

Imprisonment and the Crime Rate in Ireland*

EOIN O'SULLIVAN

Trinity College Dublin

IAN O'DONNELL

University College Dublin

Abstract: Between 1995 and 1999, the number of indictable crimes recorded in Ireland dropped by 21 per cent and the daily average prison population rose by 33 per cent. The Government has claimed that a causal relationship exists here: more prisoners means less crime. The purpose of this paper is to map recent trends in the use of prison and to explore the interaction between rates of crime and rates of imprisonment.

I INTRODUCTION AND OVERVIEW OF IRISH PRISON SYSTEM

Prison is the ultimate sanction available to the State.¹ For this reason, to say nothing of its financial and social costs, it should be applied sparingly and with precision. In recent years, however, the daily average number of prisoners has grown swiftly. To understand the current trend, it is worth giving a brief outline of Irish prison history.

In 1877, the *General Prisons (Ireland) Act* established a General Prisons Board and provided that central government would have both administrative and financial responsibility for the operation of the Irish penal system. This new centralised system replaced a devolved and localised system (Carroll-Burke, 1999; Hinde, 1977a, 1977b). The General Prisons Board assumed

* The authors are grateful to the editor and the two anonymous referees for their constructive comments.

¹ Capital punishment was abolished in 1990, whipping in 1997; although both penalties had fallen into disuse many years before.

responsibility for nearly 4,000 prisoners, predominantly males (Smith, 1990), distributed between 38 local county prisons, 96 bridewells and four convict prisons. When the General Prisons Board was dissolved in 1928 and its functions transferred to the Department of Justice, there were eight prisons and a Borstal operating in Ireland with a daily average population of 729.² The number of institutions declined steadily from this period and by the mid-1950s, there were only three prisons, with a daily average in custody of less than 400 (Osborough, 1985). While there were occasional criticisms of the operation of the prison system (Fahy, 1944; D. 83222, 1945; Irish Labour Party, 1946; Cowen, 1960), in general this was a marginal and minor area of public policy.

From the early 1970s, the daily average number of prisoners began to rise, exceeding 1,000 in 1975. Crime rates also increased dramatically during this period, from, on average, less than 20,000 recorded indictable offences each year in the 1960s to over 100,000 in 1983 (O'Donnell and O'Sullivan, 2001). As the prison population grew, the penal system came under increasing strain (McCullagh, 1988). This situation was exacerbated by the outbreak of conflict in Northern Ireland, which contributed to an escalation in armed crime throughout the country, an increased case load for the Special Criminal Court and the need to make special provision for politically motivated prisoners (McEvoy, 2001; Mulcahy, 2002; Tomlinson, 1995).

To cope with these pressures, the number of prison places was increased. This provided some short-term relief but by the early 1980s, additional capacity was required. In 1983, prison governors were for the first time permitted to accommodate more than one person per cell. However, this practice did not provide adequate relief and increasing reliance was put on Temporary Release (TR) as allowed under the *Criminal Justice Act 1960*.³ By the mid-1990s, the crime rate was at an all-time high, the prisons were overcrowded and the safety valve of TR was bringing the system into disrepute.⁴ When the Department of Justice, Equality and Law Reform relinquished day to day responsibility for the management of prisons to the Irish Prisons Service in 1999, as recommended by the Expert Group (Expert

² The Borstal in Clonmel (Osborough, 1975) that opened in 1907 was established following the recommendations of the 1895 Report of the Departmental Committee on Prisons, more generally known as the Gladstone Committee (see Garland, 1985).

³ In the 1970s, full TR was rarely resorted to; in the 1980s, it was granted, on average, less than 1,500 times per annum; but by the early 1990s, it was being granted on over 3,500 occasions each year.

⁴ A number of important review groups concluded that to reduce the growing dependence on imprisonment would require a major shift towards punishment in the community (Prison Study Group, 1973; Commission of Enquiry into the Irish Penal System, 1980; Council for Social Welfare, 1983; and Committee of Inquiry into the Penal System, 1985).

Group 1997, see also Aylward, 2002) there were 15 prisons and a daily average population of nearly 3,000 (Expert Group, 1997). By the end of 2003 it is likely that the capacity of the prison system will exceed 4,000 (Irish Prisons Service, 2001, p.17).

Over the past decade a number of estimates have been produced of the amount of prison space required nationally. In 1994, the Department of Justice put the demand for extra prison accommodation at 210 places (Department of Justice, 1994, p. 32). By 1997, this had risen to 840 (Department of Justice, 1997a, p. 111; O'Donnell, 1999, 2001). A change of Government in 1997 resulted in a further revision to 2,000 places and a major prison building programme was begun (Department of Justice, Equality and Law Reform, 1998, p. 39).⁵

These additional prison cells were seen to have played a crucial role in the fight against crime. In a special Dáil Debate on the "Zero Tolerance" approach to crime, the Minister for Justice, Equality and Law Reform Mr John O'Donoghue, T.D. stated "I know that there are some of you who have expressed unease about, and even outright opposition to, the increase in prison places, but whatever may be said about the harshness of this as an approach to tackling what was a very bad crime problem, there is no doubt that it has had a significant bearing on the drop in crime in recent years" (Dail Debates, 30 January, 2002).

II THEORETICAL MODELS OF CRIMINAL BEHAVIOUR

The now considerable economic literature that has explored criminal behaviour is underpinned by two essential concepts: rational choice and deterrence. The seminal paper in this area is Becker (1968). It is argued that potential criminals, as rational agents, weigh up both the expected utility from criminal acts and the likelihood of apprehension and punishment by those responsible for criminal law enforcement. Individuals who are considering whether to commit crimes are assumed to evaluate both the risk of being caught and the associated punishment. Thus, potential criminals will alter their behaviour in response to changing incentives. By increasing the risks associated with crime, through escalating the certainty or severity of punishment, less crime should take place. In this model, crime reduction can

⁵ The reason for this policy shift lay, in large part, in the law and order politics which followed the murders of Garda Jerry McCabe and journalist Veronica Guerin in June 1996 and a number of fatal attacks in rural areas earlier in that year (McCullagh, 1999). These killings were followed by public demands for action which were translated into promises of more police, more prisons and more repressive legislation (O'Donnell and O'Sullivan, 2001, 2003).

occur through reducing the benefits of the crime (financial rewards, status, sexual gratification) and increasing the costs (probability of apprehension and subsequent punishment). Criminals from this perspective should be seen as rational, self-interested agents whose unlawful behaviour is best understood as an optimal response to the net incentives created by governments *via* expenditures on the criminal justice system.

Building on Becker's work, Ehrlich (1996, p. 44) observed that there can be both positive and negative incentives. Negative incentives are those associated with the apparatus of the criminal justice system and aim to prevent crime from occurring through intensive policing and extensive use of various punishments, particularly incarceration. Positive incentives aim to promote participation in licit rather than illicit activities and are typically administered through employment, rehabilitation and educational programmes. Which incentive mechanism has the greatest impact on reducing criminal activity is subject to considerable discussion. Available economic evidence suggests that deterrence measures are more significant, but caution is required in interpreting such results (Corman and Mocan, 2002; Silberman, 1976). Bar-Gill and Harel (2001) analysed the effect of crime rates on sanctions rather than *vice versa*, and argued that this dimension needs to be incorporated into future models.

Levitt (1999, p. 353) argued that empirically, "it is often difficult to distinguish between deterrence (which is a behavioural response) and incapacitation (in which reductions in crime are attributable solely to criminals being unable to commit crimes because they are locked up)."⁶ He went on to identify a number of limitations to the deterrence model with the following comments (*ibid*):

In the real world, however, there are a number of obstacles to effective deterrence. First, criminals may be poorly informed about the likelihood of detection, or may be overly optimistic about their own criminal activities. Second, whereas the benefits of crime accrue immediately, the costs of crime (e.g. imprisonment) are administered with a substantial lag. To the extent that criminals are myopic, even large punishments will have little weight in the current decision of whether or not to commit a crime. Finally, among certain groups, serving time in prison is seen as a rite of passage so that being arrested is sometimes viewed as a positive outcome by the criminal.

⁶ It should be remembered that prisoners can continue to commit crimes against their fellow inmates. The victim survey conducted by O'Donnell and Edgar (1998) found high levels of theft, robbery and assault in English prisons. Sabo *et al.* (2001) showed how the threat of rape is a defining feature of the prison experience in the United States.

Prison cells are often held out by politicians as an antidote to crime. It is suggested that a kind of hydraulic relationship exists whereby if imprisonment rates are forced up, crime rates will inexorably be pushed down. There are a number of possible mechanisms at work here. First, the experience of prison can change the inclination of those incarcerated to engage in crime when they are released. This can occur either because they have been reformed/rehabilitated *via* educational, drug treatment and other programmes (Cavadino and Dignan, 2003, pp. 37-42), or are fearful of returning to prison and its attendant violence, indignities, deprivations and humiliations (Parenti, 1999, pp. 182-210). There has been a resurgence of interest in rehabilitative programmes for prisoners and recent years have seen a growing literature around “what works” for offenders (Sherman *et al.*, 1998; Goldblatt, and Lewis, 1998; O’Donnell, 2002a).

Second, the threat of incarceration can deter potential offenders from engaging in crime as described above. The fear of loss of freedom and stigmatisation that may lead to discrimination in terms of employment and accommodation stemming from a period of incarceration may act as an incentive to avoid criminal activity. However, as Levitt has noted, such deterrence may not operate uniformly and may be structured by one’s class and social environment.

Third, incarceration prevents those crimes that would have been committed by inmates had they been at liberty. In other words, imprisonment rates and crime rates covary negatively. The best-known exponent of this view is probably Murray (1997, p.14) who claims that “deterrence fails only because the odds of being caught and imprisoned aren’t high enough, or because the sentence is not harsh enough. Whether prison can deter crime is not in question”. However, contrary to this view, others see higher imprisonment rates causing crime over the longer term. High rates of imprisonment are said to break down the social networks that guide individuals away from crime; remove adults who would otherwise nurture children and supervise and mentor youth; deprive communities of income (both licit and illicit); stigmatise whole groups of people; disenfranchise a significant proportion of inner-city communities; and engender a deep resentment toward the legal system (VERA Institute of Justice, 1996; Lynch and Sabol, 2000).

From the mid-1970s, interest in incapacitation as a method of crime prevention grew, particularly in the USA, due to concerns about the efficacy of rehabilitation, rising crime rates and the public’s fear of crime (Martinson, 1974; Radzinowicz and King, 1977; Lee, 2001; Garland 2001a). Studies examining the association between incarceration rates and arrest rates within jurisdictions have not found any consistent correlation between the two variables (Zimring and Hawkins, 1995). Differentiating between correlation

and causality is critical when analysing the impact of crime policies. Crime rates and incarceration rates may both be influenced by other factors such as policing, demographic, labour market, social, cultural, or normative changes (see for example, Grogger, 2000). As a consequence, any apparent relationship may be spurious.⁷

In the first major review of this important area of public policy, the US National Academy of Sciences Panel on Research on Deterrent and Incapacitative Effects (see Blumstein *et al.*, 1978) reported that the research offered widely divergent estimates of the incapacitative effect of imprisonment (MacKenzie, 1998). The panel concluded that the primary disagreement was over the value of the individual crime rates that were used to estimate the effectiveness of incapacitative policies. That is, models of the crime reduction effectiveness of imprisonment required estimates of how frequently individuals commit crimes when they are free. There were no generally accepted estimates of these rates nor did researchers know how long criminals continued to commit crimes (i.e. the length of the average “criminal career”) (see Laub and Sampson, 2001). In general, reviews of these “collective” incapacitation strategies demonstrated a modest reduction in crime combined with substantial increases in prison populations (see Von Hirsh *et al.*, 1999, for a concise and authoritative review of recent research).

The finding that large differences exist in individual offending rates (West and Farrington, 1977; Wolfgang, Figlio and Sellin, 1972; Wolfgang, Thornberry and Figlio, 1987) moved attention towards a more selective strategy of incapacitating a targeted group of offenders. Research suggested that a relatively small number of individuals (6 per cent) accounted for a disproportionately large number of the arrests (52 per cent) in a Philadelphia birth cohort sample (Bernard and Ritti, 1991). That is, a few people were responsible for a large amount of crime. Advocates of incapacitation argued that crime would be reduced if these high frequency offenders were identified and placed behind bars. For example, Greenwood (1982) argued that increasing the length of time served by the predicted high-rate offenders while at the same time reducing the time served by those who were predicted to be low-rate offenders could reduce crime without a corresponding increase in prison populations. However, selective incapacitation to be effective, it must be possible to accurately identify the offenders who will commit the most crimes in the future (DiIulio, 1996).

⁷ See for example the competing explanations for the dramatic decrease in homicide and other crimes in New York during the 1990s. Some argue that it is explained by innovative policing strategies, especially a focus on low-level disorder (Kelling and Sousa, 2001). Others put forward the view that it was due to demographic changes and the decline in the use of crack-cocaine (Bowling, 1999). Identifying what mechanism is at work, can become a value judgement as much as a statistical exercise (Harcourt, 2001).

However, it is exceedingly difficult to target those who will become persistent offenders (Gottfredson and Gottfredson, 1986, 1994). While arrest rates are high for adolescent males, their desistance rates are also high. This means that a broad policy of incarceration for youthful offenders will inevitably lead to the locking up of a large number who, without imprisonment, would quickly outgrow criminal behaviour patterns. The second problem is that incarcerating low-risk youth could have detrimental effects. Exposing young males to the damaging consequences of prison may make it less likely that they outgrow their criminal behaviour at the usual pace (Golub, 1990).

Nagin (1998) concluded that there is evidence for a general negative effect of imprisonment on crime but that this finding tells us little about the wisdom of any given policy. To assess the likely effect of specific policies, Nagin argues that we need to know (1) the long term as well as the short term effects of incarceration, (2) the link between risk perceptions and actual policy, (3) the form in which policies are implemented across population units, and (4) the link between intended and actual policy.

As the American prison system continued its expansion during the 1990s,⁸ a number of methodologically sophisticated studies were published on the crime control effect of “mass incarceration” (for an overview, see Garland, 2001b). Marvell and Moody (1994) reported that the size of the State prison population had a significant, short-term negative impact on crime. Expressed in terms of crimes prevented, “each additional State prisoner averted at least 17 index crimes on average, mostly larcenies” (ibid, p.136). Using a somewhat different approach, Levitt (1996) found that a 10 per cent increase in the prison population led to a 3–4 per cent decline in index crimes. More recently, Liedka *et al.* (2001) found that a 10 per cent increase in the prison population led to a 0.6 per cent decline in crime rates or that an additional 20 prisoners per 100,000 population would be expected to produce a decline of 29 crimes per 100,000 population. They argued that the crime control effects of incarceration get smaller as the prison population gets larger (see also Gainsborough and Mauer, 2000).

The bulk of the research that has attempted to quantify the relationship between imprisonment and the crime rate is based on data from the United States. Looking at England and Wales, Tarling (1993, 1994) came up with the following broad rule of thumb: an increase of 25 per cent in a country’s prison population will reduce the rate of recorded crime by 1 per cent.

⁸ In 1980 there were around 500,000 persons held in prisons or jails in the United States of America. By 2001, this number had risen to 2,100,146 (Harrison and Beck, 2002).

While a number of studies have been conducted on the characteristics of Irish prisoners (e.g. O'Mahony, 1997) there have been few multivariate analyses. In this journal more than a quarter of a century ago Bacon and O'Donoghue (1975) sought to establish optimal levels for expenditure on controlling crime against property. They reported the difficulties posed to economic analysis by the absence of adequate data. The problems posed by poor quality data persist today. McCullagh (1992) examined the relationship between unemployment and imprisonment between 1951 and 1988. He found that there was no strong direct relationship between these two variables in the period under review. The most sophisticated study to date was an econometric analysis of burglary in Ireland between 1950 and 1998 (Denny *et al.*, 2001). These researchers found that the level of crime was positively influenced by the number of young males in the population. Two criminal justice system variables (the detection rate and the custody level) were important negative determinants of the growth in crime.

While it is almost universally accepted that increased incarceration rates must have some effect on crime rates, a great deal of controversy exists about the magnitude of this effect. Researchers who have studied the effects of incapacitation and deterrence have generally concluded that these policies have had a relatively modest impact on reducing crime. As Currie puts it in his review of the evidence "...the relationship between violent-crime rates and rates of incarceration is blurry indeed. This isn't to say that there is *no* correlation, but rather that the connections are extremely complicated and tend to be overwhelmed in importance by forces operating outside the justice system" (1998, p. 57, emphasis in original). Frequently, however, this crime prevention effect is associated with disproportionate increases in prison populations. Issues of concern relate to whether this reduction is worth the expense of building and maintaining penal institutions, and whether there are other more cost-effective methods of crime reduction.

III EMPIRICAL MODEL AND DATA

The purpose of this article is to map recent trends in the use of prison and to explore the relationship between rates of crime and rates of imprisonment, using a technique developed by Spelman (2000a, 2000b) for the United States. The available national and international statistics are presented. To our knowledge this is the first time that such an analysis has been attempted using Irish data. It is to be hoped that this will contribute, in some small way, to the development of an evidence-based approach to penal policy making.

Spelman's model examined what would have happened to the crime rate in the United States if the prison system had not begun to expand dramatically in the 1970s. He suggests that to answer this question requires only the actual changes in rates of crime and imprisonment and an estimate of the elasticity (i.e. the percentage change in the crime rate associated with a 1 per cent change in the prison population). Estimates of elasticity vary widely. For example, in a survey of prison effectiveness across 50 American States between 1971 and 1997, Becsi (1999) suggested elasticities of -0.05 for violent crime and -0.09 for property crime. Using national time-series data for the US between 1958 and 1995, Marvell and Moody (1997) came up with -0.79 for violent crime and -0.95 for property crime.

Despite an extensive trawl of the criminological and economic literature it has not been possible to uncover elasticities for small European countries that might be more appropriate comparators for Ireland than the US. This may well reflect the nature of the debate in Europe where economists appear not to have engaged in criminological controversies and criminologists tend to operate largely from a sociological perspective. For example, in the most recent *Oxford Handbook of Criminology* (3rd edition, 2002), virtually no reference is made to economic models of crime prevention. It also may also reflect the fact that while prison populations have grown in the EU over the past decade, the scale of growth is not comparable to the US.⁹

Based on a close examination of the available research findings, Spelman concluded that given the wide variety of estimates, a reasonable range might be anywhere between -0.10 and -0.30 , and perhaps even higher for certain crime categories. He selected three different elasticities (-0.15 , -0.30 , -0.45) to compare actual with predicted trends in crime.

It is not possible to calculate elasticities specific to the Irish situation due to the absence of adequate published data on the operation of the criminal justice system. To conduct a thorough analysis would require data on arrest rates, the proportion of arrests that result in successful prosecution, the sentences awarded in each case and the length of the typical criminal career. Unfortunately, none of this information is available in Ireland. This makes it impossible to estimate elasticities with any degree of precision and while we await the development of a local body of research, we have adopted the elasticities employed by Spelman and applied them to the Irish data. In the circumstances, this appears to us the most reasonable way in which to proceed and provides a starting point for future analyses.

⁹ In 2000, the US prison population was approximately five times the size of the prison population in EU member states. Between 1990 and 2000, the prison population in the United States increased by nearly 70 per cent compared to under 40 per cent in the EU (Barclay and Tavares, 2002).

In any event the search for the most accurate measure of elasticity is bound to remain elusive. As Spelman (2000b, p. 484) put it:

Policy makers looking for a single, best estimate are in error. We will never know enough about the relationship between prisons and crime to reduce our knowledge to a single point. Still, the recent studies suggest that our best guess as to the nationwide elasticity should be in the neighbourhood of -0.30 . Any figure between -0.20 and -0.40 can be defended, and we should not be too surprised to find that the result is anywhere between -0.10 and -0.50 .

Data Limitations

Any attempt to research crime and punishment in Ireland is made exceedingly difficult by a lack of reliable statistical sources. As a result, findings must be hedged with an unusually high number of caveats.¹⁰ For example, the Garda annual report on crime is silent about crimes that are not reported to the Garda (or observed by them), or that are reported but not recorded. The gap between the official picture and the true extent of crime is narrowest for very serious crimes such as murder or for offences such as car theft where the police must be notified if an insurance claim is to be made (Central Statistics Office, 1999, Watson, 2000). Offences where the Garda Síochána is not the prosecuting authority are excluded from the official crime statistics. Examples include television licence evasion, welfare and revenue fraud, health and safety violations. In addition, the total tally of crime is further depressed by what are known as “counting rules”. These internal recording guidelines dictate that where two or more offences take place in a single episode, only the most serious one is counted. Also, a continuous series of offences against the same injured party involving the same offender counts as a single offence (O’Donnell, 2002b).

In terms of the classification of crimes, indictable crimes are not necessarily the most serious matters. Theft of a bicycle and shoplifting are designated indictable, and may lead to a trial by judge and jury. Possession of knives, drink driving and threatening or abusive behaviour are not, and are dealt with to conclusion by the District Court. The majority of assaults and drug offences are included in non-indictable categories. For legal reasons larceny (theft) of a

¹⁰ For critiques of the limitations of official data see Rottman (1976; 1984); McCullagh (1996); O’Malley (2000); O’Donnell and O’Sullivan (2001). The information presented in this paper has been carefully collated and cross checked. Despite our best efforts there may still be slight discrepancies, as the published sources are not always consistent.

car is indictable whereas the unauthorised taking of a car is not. While the same behaviour is involved in either case and the consequences for the victim may be identical, there is a difference in recording.¹¹ Generally speaking, however, indictable crimes are those that lead to prison sentences and the vast bulk of non-indictable crime involves minor road traffic matters. The political and public debate about crime focuses on the indictable offences, and it is changes in the level of indictable crime that are used to indicate the success or otherwise of crime control policies.

The Garda annual statistics traditionally divided indictable crime into three major categories: crimes against the person (e.g. murder, wounding, rape); crimes against property with violence (e.g. burglary, arson, robbery); and larceny (e.g. shoplifting, car theft, fraud).¹² On average, the latter two categories have accounted for about 97 per cent of recorded crime each year since 1960. Violence against the person accounts for just over 2 per cent of the total.¹³ The same classification is used by the prison service to record persons committed to custody under sentence.

In relation to the prison statistics, some prisoners are in custody on remand, although this number has traditionally been small (typically under 10 per cent of the average daily population).¹⁴ There will also be some prisoners who are serving time for non-indictable offences – however, they will generally be serving short sentences and while they might contribute significantly to the flow of prisoners will be a less significant proportion of the daily average population (for example in 1994, 47.9 per cent of adults committed to prison received sentences of less than three months, but only 1 per cent of those in custody on 1 January 1994 were serving three months or less – Department of Justice, 1997b). Similar problems exist in other jurisdictions although they may not be as pronounced, and the daily average population is the figure normally used in comparative studies (Barclay and Tavares, 2002; Walmsley, 2002).

¹¹ In 2000, 176 larcenies of motor vehicles were recorded by the Gardai compared with 15,964 unauthorised takings.

¹² A fourth Garda category is known simply as “other offences”, and includes matters as diverse as obstructing clergy during services, corruption and conspiracy. In recent years, this category has accounted for approximately 0.5 per cent of recorded indictable crime. In 2000, a new classification – headline and non-headline – was introduced (An Garda Síochána, 2002). This largely mirrored the indictable/non-indictable classification, but made direct comparison with previous years difficult. The usual four categories of “indictable” crime were replaced by ten groups of “headline” crimes.

¹³ O'Donnell (2002c) shows that the fall in crime since 1995 masks an increase in lethal violence.

¹⁴ The *Bail Act, 1997* came into effect on 22 May, 2000. This is likely to have a substantial impact on the number of persons in custody.

Given the inherent shortcomings of the available data, we were not convinced that the assumptions required for complex multivariate analyses could be supported. This is why we were attracted by the elegance and apparent robustness of Spelman's approach. In the following section, after reviewing broad trends in crime and imprisonment, we apply Spelman's technique to the Irish data.

IV RESULTS

Summary of Trends

Tables 1 and 2 present a summary of trends in crime and imprisonment between 1980 and 2000. Comparative data are presented for 1960 and 1970. Table 1 shows that the indictable crime rate doubled between 1960 and 1970 and again between 1970 and 1980 see Brewer *et al.* (1997). It peaked in 1983 and this marked the beginning of a period of decline. Between 1983 and 1987 the crime rate fell by 18 per cent. The early 1990s were a time of slow growth and between 1995 and 1999, there was a sharp downward trend (see O'Sullivan and O'Donnell, 2001; Young *et al.*, 2001; O'Connell, 2002). There was so little crime in Ireland during the 1950s that the number of Garda stations and personnel was reduced. Between 1951 and 1963 the number of Gardaí fell from 6,904 to 6,401 and stations from 810 to 749. The number of personnel did not climb above 6,900 again until 1972 (see Brewer *et al.*, 1988, p. 88; Connolly, 2002). Recent years have seen steady increases in Garda recruitment. These trends are summarised in Table 1.

Table 2 shows that the rate of imprisonment, based on the daily average prison population, has fluctuated much less than the crime rate. While it declined in a small number of years the overall trend has been upward, with two distinct surges (1983 to 1985; 1996 to 2000). These jumps in the number of prisoners coincided with drops in the aggregate crime rate. In overall terms, the rate doubled between 1980 and 2000. The number of staff in post has kept pace with the number of prisoners, resulting in a high ratio of staff to prisoners (for international comparisons see Prison Service Operating Cost Review Group, 1997). In 1970 there were almost three prisoners for every prison officer. In 2000 there were fewer prisoners than staff. The number of prisons grew from four in 1960 to seventeen in 2000.

Risk of Imprisonment

For each of the three main Garda categories it is possible to match the flow of convicted persons into prison each year against the number of crimes recorded. This allows an examination of the extent to which the risk of custody

Table 1: *Crime and Policing, 1960-1999*

Year	Offences against the Person	Offences against Property with Violence	Larceny	Other	Total Indictable Crime	Indictable Crimes per 100,000 pop.	Annual Change in Overall Crime Rate	Number of Gardai
1960	675	2,982	11,470	248	15,375	543		6,580
1970	1,142	9,577	19,557	480	30,765	1,043		6,532
1980	2,353	24,878	45,298	253	72,782	2,140	11.1	9,693
1981	2,478	28,916	57,642	364	89,400	2,596	17.6	9,722
1982	2,275	36,460	58,410	481	97,626	2,805	7.5	10,009
1983	2,306	41,364	58,283	434	102,387	2,922	4.0	10,869
1984	2,331	41,003	55,945	448	99,727	2,826	-3.4	11,329
1985	2,348	37,185	51,354	398	91,285	2,579	-9.6	11,396
1986	1,883	35,146	49,226	319	86,574	2,445	-5.5	11,382
1987	2,035	34,930	47,993	400	85,358	2,407	-1.6	11,109
1988	2,144	35,679	51,291	430	89,544	2,536	5.1	10,749
1989	1,667	35,595	49,223	507	86,992	2,473	-2.6	10,472
1990	1,631	35,453	50,222	353	87,659	2,500	1.1	10,472
1991	1,435	40,676	51,990	305	94,406	2,678	6.6	10,601
1992	1,298	41,736	52,026	331	95,391	2,684	0.2	10,786
1993	1,314	44,131	53,175	359	98,979	2,769	3.1	10,984
1994	1,327	44,313	55,114	282	101,036	2,818	1.7	10,892
1995	1,663	43,391	57,123	307	102,484	2,846	1.0	10,837
1996	1,541	43,842	55,041	361	100,785	2,779	-2.4	10,741
1997	1,785	40,252	48,390	448	90,875	2,483	-12.0	10,968
1998	1,907	37,191	46,127	402	85,627	2,311	-7.4	11,235
1999	1,869	34,623	44,294	488	81,274	2,170	-6.5	11,458

Source: *Annual Report of An Garda Síochána* (as group totals were not published for 1999, we have extrapolated from the figures available for January to September); *Statistical Abstract of Ireland*, various years.

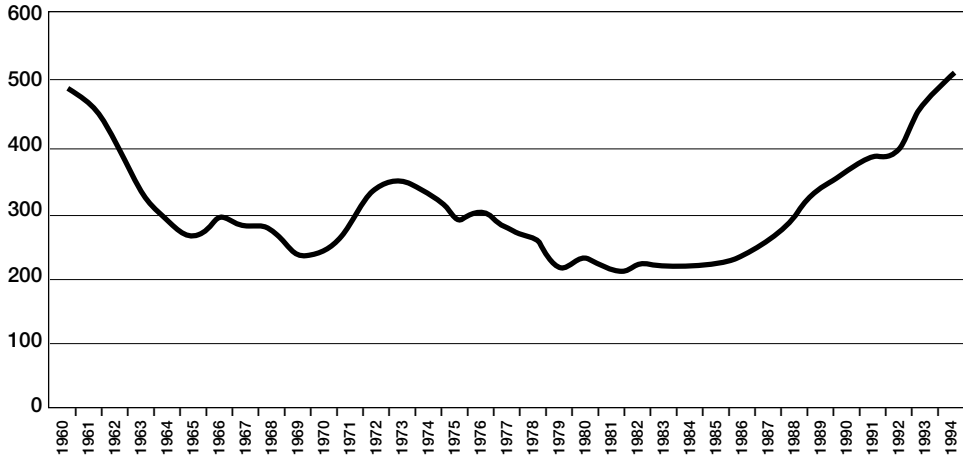
Table 2: *Prisons and Prisoners, 1960-2000*

	<i>Daily No. Prisoners</i>	<i>Prisoners per 100,000 Population</i>	<i>Annual Change in Rate of Imprisonment</i>	<i>No. of Staff</i>
1960	461	16.4		239
1970	750	25.2		264
1980	1,215	36.1	6.2	1,450
1981	1,196	35.2	-2.6	1,490
1982	1,236	35.9	2.0	1,534
1983	1,450	41.7	13.9	1,552
1984	1,594	45.5	8.4	1,561
1985	1,863	52.8	13.8	1,601
1986	1,869	52.8	0.0	1,713
1987	1,943	54.9	3.8	1,942
1988	1,962	55.3	0.8	1,920
1989	2,067	58.5	5.5	1,934
1990	2,108	60.1	2.5	2,039
1991	2,140	61.0	1.6	2,161
1992	2,185	62.0	1.5	2,309
1993	2,171	61.1	-1.5	2,346
1994	2,141	59.9	-2.0	2,400
1995	2,121	56.7	-5.7	2,487
1996	2,191	61.8	8.2	2,470
1997	2,422	68.1	9.3	2,495
1998	2,610	72.3	5.7	2,727
1999	2,822	76.2	5.1	3,073
2000	3,009	80.4	5.2	3,200

Source: Annual Report on Prisons and Places of Detention; Statistical Abstract of Ireland, Irish Prisons Service, various years.

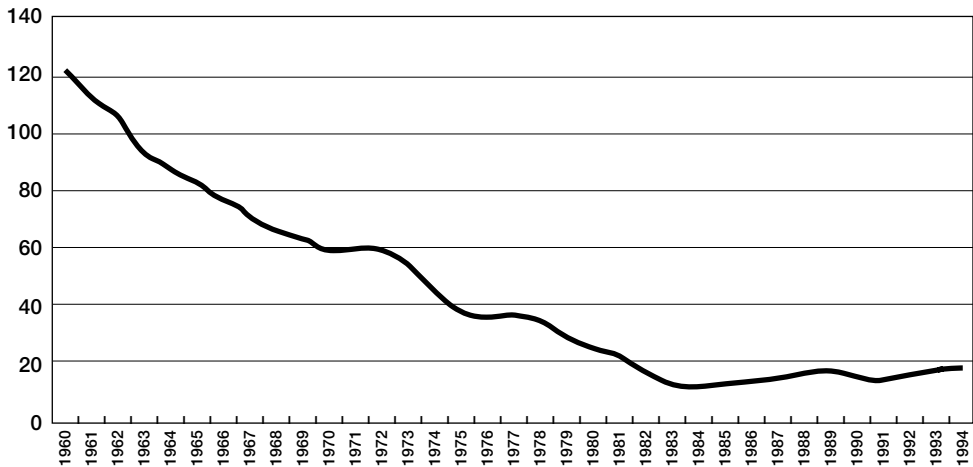
has changed over time. This analysis is only possible up to 1994, because a detailed breakdown of committals to prison is not available after this date and is unlikely to become available. A report was published in 2000, covering the years 1995 to 1998 (Irish Prisons Service, 2000). It contains only a sketchy overview. This is a significant data deficit, especially as the decline in crime and the rise in imprisonment began in earnest in 1996, as shown in Tables 1 and 2. Post 1994, we know something about the stock of prisoners (daily average prison population), but not about the flow (numbers committed to prison over the year). Either figure can be used to calculate an imprisonment rate.

Figure 1: *Prison Committals for Offences Against the Person per 1,000 Recorded Offences Against the Person, 1960–1994*



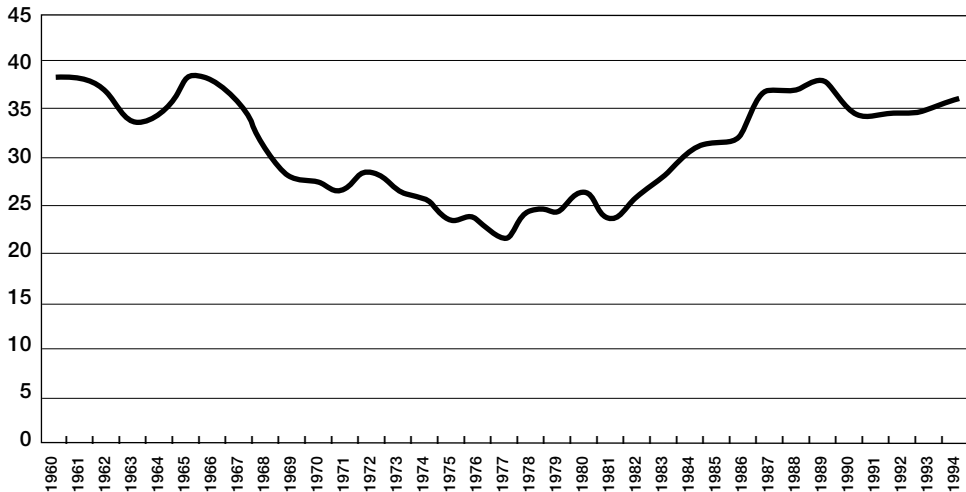
Source: *Annual Report on Prisons and Places of Detention; Annual Report of an Garda Síochána.*

Figure 2: *Prison Committals for Offences Against Property with Violence per 1,000 Recorded Offences Against Property with Violence, 1960–1994*



Source: *Annual Report on Prisons and Places of Detention; Annual Report of an Garda Síochána.*

Figure 3: *Prison Committals for Larceny per 1,000 Recorded Larcenies, 1960–1994*



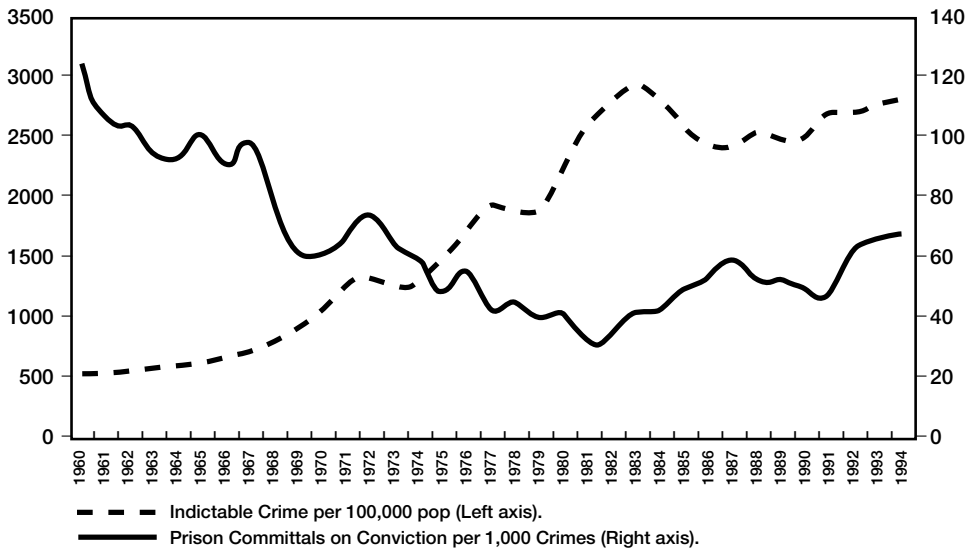
Source: *Annual Report on Prisons and Places of Detention; Annual Report of an Garda Síochána.*

Figure 1 shows that the risk of custody is high for offences against the person. There was one committal to prison for every two recorded offences against the person in 1994, the same level as in 1960. The rate was not uniform over the period however, declining steeply throughout the 1960s and rising again from the late 1980s. For offences against property with violence (Figure 2), the pattern is of a steady and steep decline. By 1994 one-sixth as many such recorded offences were resulting in a committal to prison. The proportionate use of custody for larceny was lowest, and while it fluctuated over the time period under review, the level in 1994 was broadly similar to 1960 (see Figure 3).

Looking at the relationship between the three crime categories: in 1960 the risk of custody was four times higher for offences against the person than offences against property with violence, which in turn was three times higher than larceny. In 1994 the situation was transformed, with the risk of custody 25 times higher for offences against the person than offences against property with violence, which in turn was half the level of larceny.¹⁵

The overall shift is shown in Figure 4, which plots the aggregate rate of indictable crime (per 100,000 population) against the aggregate rate of imprisonment (committals per 1,000 crimes). It is clear that between 1960 and

¹⁵ It is possible, of course, that to some extent this reflects differential recording practice in that perpetrators of violence are often known to their victim, thus improving the chances of a formal police response.

Figure 4: *Crime and Punishment in Ireland, 1960–1994*

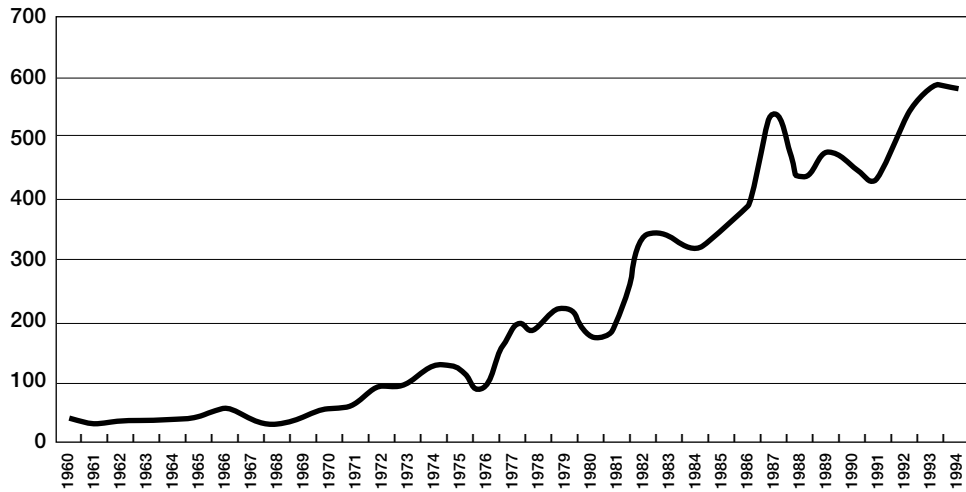
1984 there was a strong inverse relationship: crime rises and the risk of prison falls. Since the mid-1980s the two variables have followed a similar trajectory.

The Emergence of a Punitive Society?

There are several indices of a country's punitiveness. One is the number of persons sentenced to lengthy terms of imprisonment. As shown in Figure 5, this increased steadily between 1960 and 1994. The steep rise began in 1977. Before this date fewer than 100 sentences of two years and above were awarded in an average year. By the early 1990s this had risen to over 500.

The proportionate use of custody in Ireland appears high as shown in Table 3.¹⁶ Although the rate of indictable crime is comparatively low, those who appear before the courts are imprisoned at a relatively high level. Compared to other EU countries, Ireland has a swiftly rising prison population as shown in Figure 6. While prison may be used comparatively frequently, it is clear from Figures 2 and 3 that the risk of imprisonment decreased substantially for the most common crimes between 1960 and 1994. Similar trends of a falling ratio of prisoners to recorded crimes have been observed in

¹⁶ Cross-national comparisons of crime statistics are fraught with difficulty due to different legal classifications of crime, non-standardised recording practices and so forth. The proportionate use of custody would be high for example if there was a bias towards not recording crimes that were unlikely to be detected. The relatively high detection rate for property crime in Ireland (Interpol nd), may indicate such a tendency. If so, more comprehensive recording would depress the proportionate use of custody and bring Ireland into line with other European countries.

Figure 5: *Number of Sentences of Two Years or More, 1960–1994*

Source: *Annual Report on Prisons and Places of Detention*.

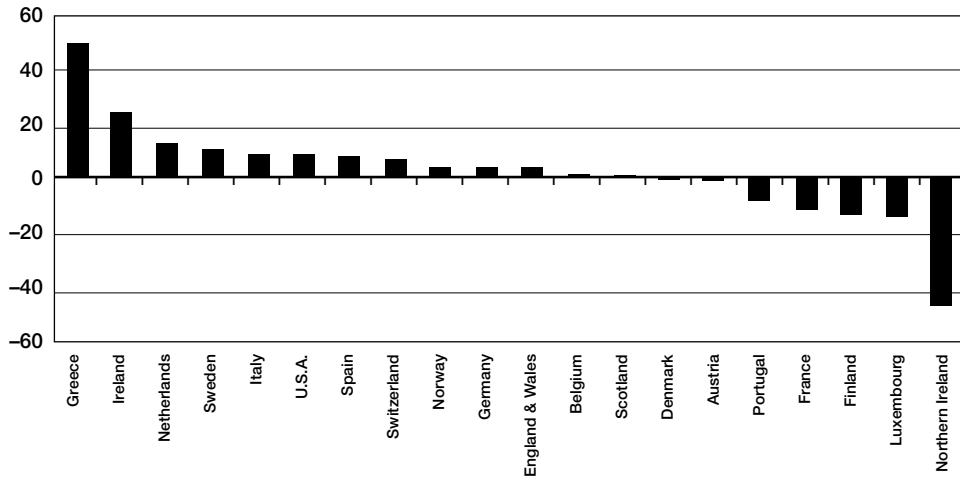
England and Wales (Wolpin, 1978; Hood and Roddam, 2000), in France, New Zealand, West Germany and the Netherlands (Young and Brown, 1993).

Table 3: *Proportionate Use of Custody in 1999*

	<i>Daily Average Number of Prisoners</i>	<i>Number of Crimes Recorded</i>	<i>Prisoners per 1,000 Crimes</i>
USA	1,860,520	11,635,100	160
Ireland	2,741	81,274	34
Canada	37,384	2,357,771	16
Australia	20,416	1,327,971	15
Scotland	6,029	435,703	14
England and Wales	65,594	5,301,185	12
Netherlands	13,231	1,152,100	12
Norway	2,466	315,924	8
Denmark	3,496	494,191	7
Finland	2,389	372,207	6
Sweden	5,270	1,163,916	5

Source: Based on data from Barclay *et al.* (2001).

Figure 6: *Prisoners per 100,000 Population in the European Union and the USA, Percentage Change, 1997–2000*



Source: Walmsley (1999, 2002).

A combination of a rising use of custody by the courts (as measured by committals to prison) and an increase in sentence lengths will lead to a significant increase in the daily average number of prisoners. The relationship between the daily average prison population and the crime rate is discussed in the next section.

The Impact of Imprisonment on the Crime Rate

Figures for the daily average prison population are available from 1980 to 2000.¹⁷ Crime data are available for the same period but a change in the method of data aggregation and presentation means that some of the following analyses are only possible until 1999.¹⁸ This allows us to test the Irish

¹⁷ As noted above, some prisoners have been convicted of non-indictable offences or are serving time for non-payment of fines. Given their brief detention periods they contribute relatively little to the average daily population figures (although they may constitute a significant proportion of the individuals who pass through the system each year.)

¹⁸ The published crime statistics for 1999 disaggregate by offence category only for the period January to September. The annual totals (and rates) for offences against the person, violent property crime and larceny have been extrapolated from these figures. The classification of offences changed in the Garda report for 2000, making direct comparisons problematic, except for larcenies.

Table 4: *Estimates of the Effect of Non-Expansion of the Irish Prison Population on Offences Against the Person*

	<i>Offences Against Person per 100,000 Pop.</i>	<i>Per Cent Annual Change in Offences Against Person Rate</i>	<i>Per Cent Annual Change in Imprisonment Rate</i>	<i>Per Cent Change in Rate of Offences against Person due to Non-Prison Factors at Elasticities of ...</i>		
				-0.15	-0.30	-0.45
1980	69.2	0.1	6.2	1.1	2.1	3.0
1981	72.0	3.9	-2.6	3.5	3.1	2.7
1982	65.4	-10.1	2.0	-9.8	-9.5	-9.3
1983	65.8	0.7	13.9	2.8	5.0	7.4
1984	66.1	0.4	8.4	1.6	3.0	4.3
1985	66.3	0.4	13.8	2.5	4.8	7.1
1986	53.2	-24.7	0.0	-24.7	-24.7	-24.7
1987	57.4	7.3	3.8	7.9	8.6	9.2
1988	60.7	5.5	0.8	5.6	5.8	5.9
1989	47.5	-27.8	5.5	-27.2	-26.6	-26.0
1990	46.5	-2.1	2.5	-1.7	-1.3	-1.0
1991	40.7	-14.3	1.6	-14.1	-13.9	-13.7
1992	36.5	-11.5	1.5	-11.3	-11.1	-10.9
1993	36.8	0.7	-1.5	0.5	0.2	0.0
1994	37.0	0.7	-2.0	0.4	0.1	-0.2
1995	46.2	19.9	-5.7	18.8	17.8	16.9
1996	42.5	-8.7	8.2	-7.5	-6.3	-5.1
1997	48.8	12.8	9.3	14.5	16.1	17.8
1998	51.5	5.3	5.7	6.2	7.1	8.1
1999	49.9	-3.1	5.1	-2.4	-1.6	-0.8

experience against the model devised by Spelman and to estimate the likely crime rate under different sets of prevailing conditions.¹⁹

It might be helpful to provide an illustration of how the figures in Tables 4 to 6 have been calculated. In 1980 the imprisonment rate (daily average number of prisoners per 100,000 population) went up by 6.2 per cent. If the elasticity of crime with respect to prison is -0.3 then the effect of this increase

¹⁹ The figure for recorded indictable crime is from the annual report of the Garda Commissioner (e.g. An Garda Síochána, 2000). Prisoner numbers are from the annual report on prisons and places of detention (e.g. Department of Justice, 1997b). Population data are from the annual abstract prepared by the Central Statistics Office (e.g. CSO, 2000). Spelman limits his analysis to the rate of violent crime, whereas we also focus on crimes against property with violence and larcenies.

Table 5: *Estimates of the Effect of Non-Expansion of the Irish Prison Population on Offences Against Property with Violence*

	<i>Violent Property Offences per 100,000 Pop.</i>	<i>Per Cent Annual Change in Violent Property Crime Rate</i>	<i>Per Cent Annual Change in Imprisonment Rate</i>	<i>Per Cent Change in Violent Property Crime Rate due to Non-Prison Factors at Elasticities of ...</i>		
				-0.15	-0.30	-0.45
1980	731.5	12.6	6.2	13.7	14.8	15.9
1981	839.8	12.9	-2.6	12.5	12.0	11.6
1982	1,047.7	19.8	2.0	20.2	20.6	21.0
1983	1,180.5	11.2	13.9	13.6	16.1	18.6
1984	1,161.9	-1.6	8.4	-0.3	0.9	2.3
1985	1,050.4	-10.6	13.8	-8.7	-6.7	-4.7
1986	992.7	-5.8	0.0	-5.8	-5.8	-5.8
1987	984.9	-0.8	3.8	-0.2	0.4	0.9
1988	1,010.5	2.5	0.8	2.7	2.8	2.9
1989	1,008.5	-0.2	5.5	0.6	1.5	2.3
1990	1,011.3	0.3	2.5	0.7	1.0	1.4
1991	1,153.7	12.3	1.6	12.6	12.9	13.2
1992	1,174.2	1.7	1.5	2.0	2.2	2.4
1993	1,234.8	4.9	-1.5	4.7	4.4	4.2
1994	1,235.8	0.1	-2.0	-0.2	-0.5	-0.8
1995	1,204.9	-2.6	-5.7	-3.4	-4.2	-5.0
1996	1,209.1	0.3	8.2	1.6	2.9	4.2
1997	1,099.6	-10.0	9.3	-8.7	-7.4	-6.0
1998	1,003.8	-9.5	5.7	-8.8	-8.0	-7.1
1999	924.6	-8.6	5.1	-7.9	-7.1	-6.4

was -1.86 per cent. In other words the 1980 crime rate should be 98.14 per cent of what it was in 1979. In 1980 the actual rate of crime against the person went up by 0.1 per cent; violent property crime rose by 12.6 per cent and larceny grew by 10.9 per cent. Thus the effect of all non-prison factors on the crime rate must be 1.021 (i.e. $1.001/0.981$) for offences against the person; 1.148 (i.e. $1.126/0.981$) for violent property crime; and 1.130 (i.e. $1.109/0.981$) for larcenies. This means that had the 1980 prison expansion not taken place the rate of violence against the person would have increased by 2.1 per cent, violent property crime and larcenies would have grown by 14.8 per cent and 13.0 per cent respectively.

Tables 4 to 6 present the actual change in the crime rate and the change due to non-prison factors (i.e. the change that would have occurred had prison

Table 6: *Estimates of the Effect of Non-Expansion of the Prison Population on Larcenies*

	<i>Larcenies per 100,000 Pop.</i>	<i>Per Cent Annual Change in Larceny Rate</i>	<i>Per Cent Annual Change in Imprisonment Rate</i>	<i>Per Cent Change in Larceny Crime Rate due to Non-Prison Factors at Elasticities of ...</i>		
				-0.15	-0.30	-0.45
1980	1,331.9	10.9	6.2	11.9	13.0	14.1
1981	1,674.0	20.4	-2.6	20.0	19.5	19.1
1982	1,678.4	0.3	2.0	0.6	0.9	1.2
1983	1,663.3	-0.9	13.9	1.2	3.4	5.7
1984	1,585.3	-4.9	8.4	-3.7	-2.5	-1.2
1985	1,450.7	-9.3	13.8	-7.4	-5.4	-3.3
1986	1,390.3	-4.3	0.0	-4.3	-4.3	-4.3
1987	1,353.3	-2.7	3.8	-2.2	-1.6	-1.1
1988	1,452.7	6.8	0.8	7.0	7.1	7.2
1989	1,402.6	-3.6	5.5	-2.8	-2.0	-1.1
1990	1,432.5	2.1	2.5	2.5	2.9	3.3
1991	1,474.6	2.9	1.6	3.1	3.3	3.6
1992	1,463.7	-0.7	1.5	-0.5	-0.3	-0.1
1993	1,487.8	1.6	-1.5	1.4	1.2	1.0
1994	1,537.0	3.2	-2.0	2.9	2.6	2.3
1995	1,586.2	3.1	-5.7	2.2	1.4	0.5
1996	1,517.9	-4.5	8.2	-3.3	-2.1	-0.8
1997	1,321.9	-14.8	9.3	-13.6	-12.4	-11.1
1998	1,245.0	-6.2	5.7	-5.4	-4.5	-3.7
1999	1,182.9	-5.3	5.1	-4.5	-3.8	-3.0
2000	1,087.2	-8.8	5.2	-8.1	-7.4	-6.6

populations remained static), for each of the three elasticities. If the elasticity was higher or lower, the magnitude of the reductive effect would change accordingly. The cumulative effect can readily be calculated. For example, in 1982 the rate of crime against the person would have been $1.02 \times 1.03 = 1.05$, or 5 per cent higher than in 1980 if there had been no prison expansion, assuming an elasticity of -0.30 . The cumulative trends are plotted on Figures 7 to 9.

The simplest way to interpret Figures 7 to 9 is to look at the end-points of each line. If there had been no prison expansion since 1980 the rate of offences against the person per 100,000 population in 1999 would have been 43.0 (assuming an elasticity of -0.15) or 48.4 (assuming -0.30) or 54.6 (assuming -0.45). In fact, the real rate was 49.9. For violent property crime, the expected rates in 1999 were 1,026.2, 1,154.9 and 1,302.3 compared with a real rate of

Figure 7: *Hypothetical Effect of Failure to Expand Prison Population on Offences Against the Person*

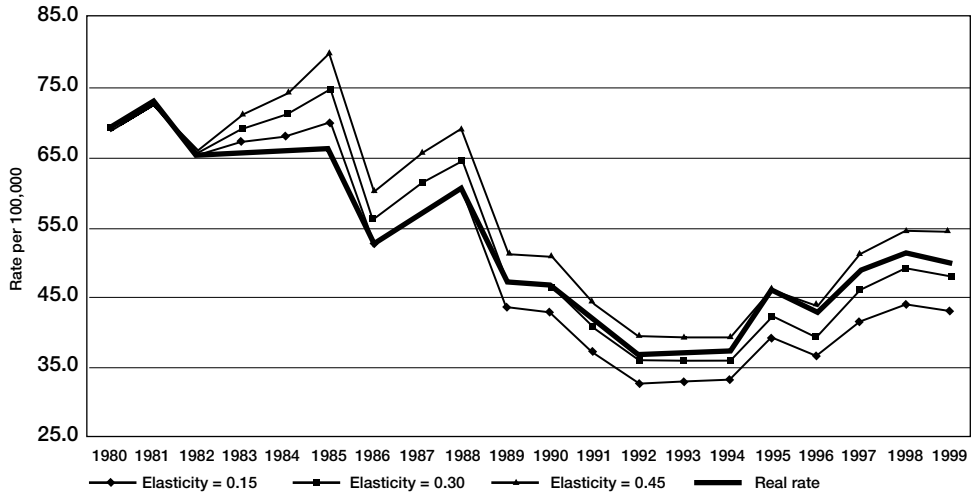


Figure 8: *Hypothetical Effect of Failure to Expand Prison Population on Offences Against Property with Violence*

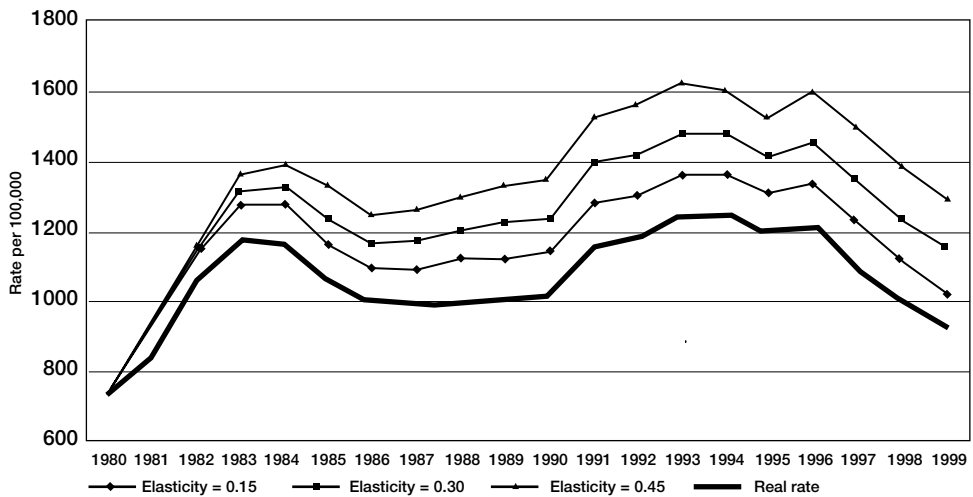
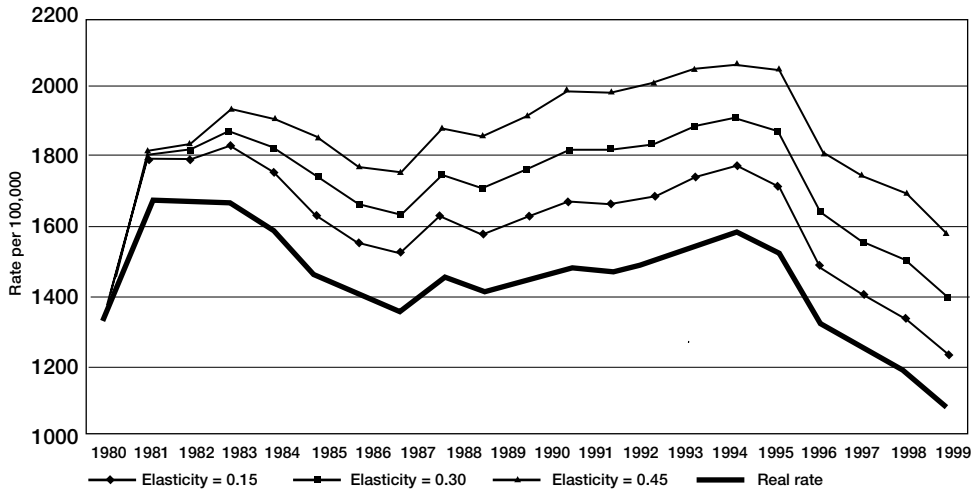


Figure 9: *Hypothetical Effect of Failure to Expand Prison Population on Larcenies*



924.6. For larceny in 2000, the expected rates were 1,229.2, 1,394.3 and 1,584.8 compared with a real rate of 1,087.2. This gives a clear quantitative indication of the magnitude of the impact of imprisonment on crime rates.²⁰

The impact of prison would appear to be greatest on the rates of violent property crime and larceny (Figures 8 and 9). One interpretation of this finding is that sudden and substantial increases in the prison population – such as the greater than 40 per cent growth in the daily average prison population seen between 1982 and 1985 and again between 1995 and 2000 – will quickly absorb a significant number of prolific, if generally less serious, offenders. This has the effect of temporarily holding down crime rates. The reduction may be explained by a combination of incapacitation (high rate offenders are out of circulation) and deterrence (as the risks increase, people decide not to offend). The declining use of temporary release is also a factor in that effective sentence lengths have grown. This is because individuals are no longer being released early to relieve overcrowding. In July 1996, 19 per cent of serving prisoners were on full temporary release. By July 2000, this had declined to 7 per cent (Department of Justice, Equality and Law Reform, 2000).

²⁰ Between 1995 and 1999, the overall crime rate per 100,000 population fell by 24 per cent (see Table 1). Over the same period the imprisonment rate rose by 42 per cent (see Table 2). In order for prison expansion to explain all of the reduction in crime, the elasticity would have to be -0.57 , which in our view seems implausibly large.

However, the pattern with regard to offences against the person is quite different (Figure 7). Increasing the level of imprisonment had no discernible impact on the frequency of the most serious crimes (murder, rape, serious wounding and so on). This may be because the perpetrators of such crimes are often in a state of mind where they are not capable of thinking clearly about the consequences of their actions.²¹ Also the frequency with which individuals commit these offences is low. Many homicides are domestic and serial murderers are the exception. Many sex crimes recorded in recent years relate to incidents that took place some time in the past (Leon, 2000). Thus, the preventive effect of incapacitation will be far less for such offenders than for burglars or shoplifters, who often offend frequently when at liberty (see work in the tradition of situational crime prevention, e.g., Clarke, 1997). This is similar to findings reported from the United States and reviewed by Currie (1998, pp. 55-66).

We cannot conclude from this analysis that the growth in prison numbers is responsible for the drop in crime that began in 1996. The three hypothetical lines plotted against the observed rate on Figures 7, 8 and 9 show clearly that crime rates would have fallen steeply around this time even if the prison population had not gone up. If not a single pound had been spent on prison building the crime rate would still have fallen steeply.

The interpretation of this finding is that non-prison factors cannot be discounted. As we have argued elsewhere these would include, in particular, the greatly improved economic situation and better treatment for heroin users due to the expansion of the methadone maintenance scheme, particularly in Dublin (O'Donnell and O'Sullivan, 2001; Butler, 2002).

The certainty of apprehension is usually considered to exercise a greater influence on criminal decision making than the severity of punishment. In this regard it is puzzling to observe a steep decline in property crime (Figures 8 and 9) at a time when the risk of custody appears to be low and declining (Figure 2) or fluctuating around a very low base (Figure 3). The period for which data about prison committals by crime category are missing (1995 to 2000) may contain part of the answer.

V CONCLUSION

Our results, based on the available data, suggest that there may have been undue political optimism about the power of imprisonment to depress the rate

²¹ In a survey of homicide in Ireland between 1992 and 1996, Dooley (2001) found that in two out of every five cases the perpetrator was intoxicated. In a small number of cases (7 per cent) the killer was suffering from a psychotic illness.

of indictable crime. While incapacitation undoubtedly has some reductive value in regard to crimes against property, its impact on violent crime is debatable. The next stage in the analysis presented here is to measure the cost of crimes prevented against the cost of imprisonment and law enforcement more generally. It is important to bear in mind that most of the crimes prevented will be against property and of little monetary value. This may have implications for political decisions about resource allocation. In 2000 for example, 54 per cent of all headline crimes were larcenies and in most cases the average value of goods taken was less than €254 (An Garda Síochána, 2002, p. 98). This compares with an average cost in 2001 of about €1,500 to keep one person in custody for one week.

In a sophisticated analysis, Brand and Price (2000) have shown that the average cost of crime in the UK varies widely between offence categories. They estimate that burglaries cost an average of £2,300, robberies £5,000 and criminal damage around £500. Personal crimes are far more costly on average than property crimes, homicides costing at least £1 million and other violence against the person £19,000 per incident. Cost calculations take account of the emotional and physical impact on victims, expenditure on security, insurance, health services, victim support, and the criminal justice system.²²

Any cost-benefit analysis will involve difficult methodological, moral and political choices (Lynch, 1994; Piehl, Useem and Dilulio, 1999). Given that our data suggest that the crime rate would have declined sharply anyway between 1995 and 2000, an argument can be made for a more moderate use of imprisonment. A key public policy question is the relative value of incapacitation compared with non-custodial approaches such as drug treatment, community punishment, electronic monitoring or mediation. See for example Department of Justice, Equality and Law Reform, 1999 and Dáil Eireann, 2000. Even if incapacitation can be shown to depress rates of specific crime types, such as burglary (see Denny *et al.*, 2001), this is not in itself a justification for prison expansion. It may be that alternative measures, such as drug treatment, employment, community service or probation would have a similar (or greater) effect. In terms of reducing the risk of future offending, some community based measures may be more effective than incapacitation. The relative efficacy of various penalties requires close examination in Ireland.

It is peculiarly difficult in Ireland to discuss such matters in an informed way as an adequate knowledge base does not yet exist. However, it would be unrealistic to believe that the availability of information is enough in itself to guarantee evidence-based decision making (Hood, 2002). In countries where

²² The criminal justice system in England and Wales is committed to reducing not only crime and the fear of crime, but also the social and economic costs of criminal activity (Brand and Price, 2000, p. 3).

criminological research is well developed it sometimes happens that key findings are ignored or dismissed if they conflict with political priorities. The purpose of this paper is not to engage with this wider political discourse, but rather to begin to frame some important social policy questions in a way that makes them amenable to critical inquiry.

REFERENCES

- AN GARDA SÍOCHÁNA, 2000. *Annual Report 1999*, Dublin: Stationery Office.
- AN GARDA SÍOCHÁNA, 2002. *Annual Report 2000*, Dublin: Stationery Office.
- AYLWARD, S., 2002. "The Irish Prisons Service, Past, Present and Future – A Personal Perspective" in P. O'Mahony (ed), *Criminal Justice in Ireland*. Dublin: Institute of Public Administration.
- BACON, P. and M. O'DONOGHUE, 1975. "The Economics of Crime in Ireland: An Exploratory Paper", *The Economic and Social Review*, Vol. 7, No. 1, pp. 19-34.
- BARCLAY, G. and C. TAVARES, 2002. *International Comparisons of Criminal Justice Statistics 2000*, Statistical Bulletin, 5/02. London: Home Office.
- BARCLAY, G., C. TAVARES, and A. SIDDIQUE, 2001. *International Comparisons of Criminal Justice Statistics 1999*, Statistical Bulletin 6/01, London: Home Office.
- BAR-GILL, O. and A. HAREL, 2001. "Crime Rates and Expected Sanctions: The Economics of Deterrence Revisited", *Journal of Legal Studies*, Vol. XXX, pp. 485-501.
- BECKER, G., 1968. "Crime and Punishment: An Economic Approach", *Journal of Political Economy*, Vol. 76, pp. 169-217.
- BECSI, Z., 1999. "Economics and Crime in the United States", *Economic Review of the Federal Reserve Bank of Atlanta*, Vol. 84, pp. 38-56.
- BERNARD, T., and R. RITTI 1991. "The Philadelphia Birth Cohort and Selective Incapacitation", *Journal of Research in Crime and Delinquency*, Vol. 28, pp. 33-54.
- BLUMSTEIN, A, J. COHEN and D. NAGIN, (eds.), 1978. *Deterrence and Incapacitation: Estimating the Effects of Criminal Sanctions on Crime Rates*. Panel on Research on Deterrent and Incapacitative Effects, Committee on Law Enforcement and the Administration of Justice, Assembly of Behavioral and Social Sciences, National Research Council. Washington, D.C.: National Academy of Sciences.
- BOWLING, B., 1999. "The Rise and Fall of New York Murder. Zero Tolerance or Crack's Decline?" *British Journal of Criminology*, Vol. 39, No.4, pp.531-554.
- BRAND, S. and R. PRICE, 2000. *The Economic and Social Costs of Crime*, Home Office Research Study 217, London: Home Office Research, Development and Statistics Directorate.
- BREWER, J. D., A. GUELKE, I, HUME, E. MOXON-BROWNE and R. WILFORD, 1988. *The Police, Public Order and the State: Policing in Great Britain, Northern Ireland, the Irish Republic, the USA, Israel, South Africa and China*, Basingstoke: Macmillan.
- BREWER, J. D., B. LOCKHART and P. RODGERS, 1997. *Crime in Ireland, 1945-95: Here be Dragons*. Oxford: Clarendon Press.

- BUTLER, S., 2002. "The Making of the Methadone Protocol: The Irish System?" *Drugs: Education, Prevention and Policy*, Vol. 9., No. 4., pp.311-324.
- CARROLL-BURKE, P., 1999. *Colonial Discipline: The Making of the Irish Convict System*. Dublin: Four Courts Press.
- CAVADINO, M. and J. DIGNAN, 2002. *The Penal System: An Introduction*, London: Sage.
- CENTRAL STATISTICS OFFICE, 1999. *Quarterly National Household Survey – Crime and Victimisation*. Dublin: CSO.
- CENTRAL STATISTICS OFFICE, 2000. *Statistical Abstract of Ireland*, Dublin: Stationery Office.
- CLARKE, R. V., 1997. *Situational Crime Prevention: Successful Case Studies*, New York: Harrow and Heston.
- COMMISSION OF ENQUIRY INTO THE IRISH PENAL SYSTEM (McBride Committee), 1980. *Report*. Dublin.
- COMMITTEE OF INQUIRY INTO THE PENAL SYSTEM, (Whitaker Committee) 1985. *Report*. Dublin: Stationery Office.
- CONNOLLY, J., 2002. "Policing Ireland: Past, Present and Future", in P. O'Mahony, (ed.), *Criminal Justice in Ireland*. Dublin: Institute of Public Administration.
- CORMAN, H. and N. MOCAN, 2002. *Carrots, Sticks and Broken Windows*. Working Paper 9061. Cambridge MA: National Bureau of Economic Research.
- COUNCIL FOR SOCIAL WELFARE, 1983. *The Prison System*, Dublin: Council for Social Welfare.
- COWEN, P., 1960. *Dungeons Deep: A Monograph on Prisons, Borstals, Reformatories and Industrial Schools in the Republic of Ireland, and Some Reflections on Crime and Punishment and Matters Relating Thereto*. Dublin: Marion Printing.
- CURRIE, E., 1998. *Crime and Punishment in America*, New York: Metropolitan Books.
- D. 83222, 1945, *I Did Penal Servitude*. Dublin: Metropolitan Publishing Co.
- DAIL EIREANN, 2000. *Report of the Sub-Committee on Crime and Punishment of the Joint Committee on Justice, Equality, Defence and Women's Rights on Alternatives to Fines and the Uses of Prison*.
- DENNY, K., C. HARMON, R. LYDON and I. WALKER, 2001. *An Econometric Analysis of Burglary in Ireland*. Dublin: Department of Justice, Equality and Law Reform.
- DEPARTMENT OF JUSTICE, 1994. *The Management of Offenders: A Five Year Plan*. Dublin: Department of Justice.
- DEPARTMENT OF JUSTICE, 1997a. *Tackling Crime: Discussion Paper*, Dublin: Stationery Office.
- DEPARTMENT OF JUSTICE, 1997b. *Annual Report on Prisons and Places of Detention for the Year 1994*, Dublin: Stationery Office.
- DEPARTMENT OF JUSTICE, EQUALITY AND LAW REFORM, 1998. *Strategy Statement 1998-2000: Community Security and Equality*, Dublin: Department of Justice, Equality and Law Reform.
- DEPARTMENT OF JUSTICE, EQUALITY AND LAW REFORM, 1999. *Final Report of the Expert Group on the Probation and Welfare Service*. Dublin: Stationery Office.
- DEPARTMENT OF JUSTICE, EQUALITY AND LAW REFORM, 2000. *Progress Report on Strategy Statement, 1998-2000*. Dublin: Department of Justice, Equality and Law Reform.
- DiIULIO, J. J., 1996. "Help Wanted: Economics, Crime and Public Policy", *Journal of Economic Perspectives*, Vol. 10, pp. 3-24.

- DOOLEY, E., 2001. *Homicide in Ireland 1992–1996*, Dublin: Stationery Office.
- EHRlich, I., 1996. "Crime, Punishment and the Market for Offences", *Journal of Economic Perspectives*, Vol. 10, pp. 43-67.
- EXPERT GROUP, 1997. *Towards an Independent Prisons Agency*. Dublin: Stationery Office.
- FAHY, E., 1944. "Preventative Detention". *Hermathena*, Vol. LXIV, pp. 44-63.
- GAINSBOROUGH, J. and M. MAUER, 2000. *Diminishing Returns: Crime and Incarceration in the 1990s*. Washington DC: The Sentencing Project.
- GARLAND, D., 1985. *Punishment and Welfare. A History of Penal Strategies*. Gower.
- GARLAND, D., 2001a. *The Culture of Control: Crime and Social Order in Late Modernity*. Oxford: Oxford University Press.
- GARLAND, D., (ed.), 2001b. *Mass Imprisonment: Its Causes and Consequences*. London: Sage.
- GOLDBLATT, P. and C. LEWIS (eds.), 1998. *Reducing Offending: An Assessment of Research Evidence on Ways of Dealing with Offending Behaviour*, London: Home Office Research Study, No. 187.
- GOLUB, A., 1990. *The Termination Rate of Adult Criminal Careers*. Pittsburgh: Carnegie Mellon.
- GOTTFREDSON, S. D., and D. M. GOTTFREDSON, 1986. "Accuracy of Prediction Models", in A. Blumstein, J. Cohen, J. A. Roth, and C. Visher (eds.), *Criminal Careers and "Career Criminals."* Washington, DC: National Academy Press.
- GOTTFREDSON, S. D. and D. M. GOTTFREDSON, 1994. "Behavioral Prediction and the Problem of Incapacitation", *Criminology*, Vol. 32, pp. 441-474.
- GREENWOOD, P., 1982. *Selective Incapacitation*, Santa Monica: Rand.
- GROGGER, J., 2000. "An Economic Model of Recent Trends in Violence", in A. Blumstein and J. Wallman (eds.), *The Crime Drop in America*, Cambridge University Press.
- HARCOURT, B.E., 2001. *Illusion of Order: The False Promise of Broken Windows Policing*, Cambridge, MA: Harvard University Press.
- HARRISON, P. M. and A. J. BECK., 2002. *Prisoners in 2000*. Washington: U.S. Department of Justice.
- HINDE, R. S. E., 1977a. "Sir Walter Crofton and the Reform of the Irish Convict System, 1854-61" – I. *Irish Jurist*, NS, Vol. 12, pp. 115-147.
- HINDE, R. S. E., 1977b. "Sir Walter Crofton and the Reform of the Irish Convict System, 1854-61" – II. *Irish Jurist*, NS, Vol. 12, pp. 295-336.
- HOOD, R., 2002. "Criminology and Penal Policy: The Vital Role of Empirical Research", in A. Bottoms and M. Toney (eds.), *Ideology, Crime and Justice: A Symposium in Honour of Sir Leon Radzinowicz*. Devon: Willan Publishing.
- HOOD, R. and A. RODDAM, 2000. "Crime, Sentencing and Punishment", in A. H. Halsey and J. Webb (eds.), *Twentieth-Century British Social Trends*, Macmillan.
- INTERPOL, nd, *International Crime Statistics 1998*.
- IRISH LABOUR PARTY, 1946. *Prisons and Prisoners in Ireland – A Report on Certain Aspects of Prison Conditions in Portlaoise Convict Prison*, Dublin: Irish Labour Party.
- IRISH PRISONS SERVICE, 2000. *Report on Prisons and Places of Detention for the Years 1995-1998*, Dublin: Stationery Office.
- IRISH PRISONS SERVICE, 2001. *Strategy Statement 2001-3*. Dublin: Stationery Office.

- KELLING, G. and W. H. SOUSA, 2001. *Do Police Matter: An Analysis of the Impact of New York City's Police Reforms*, Civic Report No 22. New York: Manhattan Institute.
- LAUB, J. H. and R. J. SAMPSON, 2001. "Understanding Desistance from Crime", in M. Tonry (ed.), *Crime and Justice: A Review of Research*, Vol. 28, Chicago: University of Chicago Press.
- LEE, M., 2001. "The Genesis of 'Fear of Crime'", *Theoretical Criminology*, Vol. 5, No. 4, pp. 467-485.
- LEON, C., 2000. "Recorded Sexual Offences 1994-1997: An Overview", *Irish Criminal Law Journal*, Vol. 10, No.3, pp. 2-7.
- LEVITT, S. D., 1999. "Why Do Increased Arrest Rates Appear to Reduce Crime: Deterrence, Incapacitation, or Measurement Error?" *Economic Inquiry*, Vol. 36, No.3, pp. 353-372.
- LEVITT, S. D., 1996. "The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation", *Quarterly Journal of Economics*, Vol. CXI (May), pp. 319-351.
- LIEDKA, R. V., A. M. PIEHL and B. USEEM, 2001. *The Crime-Control Effect of Incarceration: Reconsidering the Evidence*. Washington: Report to the National Institute of Justice.
- LYNCH, A. K., 1994. *The Cost Effectiveness of Incarceration: A Critical Review of the Literature*. Florida: Florida Corrections Commission.
- LYNCH, J. P. and W. J. SABOL, 2000. "Prison Use and Social Control", *Criminal Justice 2000: Policies, Processes, and Decisions of the Criminal Justice System*. Washington: U.S. Department of Justice.
- MACKENZIE, D.L., 1998. "Criminal Justice and Crime Prevention", in L. W. Sherman, D. C. Gottfredson, D. L. Mackenzie, J. Eck, P. Reuter and S. D. Bushway (eds.), *Preventing Crime: What Works, What Doesn't, What's Promising*, Washington DC: US National Institute of Justice.
- MARTINSON, R., 1974. "What Works? Questions and Answers about Prison Reform", *The Public Interest*, Vol. 10, Spring, pp. 22-54.
- MARVELL, T. B., and C. E. MOODY, 1994. "Prison Population Growth and Crime Reduction", *Journal of Quantitative Criminology*, Vol. 1, No. 2, pp. 109-140.
- MARVELL, T. B., and C. E. MOODY, 1997. "The Impact of Prison Growth on Homicide", *Homicide Studies*, Vol. 1, pp. 205-233.
- MCCULLAGH, C., 1988. "A Crisis in the Penal System? The Case of the Republic of Ireland", in M. Tomlinson, T. Varley and C. McCullagh (eds.), *Whose Law and Order?*, Belfast: Sociological Association of Ireland.
- MCCULLAGH, C., 1992. "Unemployment and imprisonment: Examining and interpreting the relationship in the Republic of Ireland", *Irish Journal of Sociology*, Vol. 2, pp. 1-19.
- MCCULLAGH, C., 1996. *Crime: a Sociological Introduction*. Cork: Cork University Press.
- MCCULLAGH, C., 1999, "Rural Crime in the Republic of Ireland", in G. Dingwall and S. R. Moody (eds.), *Crime and Conflict in the Countryside*, Cardiff: University of Wales Press.
- MCEVOY, K., 2001. *Paramilitary Imprisonment in Northern Ireland*. Oxford: Oxford University Press.

- MULCAHY, A., 2002. "The Impact of the Northern 'Troubles' on Criminal Justice in the Irish Republic", in P. O'Mahony (ed.), *Criminal Justice in Ireland*. Dublin: Institute of Public Administration.
- MURRAY, C., 1997. *Does Prison Work?* London: Institute of Economic Affairs.
- NAGIN, D., 1998. "Criminal Deterrence Research at the Outset of the Twenty-First Century", in M. Tonry (ed.), *Crime and Justice: A Review of Research*, Vol. 23, Chicago: University of Chicago Press.
- O'CONNELL, M., 2002. "Assessment of the Crime Rate in Ireland – Issues and Considerations" in P. O'Mahony (ed.), *Criminal Justice in Ireland*. Dublin: Institute of Public Administration.
- O'DONNELL, I., 2002a. "The Re-Integration of Prisoners", *Administration*, Vol. 50, No. 2, pp. 80-96.
- O'DONNELL, I., 2002b. "Interpreting Crime Trends", *Irish Criminal Law Journal*, Vol. 12, No. 1, pp.10-16.
- O'DONNELL, I., 2002c. "Unlawful Killing: Past and Present". *Irish Jurist* (NS), Vol. 37, pp. 56-90.
- O'DONNELL, I. and K. EDGAR, 1998. "Routine Victimisation in Prisons", *Howard Journal of Criminal Justice*, Vol. 37, pp. 266-279.
- O'DONNELL, I. and E. O'SULLIVAN, 2001. *Crime Control in Ireland*, Cork: Cork University Press.
- O'DONNELL, I. and E. O'SULLIVAN, 2003. "The Politics of Intolerance, Irish Style", *British Journal of Criminology*, Vol. 43, No. 1, pp. 41-62.
- O'DONNELL, I., 1999. "Criminal Justice Review" in A. McCashin and E. O'Sullivan (eds.), *Irish Social Policy Review 1999*. Dublin: Institute of Public Administration.
- O'DONNELL, I., 2001. "Prison matters", *Irish Jurist*, NS, Vol. 36, pp. 153-173.
- O'MAHONY, P., 1997. *Mountjoy Prisoners: A Sociological and Criminological Profile*. Dublin: Stationery Office.
- O'MALLEY, T., 2000. *Sentencing Law and Practice*. Dublin: Roundhall Sweet and Maxwell.
- O'SULLIVAN, E. and I. O'DONNELL, 2001, "Why is Crime Decreasing?" *Irish Criminal Law Journal*, Vol. 11, No. 1, pp. 2-4.
- OSBOROUGH, W. N., 1975. *Borstal in Ireland: Custodial Provision for the Young Adult Offender 1906-1974*. Dublin: Institute of Public Administration.
- OSBOROUGH, W. N., 1985. "An Outline History of the Irish Prison System", in *Report of the Committee of Inquiry into the Penal System*. Dublin: Stationery Office.
- PARENTI, C., 1999. *Lockdown America: Police and Prisons in the Age of Crisis*. New York: Verso.
- PIEHL, A. M., B. USEEM and J. J. DiIULIO, 1999. *Right-Sizing Justice: A Cost Benefit Analysis of Imprisonment in Three States*. Manhattan: Civic Report No. 8. pp.467-485.
- PRISON SERVICE OPERATING COST REVIEW GROUP, 1997. *Report*. Dublin: Stationery Office.
- PRISON STUDY GROUP, 1973. *An Examination of the Irish Prison System*, Dublin: Prison Study Group.
- RADZINOWICZ, L. and J. KING, 1977. *The Growth in Crime: The International Experience*, Penguin: Harmondsworth.
- ROTTMAN, D. 1976. "Crime and Law Enforcement", in National Economic and Social Council, *Towards a Social Report*. Dublin: NESC. pp.164-199.

- ROTTMAN, D., 1984. *The Criminal Justice System. Policy and Performance*, Report No. 77, Dublin: NESAC.
- SABO, D., T. KUPERS and W. LONDON, (eds.), 2001. *Prison Masculinities*, Philadelphia: Temple University Press.
- SHERMAN, L. W., D. C. GOTTFREDSON, D. L. MacKENZIE, J. ECK, P. REUTER and S. D. BUSHWAY, 1998. *Preventing Crime: What Works, What Doesn't, What's Promising*, Washington DC: US National Institute of Justice.
- SILBERMAN, M., 1976. "Toward a Theory of Criminal Deterrence", *American Sociological Review*, Vol. 41, pp. 442-461.
- SMITH, B. A., 1990. "The Female Prisoner in Ireland, 1855-1878", *Federal Probation*, Vol. 54, pp. 69-81.
- SPELMAN, W., 2000a. "The Limited Importance of Prison Expansion" in A. Blumstein, and J. Wallman (eds.), *The Crime Drop in America*, Cambridge University Press.
- SPELMAN, W., 2000b. "What Recent Studies Do (and Don't) Tell Us about Imprisonment and Crime", in Michael Tonry (ed.), *Crime and Justice: A Review of Research*, Vol. 27, Chicago: University of Chicago Press.
- TARLING R., 1993. *Analysing Offending: Data, Models and Interpretations*. London: HMSO.
- TARLING R., 1994, "The Effect Of Imprisonment On Crime", *Journal of The Royal Statistical Society, Series A*, Vol. 157, No. 2, pp. 173-176.
- TOMLINSON, M., 1995. "Imprisoned Ireland" in V. Ruggiero, M. Ryan and J. Sim (eds.), *Western European Penal Systems: A Critical Anatomy*, London: Sage.
- VERA INSTITUTE OF JUSTICE, 1996. *The Unintended Consequences of Incarceration*, New York: Vera Institute of Justice.
- VON HIRSCH, A., A. E. BOTTOMS, E. BURNEY and P-O. WIKSTRÖM, 1999. *Criminal Deterrence and Sentence Severity: An Analysis of Recent Research*. Oxford: Hart Publishing.
- WALMSLEY R., 2002. *World Prison Population List (Third Edition)*, Research Findings 166, Home Office Research, Development and Statistics Directorate.
- WALMSLEY R., 1999. *World Prison Population List (First Edition)*. Research Findings No. 88, London: Home Office Research, Development and Statistics Directorate.
- WATSON, D., 2000. *Victims of Recorded Crime in Ireland: Results from the 1996 Survey*. General Research Series, No. 174, Dublin: Economic and Social Research Institute/Oaktree Press.
- WEST, D. J. and D. P. FARRINGTON, 1977. *The Delinquent Way of Life*. London: Heinemann Educational.
- WOLFGANG, M., R. FIGLIO and T. SELLIN, 1972. *Delinquency in a Birth Cohort*. Chicago: University of Chicago Press.
- WOLFGANG, M., T. THORNBERRY, and R. FIGLIO, 1987. *From Boy to Man: From Delinquency to Crime*, Chicago: University of Chicago Press.
- WOLPIN, K. I., 1978. "An Economic Analysis of Crime and Punishment in England and Wales, 1894-1967", *Journal of Political Economy*, Vol. 86, No. 5, pp. 815-840.
- YOUNG, P., I. O'DONNELL, and E. CLARE, 2001. *Crime in Ireland: Trends and Patterns 1950 to 1998*, Dublin: Stationery Office.
- YOUNG, W. and M. BROWN, 1993. "Cross-National Comparisons of Imprisonment", in M. Tonry (ed.), *Crime and Justice: A Review of Research*, Vol. 17, Chicago: University of Chicago Press.
- ZIMRING, F. and G HAWKINS, 1995. *Incapacitation: Penal Confinement and the Restraint of Crime*, New York: Oxford University Press.