

Contemporary Comment

An Economics Perspective on Harsher Penalties

Will longer sentences have a deterrent effect on the crime rate? This is a question which has long been of interest to both criminologists and economists whose research interest focuses on modelling criminal behaviour. The relationship between the crime rate and sentencing has, in recent times, also captured the interest of the media and public alike. The sentencing issue, for example, was at the heart of the law and order debate in the lead up to the last New South Wales state election. The incumbent Fahey government promised to introduce new legislation designed to get tough with repeat offenders. The incoming Carr government, while not opting for 'three strikes', promised to make 'life mean life' for people convicted of 'horrific' crimes such as multiple homicide. The related debate on capital punishment also surfaces in a periodic manner — for example last year when the Western Australian government said it was considering holding a referendum on its reintroduction. Two backbenchers in the South Australian Parliament also introduced private member's Bills with a view to getting public support for the reintroduction of capital punishment (Fife-Yeomans 1995).

There is, of course, a lot of criminological literature to suggest that longer sentences will not deter potential criminals. Most of this literature is well known. However, what may be less familiar to researchers in criminology is the considerable economics literature on the subject. The aim of this note is to provide a brief overview of the theoretical and empirical contributions made by economists on this issue, with the hope that this will result in a richer and wider debate on the merits of longer sentences.

The economic approach to crime

The economic approach assumes that the individual is rational in the sense that they weigh up the benefits and costs of committing crime. The benefits may be pecuniary or non-pecuniary (such as hate, revenge or sexual gratification). The costs typically take the form of apprehension and punishment if convicted. There are some crimes, where the individual acts on the spur of the moment without stopping to consider the consequences of their actions, which rational choice cannot explain. Nevertheless the economic approach can explain most forms of premeditated crime reasonably well.

Multiple regression (measuring the extent to which a dependent variable can be 'explained' by various independent variables) has been used to empirically test the economic model. The per capita crime rate is the dependent variable and there are a series of independent variables measuring inter alia the probability of apprehension, the severity of the sentence and returns to legal and illegal activity. The empirical studies have used both aggregate and sample data and have employed a variety of sample observation points including precincts, counties and states. Multiple regression analysis has the advantage that it provides a powerful means of disaggregating the multiple variable reasons for criminal action. This can provide important insights into human behaviour which are not available with the simple bivariate correlation techniques often employed by criminologists.

There is no consensus in the literature, but most studies have found that there is a statistically significant inverse relationship between the criminal justice variables (the probability

of apprehension and the severity of the sentence) and the crime rate. Most studies though have found that the elasticity of the crime rate with respect to apprehension (the effect which apprehension rates have on crime) is larger than the elasticity of the crime rate with respect to sentence length (the effect longer sentences have on crime). Nevertheless, the true relationship between the crime rate and sentence length is clouded by the failure to separate the deterrent and incapacitation effects of imprisonment.

In those studies that have found a statistically significant negative relationship between crime and sentence length the effect of longer sentences could be due to deterrence, rehabilitation or incapacitation. The deterrent effect will be working if potential offenders are less likely to break the law when longer sentences are served by others. The rehabilitation effect will be operating if, after serving a longer sentence, those released are less likely to revert to crime. The incapacitation effect refers to a reduction in crime resulting from the fact that criminals cannot commit crime while in prison (see Lewis 1986). When deciding whether longer sentences are an effective means to deter crime the relative merits of deterrence and incapacitation carries important policy ramifications.

Deterrence or incapacitation?

There are a number of problems which have hindered attempts to measure the magnitude of the incapacitation effect. Most studies focusing on the incapacitation effect model a criminal career as a stochastic process treating incapacitation as a disruption to that process. The National Panel of Research on Deterrent and Incapacitative Effects (Blumstein et al 1978:66–67) point out that this approach to modelling rests on a number of untested assumptions. There are two assumptions which are particularly questionable: (i) individual crime rates are assumed to be independent of the probability of arrest and (ii) individual crime rates are assumed to be independent of individual career lengths. While these limitations cannot be ignored when considering the policy implications, stochastic models have, nevertheless, proved useful in predicting the incapacitative effects of different sentence lengths. The models also facilitate exploration of the implications of various changes in the model's assumptions. Shinnar and Shinnar (1975), for example, performed a number of sensitivity analyses and found that their results were robust with respect to a variety of assumptions as to the distribution of individual criminal career lengths.

The empirical literature measuring the incapacitation effect, using data sets from overseas has obtained mixed results. Shinnar and Shinnar (1975), Greenberg (1977) and Wolpin (1978) are a few of the authors who have found that the incapacitation effect, relative to deterrence, is very large for most types of crime. Ehrlich (1981), on the other hand, is an exception who found that for most crimes, deterrence accounted for 90 per cent of the estimated elasticity with respect to longer sentences and that the incapacitation effect was, in relative terms, small (see Cohen 1978; Lewis 1986 for a more extensive review of this literature).

There have been few attempts to empirically test the economic model using Australian data and there are no studies which attempt to explicitly measure the incapacitation effect of imprisonment. Withers' paper (1984) published more than 10 years ago, uses pooled cross-sectional and time-series data for 1963–64 to 1975–76 to test for Australian states and territories as a whole. Withers' conclusions were that (i) committal and imprisonment rates were the most reliable determinants of variations in crime and (ii) the pecuniary and attitudinal variables (such as unemployment and education) were either statistically insignificant or highly sensitive to the specification of included variables. In a more recent study (Smyth 1995), I test the economic model using crime data for New South Wales Local

Courts and socio-economic data from the 1991 National Census. The sample observation points were 25 Australian Bureau of Statistics statistical divisions for New South Wales and subdivisions for Sydney. The results in this study are somewhat clouded because of measurement difficulties, but seen as a whole they suggest, contra to Withers, that neither deterrence nor pecuniary and attitudinal variables are, on their own, good indicators of variations in the crime rate.

However, it should be pointed out that the latter paper did not explicitly attempt to measure the severity of the sentence. The reason is that the court system is the same across New South Wales and therefore Magistrates are required to apply the same principles in sentencing irrespective of where they are sitting. The study therefore uses the probability of conviction given apprehension as a proxy for punishment. Having said this the coefficient on the apprehension variable was negative and statistically significant. The coefficient on the conviction variable, though, was statistically insignificant. With Local Court offences the incapacitation effect is going to be fairly small. This is because, compared with higher court offences, the number of offenders who receive prison sentences is relatively low and the length of the sentence they receive will not be as long, given that the offences are not as serious as those tried in the higher courts. The statistically insignificant values for the conviction variable therefore gives some support to the view that the inverse relationship between sentence length and crime rates found in some studies may be due largely to the incapacitation effect rather than the deterrent effect. While any conclusions along these lines are subject to reservations about using conviction as a proxy for punishment, if this was indeed the reason for the statistically insignificant co-efficients on the conviction variable, then the policy implications would seem to be far reaching.

Policy implications and conclusion

If the objective of the criminal justice system is to deter potential criminals rather than simply housing those who have already committed crimes then the size of the deterrent effect relative to the incapacitation effect is a central issue. While the empirical work, using economic models, on this point is not conclusive, there is still a lot of evidence to suggest that to the extent that longer sentences reduce crime rates this is due, in the main, to incapacitation rather than deterrence. This, in turn, raises serious questions about the efficacy of longer sentences (which, in this context, includes the reintroduction of capital punishment) as a means of stopping individuals turning to crime.

If longer sentences are not the best way to deter potential criminals then what is the answer? Taken together both the economic model of crime and criminological micro-studies suggest there is no single answer. The economic model suggests that the most effective deterrent is to increase the probability of apprehension through, for example, an increased police presence on the streets. The economic model also suggests, however, that policies designed to raise educational standards and reduce unemployment are an important means of making legitimate earning activities more attractive relative to criminal activities. There are clearly no easy solutions, particularly given that recent debates on law and order in New South Wales and in Western Australia show how easy it is for rational discussion to be stymied by myth and misperception. Nevertheless if the different state legislatures who have pursued (or intend to pursue) stronger sentencing laws are serious about dealing with crime then, at least, they need to examine all the options in a rational and coherent framework.

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