WHAT CAN ECONOMICS TELL US ABOUT ORGANISED CRIME?

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The tools of microeconomics are increasingly being applied to topics that were traditionally the reserve of other social sciences. From behavioural economics investigating the psychological underpinnings of preferences, to political economics analysing voting patterns, economic techniques are helping to uncover new, and often surprising results. Nowhere is this truer than the economic analysis of organised crime.

Organised crime operates in every country in the world. From mafias in Italy and Russia, to the drugs cartels of Mexico and Columbia, it is widely viewed as a destructive force. Yet, as we will see, economics has uncovered an unexpected and highly controversial result: organised crime can improve welfare!

The market for stolen goods

To illustrate the reasoning, let us consider the market for stolen goods. In the absence of organised crime, individual thieves steal property and supply it to the market. What factors influence the number of thefts that they commit? As with all economic decisions, thieves will weigh up the costs and benefits. Firstly, they face some fixed costs. An individual may need to purchase lock-picks, for example, or a weapon with which to defend themselves. As the goods they are selling are stolen, they cannot go to the police if a buyer double-crosses them. Other costs will vary according to the number of thefts that they commit. They may be caught and punished; the more they steal, the longer the prison sentence. They also forego earnings in the formal sector when they devote time to theft. The benefit of a theft derives from the value of the goods stolen. For simplicity, we will assume that all stolen goods are sold on, rather than consumed by the thief.

Given the structure of a thief's costs and benefits, we can think of them as a perfectly competitive firm. They will supply stolen goods to the market so long as the price they

receive is at least as large as the marginal cost of stealing them in the first place. The market supply curve will be upward-sloping, reflecting the increasing marginal cost that each thief faces.

Where does demand come from? Presumably, consumers of stolen goods behave the same way as consumers in any market. As the price increases, they find that the benefit that they derive from the goods they buy does not justify the expense that they incur. The demand curve will be downward-sloping.

The market for stolen goods can thus be represented as in Figure 1. The market clears at a price of P^C, with T^C goods being stolen and sold on.

Figure 1: The competitive market for stolen goods
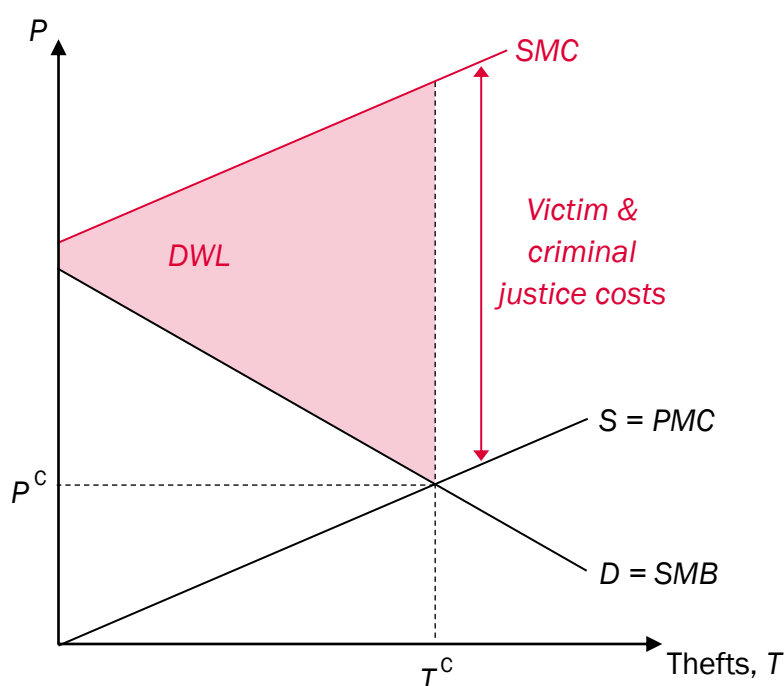
As we are interested in the welfare effects of organised crime, it is important for us to understand whether this market is efficient. The signs are promising. We know that, for the most part, perfectly competitive markets are allocative efficient – unless, of course, externalities exist. It is not difficult to think of third parties (not the thief and not the consumer) who is affected by theft. The victim of the crime will suffer psychological trauma. They are likely to have to replace the good, either paying for it again or facing higher insurance premiums having made a claim. The taxpayer is also likely to suffer

if public resources are spent on a police investigation, prosecution and incarceration. Crime is the source of a large negative externality.

As shown in Figure 1, we assume that marginal social cost of a theft always exceeds the marginal social benefit. Each additional theft inflicts a larger cost on society than the benefit derived by the consumer of the stolen goods. Society incurs a loss every time a theft is committed. The deadweight loss is given by the shaded region. The allocative efficient outcome involves no thefts being committed at all.

Introducing organised crime

How does introducing organised crime into this environment affect the deadweight loss from theft? One important feature of criminal organisations around the globe is that they operate within a defined territory. They act as a simple monopolist in all criminal markets within this territory, including the market for stolen goods.

Monopolists face very different incentives to a perfectly competitive firm, deriving from the fact that they can no longer take the market price as given. They understand that they serve the entire market, and so face a downward-sloping demand curve. If they want to increase the number of stolen goods they sell, they are forced to reduce their price. Otherwise, they will create an excess supply, and the extra goods will go unsold. This creates a trade-off for the criminal organisation that individual thieves do not face. By selling an additional stolen good, they generate revenue equal to the new, lower price. However, they are forced to reduce the price of the units that they would previously sold at the old, higher price. This reduces the organisation's marginal revenue below the price of the last unit sold.

The situation is illustrated in Figure 2. For simplicity, we make the usual assumption that the criminal organisation's marginal cost curve is the same as the competitive market's supply curve. Its marginal revenue curve is below the demand curve, reflecting the need to sell all inframarginal units at a lower price when the quantity of stolen goods supplied is increased.

Figure 2: The criminal organisation's supply decision
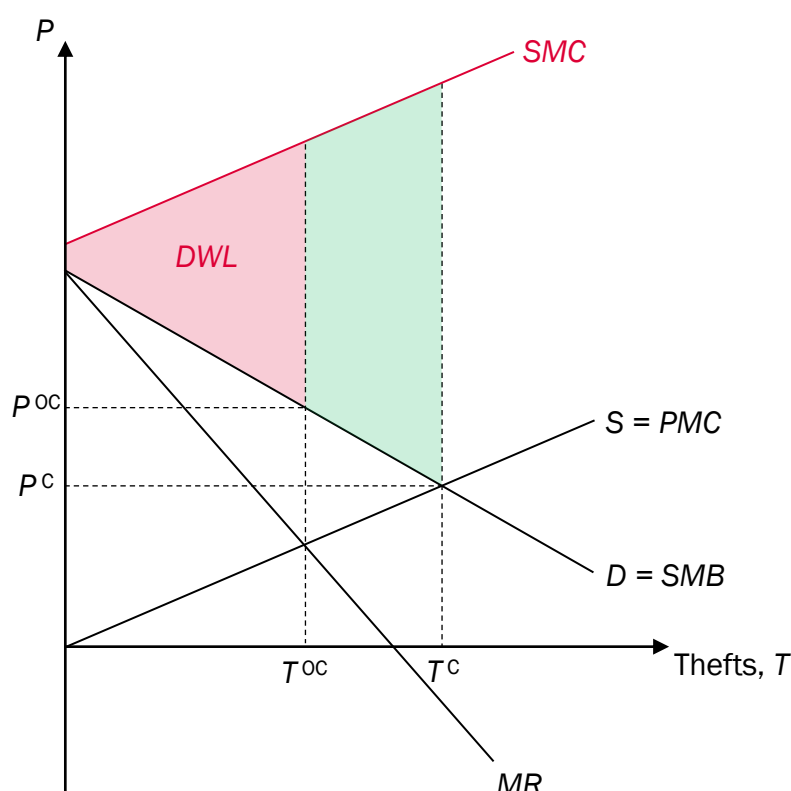
When deciding how much to supply, the criminal organisation employs a marginalist approach. They think about each additional stolen good sequentially, determining whether it will cause an increase or decrease in profits. If the marginal revenue the organisation receives exceeds the marginal cost of stealing the good, the organisation's profit will increase. It will commit the theft and sell it on. Following this line of reasoning, the organisation will commit at least T^{OC} thefts. At this point, the organisation realises that the marginal revenue it will receive from committing another theft is less than its marginal cost of production. Any additional thefts will not cover the cost of committing them, and so will reduce its profits. The criminal organisation commits T^{OC} thefts, selling stolen goods at a price of P^{OC}.

Under normal conditions, the fact that a monopolist produces less than a competitive market gives rise to a deadweight loss. By keeping the price above that of the competitive market, goods would not be sold that provide a net benefit to society. However, these are not normal conditions. Due to the combined criminal justice and victim costs, the allocative efficient outcome involves no thefts being committed.

Rather than making the market less efficient, the presence of a criminal organisation has actually improved welfare.

This is illustrated in Figure 2. By reducing the quantity of stolen goods traded in the market, the criminal organisation has reduced the deadweight loss by the green shaded area. Social welfare, whilst still negative, has increased.

This prediction seems counterintuitive. Surely, the presence of organised crime increases the crime rate, rather than decreases it? Perhaps some of the assumptions we made were dubious, and that has led to an incorrect conclusion. Can we find any evidence in support of the result?

For obvious reasons, data on organised crime is scarce. One of the best measures we have comes from an international survey of entrepreneurs conducted by the World Economic Forum. Amongst a battery of questions on the business environment within the country that they operate, the survey asks how big a problem organised crime is. This gives us a proxy for the extent to which organised crime operates. Figure 3 combines this with data on thefts per 100,000 people in 76 countries from the United Nations Office on Drugs and Crime. As the severity of organised crime increases, the rate of theft declines. Our analysis appears to be correct!

Figure 3: Theft rates (2013)
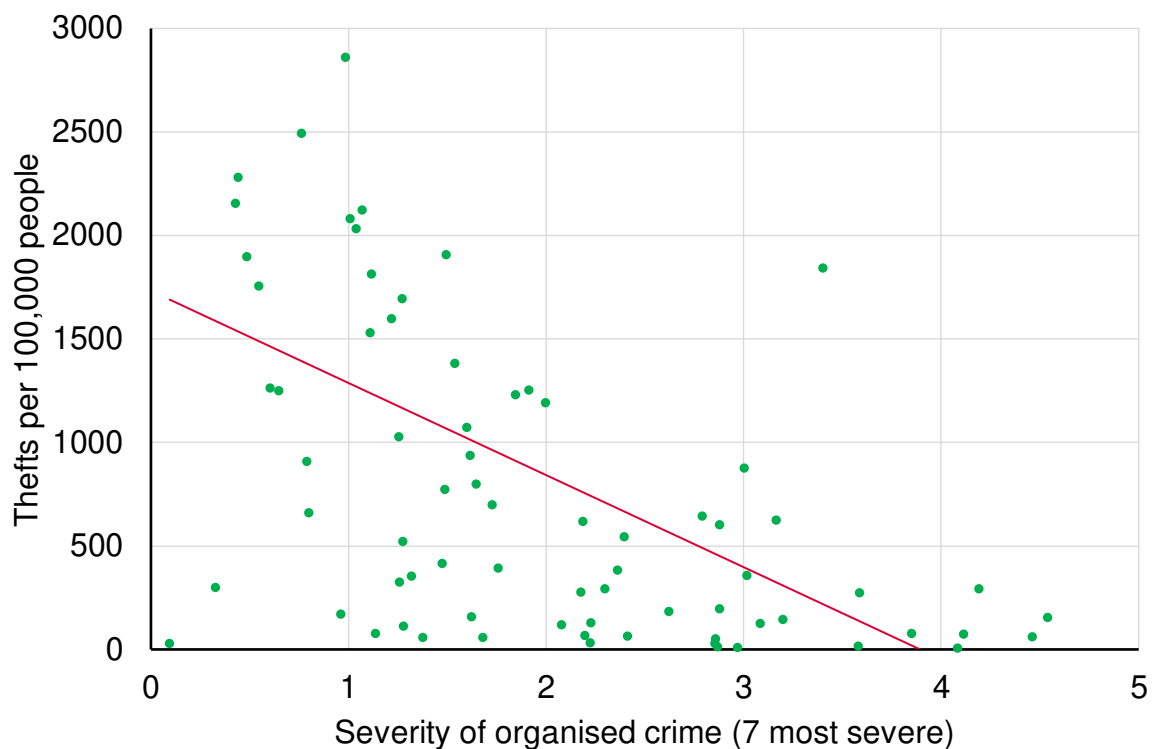
Sources: World Economic Forum Global Competitiveness Index; United Nations Office on Drugs and Crime.

What is the problem with organised crime?

If organised crime is welfare-improving, our analysis suggests that it should be encouraged. With fewer crimes to investigate, criminal justice funding can be diverted to healthcare, or even tax cuts. Fewer victims suffer psychological harm. Yet, if we look around the world, vast resources are employed by states in trying to eradicate it. We must be missing something important.

Indeed, our analysis does not present the complete picture. Whilst it is true that criminal organisations act as monopolists in various markets (drugs, smuggling, prostitution etc.), we need to understand where they derive their monopoly power from. The two sources of monopoly power that organised crime rely upon are ownership of key resources and exclusive rights over resources. Let us discuss each in turn.

As noted previously, criminal organisations operate in a well-defined territory. The pool of potential victims within that territory can be thought of as a key input into the production of stolen goods. It is therefore essential that criminal organisations prevent others from exploiting this resource. In practice, threats of violence are used to provide a deterrent. If potential entrants believe that they will be beaten up, or even murdered, for committing thefts in the organisation's territory, they will think twice about doing so. Criminal organisations jealously guard their reputations, demonstrating their willingness to use extreme violence on a regular basis in order to remind the local population just how dangerous they are.

Figure 4: Homicide rates (2013)
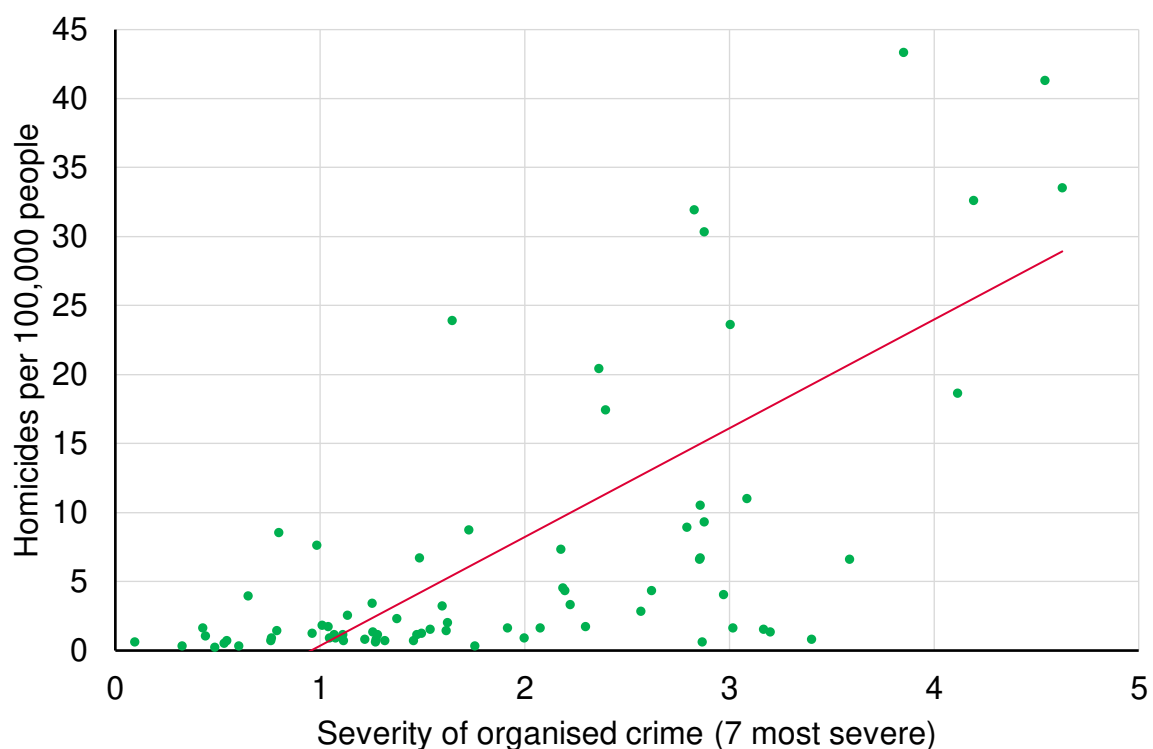
Sources: World Economic Forum Global Competitiveness Index; United Nations Office on Drugs and Crime.

Figure 4 shows the relationship between the same severity of organised crime score used in Figure 3 and each country's homicide rate. There is a positive trend. Clearly, the external cost of homicide is much larger than that of theft, creating a very large deadweight loss.

Exclusive rights are granted by the government. Given the illegal nature of organised crime's activities, one would think that these rights would not be forthcoming. However, as anyone who has watched a gangster movie will know, organised crime often have officials 'in their pocket.' They pay bribes, corrupting officials to ignore their activities or even manipulate policy in their favour. Figure 5 shows the relationship between organised crime and entrepreneurs' perceptions of the importance of bribes in their country:

**Figure 5: Importance of bribes (2013)**
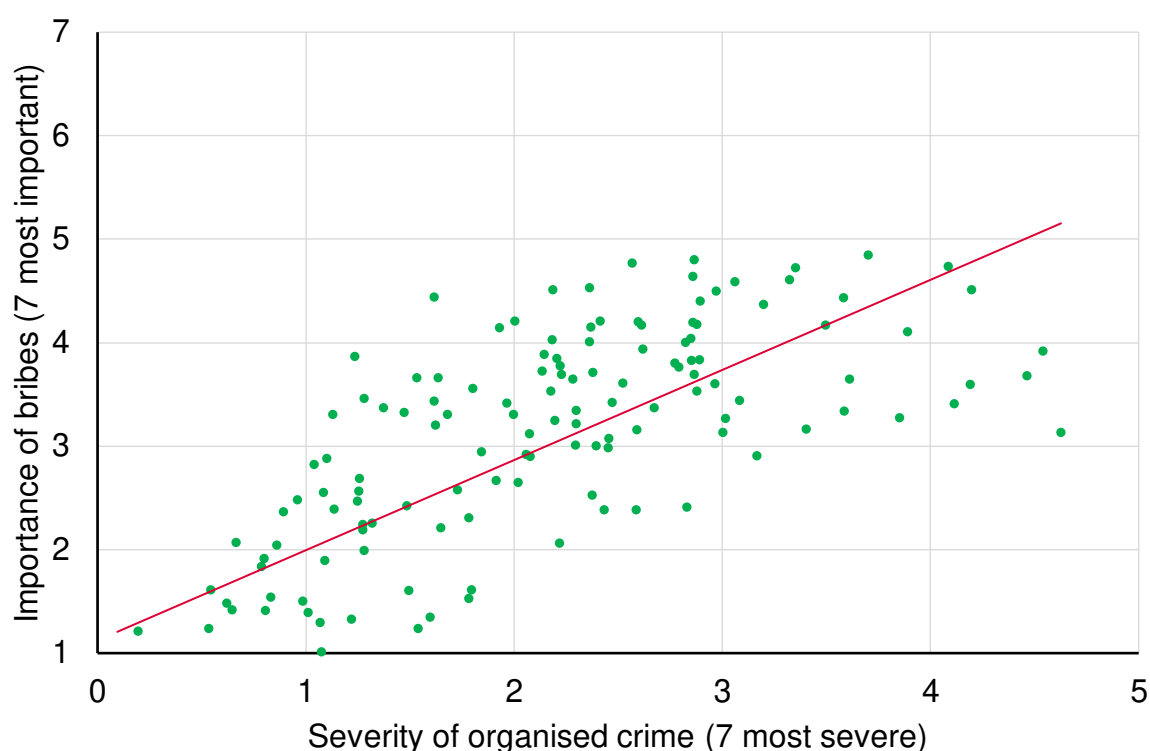
Organised crime creates a culture of corruption. This creates an immediate cost for society, as public resources are not allocated to maximise welfare; they are used to favour those willing to pay the bribes. Over a prolonged period, this undermines trust in institutions that are essential for the economic development of a country, as Figures 6 and 7 show. Without faith in law enforcement to prevent cheating, asymmetric information causes trade to decline. Untrustworthy politicians make operating in the country a much more risky prospect, deterring foreign direct investment.

Figure 6: Reliability of the police (2013)
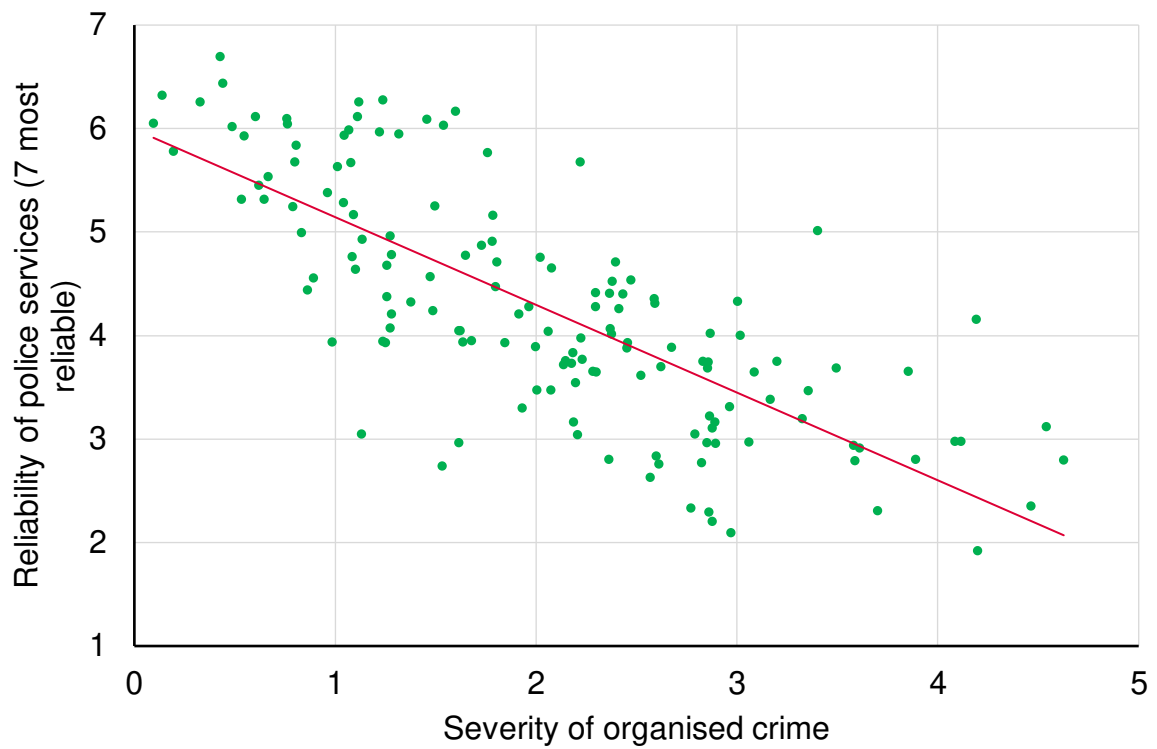
Figure 7: Public trust in politicians (2013)
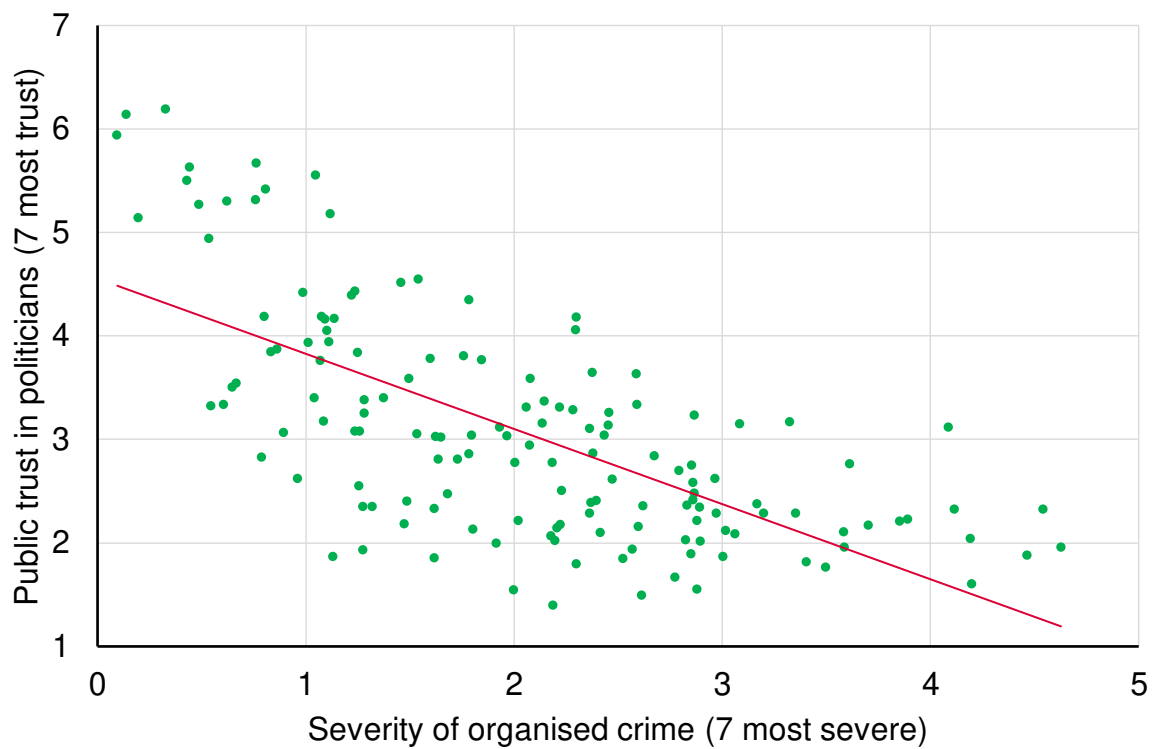
Conclusions

Economics sheds new light on the effect that organised crime has on an economy. At first pass, it seems that criminal organisations improve welfare. By acting as a monopolist, they reduce the number of crimes committed in order to keep the value of each crime high. This leads to a smaller deadweight loss for society.

Whilst this result finds some support in the data, a more careful analysis is required. Organised crime cannot rely on the traditional channels to maintain its monopoly power. The methods it employs instead are extremely destructive. They use violence to maintain control over their territory. Whilst this deters entrants, the need to demonstrate a willingness to use violence is very harmful. Organised crime also undermines formal institutions by creating a culture of corruption. The deadweight loss caused through these channels vastly outweighs any gains from lower theft rates. For this reason, it is right that resources should be spent tackling organised crime, rather than encouraging it.