deterrence mechanisms in maintaining social order. The key finding is that criminal sanctions—whether in the form of fines, imprisonment, or non-monetary punishments—are essential for preventing socially inefficient outcomes, particularly when tort law fails due to issues of solvency or detection. The discussion also highlights the importance of balancing punishment severity and the probability of detection to minimize social costs while maximizing deterrence.

The economic approach emphasizes the necessity of designing criminal penalties that account for behavioral factors, such as risk aversion and discount rates, in determining the most efficient deterrence strategies. Ultimately, this research argues that while criminal law imposes significant societal costs, it remains the optimal framework for preventing both coercive and passion-driven crimes, ensuring that market-based resource allocations prevail over inefficient, coercive transfers. The conclusions drawn from this analysis pave the way for future discussions on refining criminal law to better integrate economic principles while remaining sensitive to practical limitations and ethical considerations.

Future and Limitations

Future research should explore the influence of behavioral economics, particularly discount rates and risk preferences, on criminal behavior and sanctions, while also investigating the cost-effectiveness of preventive policing. Additionally, the impact of socioeconomic

inequality on the fairness and efficiency of criminal punishments, along with empirical evaluations of long-term deterrence, warrants further study. However, this research faces limitations due to its assumption of rationality in criminal behavior, the simplification of coercive transfers, and the generalization of theoretical models across different crime types. Moreover, the exclusion of moral and ethical considerations may limit the practical applicability of its conclusions.

References

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