

Causes and Consequences of Over-Criminalization*

by

Bruce L. Benson** and Iljoong Kim***

Center for Economic Research of Korea (CERK)

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** Bruce L. Benson, CERK Research Associate; DeVoe Moore Professor and Distinguished Research Professor, Department of Economics; Courtesy Professor of Law; Director of the BB&T Program in Free Enterprise; Florida State University, Tallahassee, FL 32306 USA; bbenson@fsu.edu

***Iljoong Kim, CERK Executive Committee Member; Dasan Professor of Economics, SungKyunKwan University (SKKU), 3-53 Myeongnyun-dong, Jongno-gu, Seoul 110-745, Korea; ijkim@skku.edu

1. Introduction

Criminal law is the body of law defining offenses against the state (or society). Government representatives pursue and prosecute alleged criminal offenders and impose punishment on those found guilty.¹ In contrast, “civil law” or “civil liability” typically applies when an identifiable individual who is harmed by (i.e., a victim of) another person’s action (e.g., trespass, nuisance, breach of contract, negligence) is able to privately prosecute the person causing the harm, generally by employing privately provided legal services, in order to obtain court-ordered compensation.² Criminalization refers to the legislative act³ of establishing/mandating criminal punishment for prohibited behavior.⁴ The decision to criminalize an action is political, and in this context, the purposes of this presentation are to explain that (1) legislators have strong incentives to “overcriminalize,” (2) they have been responding to these incentives in many countries (and in particular in Korea and the United States), and (3) overcriminalization generates significant undesirable (costly) consequences.

Many offenses with victims are illegal in virtually all societies – e.g., fraud, assault, robbery, theft, burglary, murder, arson. All such “customary” offenses have been dealt with through civil law at various times through history and in various societies around the world (Benson 1998, 2011), but many of them also have been and are criminalized. Beyond these customary offenses, many actions have been and are being criminalized through legislation. These politically defined crimes may involve efforts to legislate morality by prohibiting behavior that offends the moral/ideological/political beliefs of legislators or people with sufficient political influence to effectively demand legislation. Examples include prohibition of consumption of various commodities [e.g., narcotics, marijuana, alcohol, and tobacco, as well as horse meat, beef or pork in some cultures], gambling, prostitution, various sexual preferences or behaviors, certain kinds of behavior in public [e.g., vagrancy, public drunkenness, smoking, dress or other aspects of personal appearance], certain printed materials and/or speech [e.g., considered to be “offensive,” “pornographic,” “heretical,” “treasonous”], religious practices, and so on. Politically defined crimes also include actions that violate/circumvent politically created requirements such as taxes,

1. These representatives are typically government employees, but the government can delegate authority to people who are not its employees. For instance, during much of English history victims of crimes were required to prosecute criminals (Benson 1994, 1998). Similarly, several countries are currently contracting with private firms for prison services (Benson 2012).

2. Civil law in the United States essentially is common law, which includes tort law, contract law, and property law.

3. Legislation obviously includes statutes passed by legislatures (e.g., elected representatives in parliaments or congresses, state or provincial legislatures, local councils or commissions), but depending on the institutional environment, legislation can also be produced by courts, executives (e.g., elected presidents, prime ministers or governors, as well as kings/emperors, dictators, etc.), or executive branch officials (e.g., regulatory bureaucrats, prosecutors). See discussion below. The term “legislation” will be used here to describe rules created and imposed by government authorities and backed (or enforced) by the coercive power of the state.

4. Through history, government imposed punishment options have included fines, prison (or less intensive forms of confinement/control such as probation), exile, physical forms of punishment and capital punishment.

prohibitions, and a long list of commercial, financial, environmental, safety, land-use, labor-market, and other regulations. These include smuggling to avoid prohibition, tariffs, quotas and/or domestic taxes; using certain resources or producing various goods or services without required licenses or permits; crossing borders in search of employment without citizenship, and employing those who do so; using land for purposes that are not approved under zoning or other land use regulations; paying workers less than a minimum wage; charging interest considered to be usurious; charging different prices to different customers; and so on. In fact, in the United States (hereafter, US) “Congress may make a criminal offense of virtually anything, and, particularly in the regulatory area, Congress seems to have done so.... Today when a congressional committee adopts a new requirement – concerning commercial transactions, agricultural acreage allotments, welfare programs, or virtually any other regulated activity – it routinely incorporates at the end of the provision a boilerplate statement that any deviation from the new set of requirements constitutes a federal crime” (Gainer 2011, 592). In this context, Stuntz (2001, 512) contends that criminal law should be considered as two fields, not one:

The first consist of a few core crimes, the sort that are used to compile the FBI’s crime index⁵ - murder, manslaughter, rape, robbery, arson, assault, kidnapping, burglary, larceny, and auto theft. The second consists of everything else. Criminal law courses, criminal law literature, and popular conversation about crime focus heavily on the first. The second dominates criminal codes.... Definitions of core crimes of violence and theft ... are not substantial broader today than they were generations or even centuries ago.... When we turn our attention to the rest of criminal law, a very different picture emerges. For the most part, this criminal law was the product of legislation, not judicial decision. And the central feature of its history is growth.

The core crimes referred to by Stuntz are essentially offenses against persons or their property, also referred to as customary crimes or conventional crimes, and these terms will be used interchangeably. The “everything else” category will be referred to as legislated crimes, political crimes, or regulatory crimes depending on context.

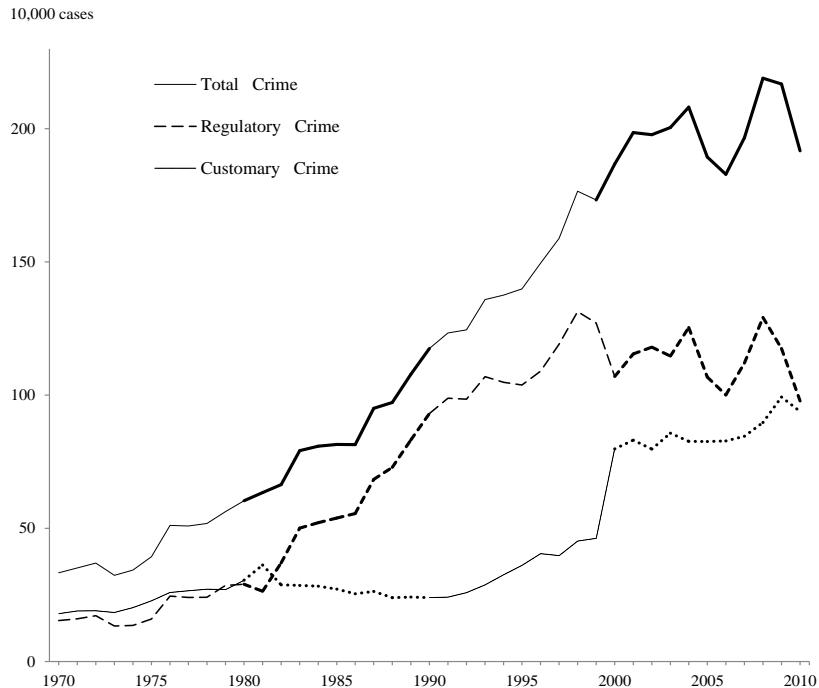
While the discussion above refers to the US, similar trends characterize Korea. Figure 1.1 shows the trends in reporting of these two categories of crime for Korea. It appears that the level of regulatory or political crimes began rising in the early 1980s, but it must be recognized that this trend reflects the fact that many new crimes have been created through legislation over the last few decades. Reported customary or core crimes began increasing in the early 1990s, however, a category that has not seen growth through legislation, so this trend clearly reflects increasing property and violent crimes.

Larkin (2013, 722) suggests that “each new criminal law or sentence enhancement may be eminently sensible on its own, but may turn out to be utterly unreasonable when it is considered against the background of laws already on the books.” Indeed, there is no claim here that any or all legislation to criminalize any particular action is “bad” (although many are, from efficiency, equity and/or other

5. See discussion of the index in Section 3.

normative perspectives (Benson 1998, 2011, 2012, 2014)). The only claim is that too many activities have been criminalized. This normative claim of overcriminalization implies that there is some relatively superior alternative to at least some criminalization (Smith 2012, 538). Such a claim may be based on a number of different norms, but the focus here is efficiency. There are at least three interrelated efficiency bases upon which this claim can be considered.⁶

Figure 1.1
Frequency of Customary and Regulatory Crime



Source: *Annual Crime Report*. The Supreme Prosecutors' Office of Korea

First, overcriminalization may imply that the government regulates more kinds of behavior than it

6. Our intention is to contribute to the “consequentialist audit of criminal laws” that Ashworth (2008, 408) calls for (also see Kadish 1987). Other normative criteria could be applied, however, and the same conclusion of overcriminalization could follow. For instance, the National Association of Criminal Defense Lawyers (NACDL, 2013) in the US suggests that overcriminalization “can take many forms, but most frequently occurs through:

- Ambiguous criminalization of conduct without meaningful definition or limitation;
- Enacting criminal statutes lacking meaningful *mens rea* requirements;
- Imposing vicarious liability with insufficient evidence of personal awareness or neglect;
- Expanding criminal law into economic activity and regulatory and civil enforcement areas;
- Creating mandatory minimum sentences un-related to the wrongfulness or harm of the underlying crime;
- Federalizing crimes traditionally reserved for state jurisdiction; and
- Adopting duplicative and overlapping statutes.”

Some of these “forms” fit within one or more the efficiency bases discussed below, although some clearly reflect other normative perspectives (e.g., the *mens rea* issue, jurisdictional issues such as federalization and legislating minimum mandatory sentences which take some sentencing authority away from the courts). In this regard, see Benson (1998, 2012, 2014) for arguments that significant decriminalization would lead to more equitable treatment of victims and offenders.

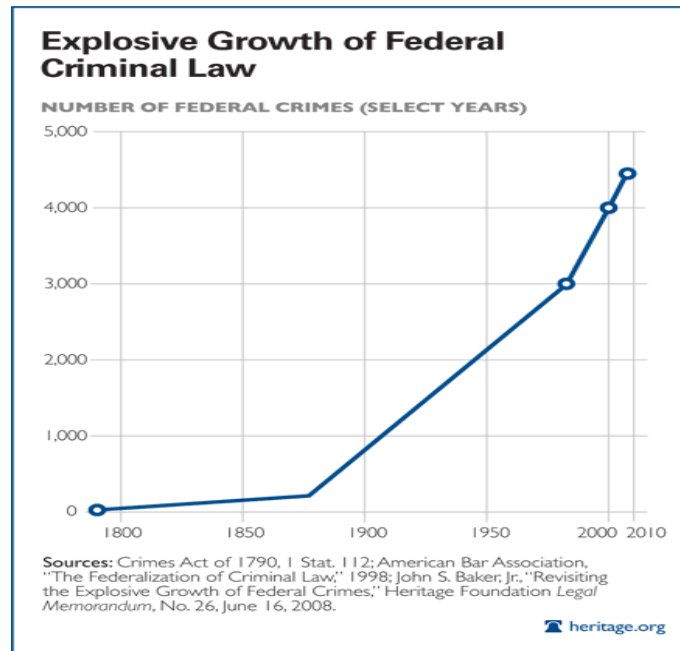
should. More specifically, behavior is being and has been criminalized that should not be illegal at all. Indeed, Gainer (2011, 591) contends that “the ‘over’ in the word ‘overcriminalization’ ... refers to the extension of penal law to reach conduct that most persons would never consider anything other than innocuous, inadvertent, or inconsequential.” Given the efficiency norm, this means that the costs arising from criminalization of many acts (e.g., compliance costs; use of resources for enforcement, prosecution and punishment; external costs detailed below that fall on innocent third parties) exceed the benefits. Thus, for instance, the American Legislative Exchange Council (ALEC 2013, 2) contends that in the US “There are so many criminalized actions that no one has been able to determine a definitive count.”⁷ Even if the effort to count criminal laws in the US is limited to the federal government level, “there are so many federal criminal laws that no one, including the Justice Department, the principal federal law enforcement agency, knows the actual number” (Larkin 2013, 726), and “not even Congress’s own experts have a clear understanding of the size or scope of federal criminalization” (Walsh and Joslyn, 2010, 29).⁸ A relatively recent estimate of federal criminalization in the US suggests that there are about 4,450 federal crimes and around 300,000 regulatory violations with criminal penalties (Baker 2008, 5). The US Congress created an average of 57 new crimes every year between 2000 and 2007, and the annual rate from 1980 to 2000

7. While the issue of overcriminalization has been recognized for at least 145 years, since John Stuart Mills (1869) contended that law should be constrained, it has attracting more and more attention in the US since the at least the 1960s. As a result, substantial legal and criminal-justice literatures have developed on the subject (while some economic literature bears on the issue, few economists have directly addressed it), most of which focuses on the US (there is, however, a significant policy and academic literature on the scope of criminal law in the United Kingdom (Brown 2011, 658; also see Ashworth 2008)). Fairfax (2011, 603-608) suggests that the “Overcriminalization Movement” in the US can be traced to the Johnson Crime Commission that was formed in 1965 and issued its report in 1967, as well as the Brown Commission established in 1966 and given three years (later extended to four) to carry out a review of the entire federal criminal law, sentencing, and all other aspects of the federal system. The first academic publication on the issue apparently appeared in 1967 (Kadish). Concern about overcriminalization has grown dramatically in recent years. For instance, at least three journals have produced symposium issues focusing exclusively on overcriminalization (*American University Law Review* (2005), *The Journal of Law, Economics and Policy* (2011), and *The Journal of Criminal Law and Criminology* (2012)), and a large number of organization from across the political spectrum are actively advocating reforms to deal with the problem (e.g., the Washington Legal Foundation, the Federalist Society, the Cato Institute, the Heritage Foundation, Families Against Mandatory Minimums, the American Civil Liberties Union, and NACDL). Therefore, many of the examples and studies discussed in this presentation are from the US.

8. “In addition to being too *numerous* for ordinary human beings to know, [criminal statutes and regulations] are too *vague* for the typical, intelligent citizen or even lawyer to understand. There is simply no way to comply with a vague statute even if you are aware of its existence” (Silverglate 2011, 712). Gainer (2011, 587-588) similarly characterizes criminal statutes as a “hodgepodge” that has been “hastily cobbled together, ... bearing little relationship to each other in terms of either structure or terminology. They are not only multiplicitous, but internally confusing. They are also overlapping and redundant.” He notes, for instance that there are roughly 700 federal statutes that deal with four types of crime (theft, forgery, false statements, and property destruction). They are spread among fifty different titles in the US Code rather than being concentrated in Title 18 which is supposed to be the penal title, and “the great majority are unknown even to the most experienced federal prosecutors.” Similarly, Stuntz (2001, 517) notes that “the federal criminal code includes 100 separate misrepresentation offences, some of which criminalize not only lying but concealing and misleading as well, and many of which do not require the dishonesty to be about a matter of importance.” Even for issues that involve serious harms, an offender can commit what to most people appears to be a single crime, but can then be treated as if he committed many different crimes.

was similar. Indeed, the growth in Federal criminal law has been going on since the country was established, as illustrated in Figure 1.2, and the rate of growth apparently increased sharply beginning in the late 1870s or early 1880s and then again in the 1980s.

Figure 1.2



Given the pace and scope of criminalization, Smith (2008, 538-539) concludes that the government is simply trying to control too much behavior:⁹

9. While increasing criminalization has a long history in England and the US, the areas attracting criminalization legislation have changed over time. Early nineteenth century state-level criminal codes in the US included "statutes that were immensely more intrusive into private and family life, and non-commercial public behavior ... than exist now" (Brown 2011, 662). As criminalization of these acts declined, criminal regulation of commercial and economic activities increased, as did regulation of property uses and labor (see Brown (2011)). Much more criminalization was occurring at the state and local level than at the federal level prior to the early 1800s, although federal criminalization of regulation also was clearly expanding by mid-century, with actions such as proscriptions of the sales of adulterated or unsafe food (Gainer 2011, 592). Criminalization of safety regulations increased with the rapid economic growth accompanying the Industrial Revolution, but then (Gainer 2011, 592):

The Congress then began prescribing minor criminal penalties for violations of regulatory provisions that somewhat less directly related to the protection of public health and public safety. Some of those provisions carried no requirement of proof of a culpable mental state, and ... the courts ruled that violators could be held strictly accountable, no matter how accidental the conduct. The congressional criminalization of regulated conduct gradually became common. Eventually, Congress began to apply criminal penalties to activities that involved no endangerment of persons or property. Criminalization of new regulatory provisions became almost mechanical.

Stuntz (2001, 515) notes that during the first third of the twentieth century, "vice" was the primary focus of new criminalization, while regulatory crime became the focus in the second third of the century along with racketeering, and the last third saw continued focus on "white-collar" regulatory crime along with drugs and violence.

Furthermore, while crime control supposedly is the primary responsibility of state and local governments, not the federal government, today "Federal criminal law probably covers more conduct – and a good deal more innocuous conduct – than any state code" (Stuntz 2001, 517).

Contemporary criminal codes reach conduct that, in previous generations, would not have been subject to punishment. The classic example is so-called regulatory offenses. These offenses punish conduct that is *mala prohibita*, or wrongful only because it is illegal, and may allow punishment where “consciousness of wrongdoing be totally wanting.” With the proliferation of regulatory offenses, infractions that in prior generations might not even have resulted in civil fines or tort liability are now subject to the punishment and stigma of the criminal law.

Stuntz (2001, 516) notes, for instance, that legislation has criminalized “negligent endangerment, which requires neither injury nor the materialization of risk, but only risk creation. Possession of burglars’ tools, which means no more than possession of a screwdriver, is routinely criminalized, as is possession of various sorts of “drug paraphernalia” (e.g., bowls and spoons) other than the banned drugs themselves.” In this context, a joint study by the Heritage Foundation and the National Association of Criminal Defense Lawyers reports “that three out of every five nonviolent offenses lack a criminal-intent requirement that is adequate to protect from unjust criminal punishment Americans who engaged in conduct that they did not know was illegal or otherwise wrongful” (Walsh and Joslyn 2010, 29). Walsh and Joslyn (2010, IX) report on criminalization activities in the 109th Congress (2005–2006), for instance, when legislation encompassing 446 criminal offenses was proposed “that did not involve violence, firearms, drugs and drug trafficking, pornography, or immigration violations. Of these 446 proposed non-violent criminal offenses, 57 percent lacked an adequate *mens rea* requirement. Worse, during the 109th Congress, 23 new criminal offenses that lack an adequate *mens rea* requirement were enacted into law.” These two quotes refer to the same concern since *Mens rea* means “guilty mind” or criminal intent. That is, the criminal offender presumably knows that an action is criminal before taking the action, and wilfully engages in the act anyway. Without adequate *mens rea* requirements individuals can be held criminally responsible for actions that they do not even know are wrongful.

A second interpretation of overcriminalization actually could be combined with the first. It is considered separately here because, while the first suggests that there are too many acts that have been prohibited in an absolute sense, the second is that even for behaviors that might appropriately be issues of law, too much criminal law is being created relative to the domain of civil law.¹⁰ From an efficiency perspective this implies that civil liability would deal more efficiency with at least some behaviors that are appropriately illegal but that have been criminalized.¹¹ Note, for instance, that many actions

10. Larkin (2013, 723) contends that the principal form of overcriminalization is simply “unnecessary criminal laws,” which presumably encompasses the first two bases suggested here. Similarly, ALEC (2013, 2) states that “The untethered and brisk growth in both the size and scope of criminal law is known as overcriminalization.”

11. Some might argue that victims often do not have the ability to pursue justice as efficiently as the state does or that justice is a public good that will be under produced by the private sector. These issues are addressed in Sections 3-5 but note that the availability of lawyers willing to work for victims on a contingency-fee basis suggests that victims have considerable access to justice through civil law. Furthermore, if a legislature believes that victims do not have the capacity or willingness to investigate potential civil offenses, it “could create civil investigative arms for ... agencies and grant them power to compel private parties to submit to onsite civil inspections” (Larkin 2013,

prohibited through criminal law and regulation have identifiable victims who are harmed. Some of the actions that are now criminal were civil law issues a few decades ago, and all crimes with victims have at one time or another been considered to be issues of civil law in many societies, both today in some cultures and in the distant past in others (Benson 1998, 2011). When there are identifiable victims of illegal behavior, pursuit of justice under civil law is pursuit of justice for victims – appropriate compensation for harms suffered (Benson 1998, 2012, 2014). As Stuntz (2001, 516) notes, for instance, negligent assault is being criminalized by states, but this is “nothing more than an ordinary tort.” When such acts are criminalized, the focus shifts to pursuit of “justice” for offenders – appropriate punishment imposed on offenders. In this context, overcriminalization implies insufficiently low levels of victim justice.

Third, a claim of overcriminalization might imply that there is too much legislation mandating/regulating human behavior through threats of criminal prosecution and punishment relative to the enforcement, prosecutorial and punishment resources the legislature actually funds. Learned Hand, one of the most famous judges in US history, contended that the “chief judicial commandment” should be “Thou shalt not ration justice.” Unfortunately, this judicial commandment cannot be followed because it violates a higher source of “law,” scarcity and the economic laws that inevitably result. Enforcement, prosecutorial and punishment resources are all scarce so they must be rationed among competing uses. This contention of overcriminalization implies that these resources are too limited, and/or that with growing numbers of crimes to enforce, the rationing mechanisms employed in the criminal justice arena are not able to allocate the scarce resources in cost-effective ways. The priorities that citizens might feel are appropriate in allocating scarce crime control resources become submerged under the mass of criminal laws, many of which citizens are not even aware of. Which laws should be heavily enforced, which should be ignored? Presumably those resulting in serious harms, the core crimes listed by Stuntz in the quote provided above, should get priority but how much priority? The likelihood that too many resources will be allocated to enforce the expanding array of political/regulatory crimes involving trivial harms, if any at all, increases and the criminal laws that most citizens are most concerned about, the core crimes, are likely to be under-enforced.¹² In fact, in order to understand many of the negative consequences of

738). Larkin (2013, 738-739) suggests that legislators prefer criminal to civil compliance officers, in part because civil compliance officers (1) “lack the authority and respect given to federal agents. In comparison to civil inspectors, FBI agents wearing ‘raid jackets’ emblazoned with the Bureau’s logo will receive far more deference from a judge, a corporation, and the public” [bureaucratic agencies are likely to support and even propagate this view whether it is correct or not, as explained below]; and (2) “Adding criminal statutes to an otherwise entirely civil regulatory scheme allows Congress to cash in on the leverage that a criminal investigation enjoys with the public and the media.” These and other legislative incentives for criminalization are discussed in Section 2 below. 12. Recall note 6 and that one of aspects of overcriminalization cited by NACDL is “Creating mandatory minimum sentences un-related to the wrongfulness or harm of the underlying crime”. This issue goes much further, however, as criminal law in the US “covers far more conduct than any jurisdiction could possibly punish” (Stuntz, 2001, 507).

overcriminalization, one must recognize the basic fact that scarce resources, including those allocated to policing, prosecution, adjudication, and punishment, all have valuable alternative uses, so something must be sacrificed in order to use these resources to control political crimes: tradeoffs are inevitable.

Furthermore, the opportunity costs of increasing enforcement of one criminal law, includes the fact that enforcement of another criminal law is reduced (Benson, et al. 1992, 1998; Resignato 2000; Benson 2009, 2010b and others cited below).¹³ Thus, adding a mandate to enforce a newly legislated crime means that, to the degree that police and prosecutors follow the mandate, less law enforcement effort will be directed at some other crime or crimes, all else equal. Recall Figure 1.1 in this context, and note that the increase in core/customary crimes in Korea occurred several years after the increase in legislated/regulatory crime. This suggests that with increased criminalization and the resulting shift of scarce policing and prosecution resources away from enforcement of core crimes, deterrence of these core crimes began to decline and those crimes began to increase. This potential relationship is explored in more detail below.

Overcriminalization also means that individual police officers, regulators, and prosecutors are given tremendous discretion in choosing who to charge with what. Indeed, Stuntz (2001, 509) concludes that “As criminal law expands, both lawmaking and adjudication pass into the hands of police and prosecutors; law enforcers, not the law, determine who goes to prison and for how long. The end point of this progression is clear: criminal codes that cover everything and decide nothing serve only to delegate power to district attorneys’ offices and police departments.” The result, as Kadish (1987, 37) explains, is that “the inevitable process of actual enforcement ... (a) ... poorly serves the objectives you [citizens] have in mind and (b) in any event produces a variety of substantial costs, including adverse consequences for the effective enforcement of the criminal law generally.”

The contention here is that overcriminalization is evident no matter which of the above three efficiency bases is applied. That is, governments try to control too much behavior, at least some criminalized behavior should be issues of civil law, too much behavior is criminalized relative to available policing, prosecution and punishment resources and as a result the already inefficient allocation processes becomes even less efficient as it deals with the ever widening array of crimes. Intended benefits from the individual criminal laws and from the mass of law will not be achieved. Recognition of the immutable fact that the enforcement of criminal laws requires the use of scarce resources is necessary in order to appreciate many of the negative consequences of overcriminalization. Section 3 examines the rationing procedures that determine the allocation of enforcement resources (police and regulators) and

Not only are many penalties too harsh relative to the harm done by a crime; they are too harsh (and too abundant) given the limited resources allocated to punishment. Too many people can be and are being sentenced to prison (and probation, etc.) for too long relative to the capacity of the system. This, excessive punishment is part of the inefficient rationing process discussed below, and the focus on Section 5.

13. This assertion assumes that crime control resources are not increased sufficiently to offset the consequence of reallocation, but see the discussion below demonstrating that this is an appropriate assumption.

the negative consequences of increasing the excess demands on police by adding to the list of criminal acts. These consequences include (a) reductions in enforcement effort against and deterrence of other criminal acts resulting in relatively high levels of those crimes, (b) tremendous discretion for law enforcement officials who can discriminate in the application of law, (c) many reported crimes being ignored by police, thus undermining the incentives of victims to report crimes, and (d) increasing corruption. Section 4 considers the same issues with regard to prosecution and adjudication. In this case, negative consequences include (a) court crowding and delay resulting in plea/charge bargaining (or some other method of rationing to alleviate crowding and delay such as summary prosecution in Korea), (b) tremendous discretion for prosecutors who can discriminate in the application of the law, (c) increasing corruption, and (d) large numbers of crime victims who report crimes but are not satisfied with the sentences given to criminals. Section 5 turns to the demands on and consequences of rationing scarce punishment resources. Among the negative consequences of overcriminalization and the growing excess demands on the corrections system (prisons, probation and parole systems, perhaps treatment and/or rehabilitation processes) are (a) prison crowding that is either alleviated by various early release mechanisms or allowed to occur thereby increasing the harshness of the punishment, (b) tremendous discretion for corrections officials who can mistreat convicts as well as allowing and even facilitating illegal activities within prisons (smuggling contraband such as illegal drugs), (c) large numbers of crime victims who are not satisfied with the punishment criminals get, (d) inadequate resources to treat/rehabilitate criminals, (e) an expanding portion of the population stigmatized with criminal records because citizens do not feel that they have adequately paid for their crimes (e.g., served sufficient sentences) which together make it difficult for these criminals to obtain legitimate work or work appropriate to their abilities, and (f) high recidivism rates. In light of the substantial undesirable consequences of overcriminalization, the obvious question is, why does overcriminalization occur? Answering this question requires an examination of the incentives faced by legislators. Such an examination is provided in Section 2 before turning to the actually rationing processes for scarce criminal justice resources and their consequences in Sections 3, 4 and 5, as noted above. Section 6 offers conclusions.

2. Overcriminalization: An Inevitable Result of the Legislative Process?

The “public interest” theory of legislation implicitly assumes that legislators as a group are benevolent and omniscient (or that they have the ability and incentives to determine what is best for the citizens in their jurisdictions before legislating). Individually, they (or at least a majority of them) are concerned about the “public interest” (or “social welfare”) rather than their own or their supporters’ personal objectives. To do so they also must know (or be able to obtain and understand) all the

information required to determine what legislation is actually in the public interest.¹⁴ Perhaps alternatively, the legislative process of information accumulation/transfer (e.g., from lobbyists, hearings, or staff research, communications with constituents) and debate results in discovery of the necessary information. If this theory accurately characterizes legislation then overcriminalization, or any other legislation that is detrimental to the public interest, should not be observed. If either of these assumptions, benevolence and omniscience (or ability to gather and process all relevant information/knowledge), is relaxed, however, then the conclusion that legislation supports the public interest no longer necessarily follows (Mises 1949, 692). In this regard, there is a large and growing theoretical and empirical literature that reconsiders one or both assumptions and rejects the public interest theory for a wide variety of legislative actions.¹⁵ Key contributions of this literature are discussed below in order to show why overcriminalization is actually inevitable, at least without binding constraints on legislators.

2.1. A Special Interest Theory of Legislation. First recognize that public officials including legislators are like everyone else. They take actions in pursuit of their own subjective objectives in an environment characterized by uncertainty. The same holds for individuals who engage in efforts to influence legislation (lobbyists and the people they represent, other public officials, legislative staff, policy “experts”, etc.) and the bureaucrats that regulate and enforce the resulting legislation. Those objectives may be completely selfish or very altruistic, but they are subjective so no can know for sure what any individual’s actual goals are.¹⁶ Some potential goals can be ruled out, however, as Stuntz (2001, 508) explains:

the legislators who vote on criminal statutes appear to be uninterested in normative arguments. To take an obvious example: for the past generation, virtually everyone who has written about [US] federal criminal law has bemoaned its expansion. But the expansion has continued apace, under very different sorts of Congresses and Presidents. Normative argument does not seem to have mattered. One can put the point more generally: American criminal law’s historical development has borne no relation to any plausible normative theory – unless “more” counts as a normative theory.”

Second, recognize with Rhodes (1977, 13) that “as far as crime policy and legislation are concerned, public opinion and attitudes are generally irrelevant. The same is not true, however, of specifically interested criminal justice publics.” Additional research implies similar conclusions.¹⁷ A

14. A complement to the public interest theory is the theoretical concept of the “public good” and the assumption that governments provide such goods. This theoretical construct is considered in Section 3.

15. Another issue with the public interest theory that “public interest” is not an objective concept. Different individuals in a community have very different subjective views of what the public interest is or should be.

16. The individuals involved may and probably often do believe that the ends they pursue are in the public interest, but what they believe to be in the public interest also reflects their subjective evaluations which may easily be influenced by private interests (Benson 2007).

17. The role of interest groups in shaping criminal justice policy has been recognized for a long time. See, for

useful starting point for the consideration of the implications of this is provided by Stigler (1971). He focuses on industrial regulation but the implications are much broader. He describes government regulation as a demand and supply process with interest groups on the demand side and legislators on the supply side. The objectives of interest group demands are property rights assignments/alterations (Benson 1984, 2002, 2005; Eggertsson 1990), along with enforcement of the property rights assignments (e.g., through criminal law).¹⁸ Mandated changes in property rights eliminate some rents and create others. Legislation mandating that various requirements be met in order to obtain a license to engage in a particular business activity, even if allegedly justified as a means of protecting consumers, raises the cost of entry into that market, for instance, so the rights of owners of productive resources who may want to enter that market have been constrained. If there is a limit on the number of licenses issued, rights have been completely taken away from those who cannot get a license. Legislation to criminalize the production and/or consumption of some substance (e.g., marijuana, cocaine, alcohol), even if it is intended to encourage moral behavior or protect people from harming themselves, takes rights away from people who want to use their resources to produce the substance, and from those who want to consume it. Similarly, the criminalization of a particular act that has previously been dealt with through civil law often takes away victims' rights to collect compensation (Benson 1994, 1998, 2012, 2014) and assigns enforcement rights to a specific government agency. Whenever interest groups are successful in inducing new legislation, they are altering the assignment of property rights, so other individuals lose rights and their accompanying subjective value. These facts do not imply that such rights reallocations are necessarily "bad" (although many are, from various normative perspectives). The point is that governments govern by assigning and enforcing rights, and by more or less continuously modifying and changing them in the face of changing interest group demands (Benson 1984). Furthermore, there inevitably are always losers when this occurs.

The losers (or potential losers from proposed legislation) have incentives to try to recapture (or prevent) the forced rights transfers. One way to do so is for the losers (or potential losers) to become involved in the political competition over rights assignments (Tullock 1980) (other ways are discussed

instance, Berk et al. (1977), Thornton (1991), Brunk and Wilson (1991), Rasmussen and Benson (1994), Benson et al. (1995), Benson (2010b, 2011), Miller (2004) and McCaghy et al. (2005), as well as literature discussed below.

18. In Stigler's (1971) model the objectives are labeled as wealth transfers produced through regulations. Property rights "convey the right to benefit or harm oneself or others" (Demsetz 1967, 348), however, so they are primary determinants of the distribution of wealth, given that they are recognized and respected (e.g., perhaps due to enforcement). Furthermore, many members of many interest groups contend that they are pursuing environmental protection, moral behavior, justice, consumer protection, workplace safety, fairness, or some other objective that they contend do involve wealth transfers to interest group members. If wealth is defined as well-being or utility (presumably Stigler's definition), of course, rather than some sort of material wealth, then success by these groups does increase wealth for members. Nonetheless, reframing the analysis in terms of property rights clearly reveals that even if members of an interest group are not pursuing personal wealth, they are pursuing property rights alterations which will negatively impact other people's wealth.

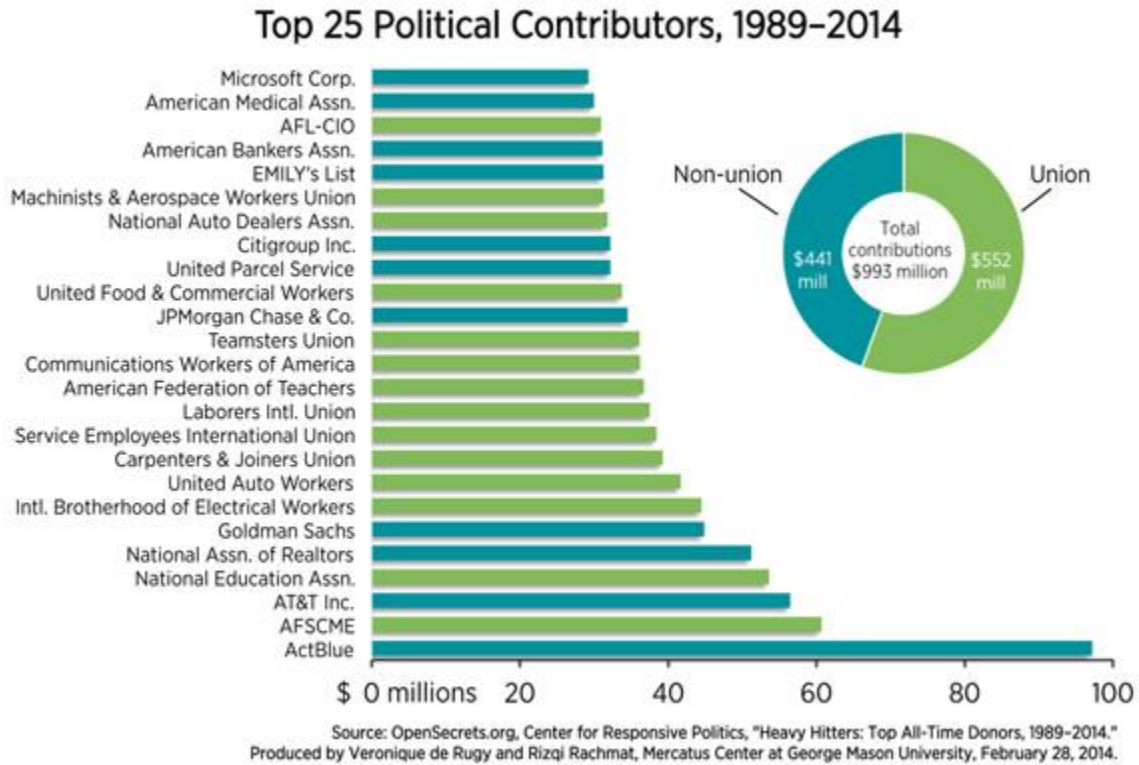
below). Once an interest group organizes and becomes politically active in an effort to influence a particular piece of legislation, however, the marginal cost of trying to influence other legislation is much lower than the initial cost of entry, so the group may move into the political completion over issues that were initially relatively unimportant to its members. Indeed, the expanding political effort is likely to involve issues that generate much smaller potential gains/losses for group members than would be necessary to induce organization in the first place.

There are significant costs involved in organizing to engage in political action (Tullock 1967; Posner 1974; Benson 2002 2004), so not all losers will do so. The expected benefits of organizing must exceed the expected costs for the individuals involved. As a consequence, potential groups whose members have relatively large per capita stakes in a particular issue are more likely to form and become effective, compared to potential groups with relatively small per capita stakes. Similarly, because of organizing costs, small groups are more likely to effectively organize than large groups. Thus, for instance, Stigler (1971) concludes that industrial regulation generally favors the industry's firms over its consumers. As a consequence, industrial regulation generally tends to result in barriers to entry (e.g., licensing requirements that are very difficult to meet for anyone not already in the industry and/or political jurisdiction, defined marketing territories), price floors rather than price ceilings, and other limits on competition. Criminalization increasing occurs in this context, as Larkin (2013, 744-745) notes,

some companies seek their own version of a particular criminal law for anticompetitive purposes.... Some companies also will use industry-specific criminal laws to garner economic rents – namely, supernormal profits obtained because of government regulation.... businesses will use the competition laws and regulatory process as a form of economic predation, especially if a company can persuade the government to do the heavy lifting itself by bringing a criminal prosecution ... against a rival.

Business groups are not the only organizations that seek criminalization of actions in order to gain rents. Labor unions clearly can capture considerable benefit from regulations too (Benson 2002), perhaps by obtaining exclusive rights to bargain on behalf of and/or supply labor for particular industries (e.g., longshoremen, railroads, automakers, construction projects funded by government, coal mining), by advocating politically imposed minimum wages in an effort to make non-union labor less attractive as potential substitutes for union labor, and so on. Indeed, unions are among the largest sources of political contributions in the US, as illustrated by Figure 2.1 above. Fourteen of the top 25 contributors over the last 25 years are labor unions, compared to four business organizations (and seven individual firms/corporations discussed below). Note that the second (American Federation of State, County and Municipal Employees), fourth (National Education Association) and twelfth (American Federation of Teachers) largest contributors are public sector unions, a point that becomes relevant below.

Figure 2.1



Labor unions often are relatively large groups, illustrating that if a large group is able to overcome the cost of organizing it can be very effective in the political arena. This is particularly true in representative democracies since one of the important factors determining the purchasing power of interest groups seeking legislation is the ability to deliver a block of votes in the next legislative election. For instance, organized single issue groups focused on non-economic issues like abortion or the environment “see themselves as warriors in a battle of good versus evil. Motivated by moral concerns not susceptible to compromise, special interest groups throw their weight behind like-minded politicians regardless of their stance on other issues, and those politicians attempt to repay their supporters with favorable legislation. Often, those statutes include criminal laws” (Larkin 2013, 741-742). Even in a non-democratic system, numbers of members can be important because large groups may be able to effectively threaten disruptions (riots, disorder, strikes and work stoppages) that destabilize the regime.

Another source of purchasing power in the political arena is financial resources, of course, as a group can exchange money (campaign contributions, bribes, promises of future employment) for legislation. Small groups with large per capita stakes tend to rely on money. Groups with large membership like unions also offer substantial amounts of money even though per capita stakes are relatively small, by collecting membership dues that are low for each individual but large in aggregate. Furthermore, if a single economic entity (individual, private firm, corporation, union initially organized

for non-political purposes, bureaucratic agency as discussed below) has a sufficiently large stake and sufficient resources to attract the support of legislators, that individual entity may pursue political action directly without organizing with others. This individual may simply represent its own interests (Figure 2.1 includes seven firms/corporations, for instance). Alternatively, as Stigler's (1974) follow-up contribution to his 1971 article suggests, when the potential gains from political actions are heterogeneous, one or a few people with particularly large stakes may effectively represent the interests of a much larger unorganized group who have smaller stakes.

Peltzman (1976) provides a formal model of Stigler's (1971) theory as it applies for representative governments by assuming a competitive process for individuals seeking to be legislators. As with the model of perfect competition in markets, where entrepreneurs who have subjective goals are nonetheless forced to act as profit maximizers in order to survive, politicians with subjective ends are forced to act as majority maximizers to survive in the Peltzman model. After all, a non-vote maximizing strategy leaves open the possibility that a competitor can offer a different bundle of political actions that will win the next election. Peltzman's model concludes that the legislature will favor the politically powerful interest groups, but that more than one organization may be favored at the expense of others, and the favored interest groups will not be favored to the extent that they could be. The reason is that the "marginal political return to a transfer must equal the marginal political cost" in order for the legislator to maximize his majority (Peltzman 1976, 217).¹⁹ For example, Stigler's (1971) model suggests that electric utility regulation is expected to favor the utility firms by creating exclusive markets and setting high prices. Some consumers may be effectively organized, however, such as industrial users who consume large amounts of electricity, so the utility commission is likely to set lower rates for these users than for widely dispersed residential consumers who are not organized, in part because their per capita stakes are small.

2.2. Information Costs and Uncertainty. The Stigler-Peltzman analysis and much of the literature that has developed from the foundation they laid involves a static equilibrium model that implicitly assumes a great deal of knowledge on the part of many participants in the political process.²⁰ Relaxing the knowledge assumption allows for a more complete understanding of the causes and consequences of overcriminalization.

First consider voters choosing from among a group of candidates offering to pursue different bundles of legislative actions. To choose the candidate most likely to pursue the bundle of legislation that would generate the greatest net benefits for a voter, she must invest considerable time and effort

¹⁹ Peltzman (1976) also concludes that when there are differences between members of an interest group, the benefits (or costs) to the members will vary, a result that is consistent Stigler's (1974) observation that one or a few people with particularly large stakes may effectively represent the interests of a much larger unorganized group who have smaller stakes, but the regulations that result will favor the large politically active individuals relatively more than those who are not active.

²⁰ For a recent review of the literature that has developed based on the Stigler and Peltzman, see Dal Bo (2006).

informing herself about the bundle each candidate says he will pursue, try to determine if his promises are credible, obtain information about the likely consequences of the various legislative actions being advocated, and then compare the expected subjective costs and benefits that the various candidates' bundles will generate. Furthermore:

When you elect a politician, you buy nothing but promises. You may know how one politician ran the country for the past four years, but not how his competitor might have run it. You can compare 1968 Fords, Chryslers, and Volkswagens, but nobody will ever be able to compare the Nixon administration of 1968 with the Humphrey and Wallace administrations of the same year. It is as if we had only Fords from 1920 to 1928, Chryslers from 1928 to 1936, and had to decide what firm would make a better car for the next four years. Perhaps an expert automotive engineer could make an educated guess as to whether Ford had used the technology of 1920 to satisfy the demands of 1920 better than Chrysler had used the technology of 1928 to satisfy the demands of 1928. The rest of us might just as well flip a coin. If you threw in Volkswagen or American Motors, which had not made any cars in America but wanted to, the situation gets ridiculous. Each of us would have to know every firm unlimitedly in order to have any reasonable basis for deciding (Friedman 1973, 179-180).

Even if a voter makes the very substantial investment required to actually make an informed decision about who to vote for, however, there is no guarantee that the candidate will actually win the election. Indeed, the individual's vote almost certainly will not influence the outcome of the election. If the candidate an individual votes for does win, there also is no guarantee that he will be successful in getting the legislation passed that he promises to pursue. Thus, the expected benefits of making a "correct" vote are quite low. Furthermore, the expected costs of making an "incorrect" vote are very small. The incorrect vote almost certainly will not influence the outcome of the election, and even if it does, the likelihood that the candidate will be successful in getting the proposed legislation passed is also low. Therefore, voters have virtually no incentives to become informed about candidates' full platforms – they are rationally ignorant. As an analogy,

Imagine buying cars the way we buy governments. Ten thousand people would get together and agree to vote, each for the car he preferred. Whichever car won each of the ten thousand would have to buy it. It would not pay any of us to make any serious effort to find out which car was best; whatever I decide, my car is being picked for me by the other members of the group. Under such institutions the quality of cars would quickly decline.

That is how I must buy products on the political marketplace. I not only cannot compare alternative products, it would not be worth my while to do so even if I could. This may have something to do with the quality of the goods sold on that market. Caveat emptor (Friedman 1973, 180-181).

Investments in information to choose among candidates are even less likely because the choice is not between different products. It is between candidates offering to attempt to pursue a set of policies in the future, with no guarantee that they will actually do so. The elected legislator may renege on promises, or perhaps know that various campaign promises are empty because he will not be able to gain sufficient support in the

legislator to pass the required statute.²¹ Since individuals have little recourse beyond voting against the candidate when he goes up for reelection, incentives to gather information about alternatives are even weaker.

Voters certainly may be more aware of some issues than of others, of course, and traditional core issues of criminal law “regularly provoke interest” (Gainer 2011, 591). On the other, regulatory crimes “are infinitely more boring, particularly when committed by corporations, and it is hard to generate much beyond indifference with regard to artificial entities committing artificial crimes” (Gainer 2011, 591). As a result, the vast amount of criminalization that has been occurring has attracted very little interest among voters at large. On the other hand, voters who have large stakes in particular legislation have strong incentives to inform themselves about the various candidates’ views about that specific issue. These are the individuals who also are likely to get involved in narrowly focused special interest groups. Candidates will be concerned about the narrowly focused voters whose interest groups can deliver blocks of votes or campaign funds. Such votes matter but funds may be more important because they can be used to pursue support from rationally ignorant voters who are likely to be swayed by typical campaign actions such as: attack ads that cast competitors in negative light; campaign signs/posters/ads that make a candidate’s name familiar to voters without saying anything about the candidate’s policy views; superficial ads and speeches stressing experience, patriotism, party affiliation or independence depending on the audience, or about job creation, crime reduction, environmental protection and other popular issues without any specifics about precise objectives or methods to achieve them; and so on.

If an elected official fails to pursue or achieve promises made to interest groups these groups also have recourse. They can make threats to take actions (support an opposition candidate with their votes and financial contributions) that can significantly affect reelection. Therefore, a legislator is much less likely to renege on most of his promises to these groups than his promises to the mass of general voters.²² In fact, Berk, et al (1977), who did a detailed and careful study of the making of criminal law in California, conclude that the creation of criminal legislation can be characterized as an “agreed bill” process involving major criminal justice lobbies. Legislators do not initiate or shape criminal law policy -- they simply react to

21. Legislators need not be this devious, of course, as they may not correctly estimate the degree of opposition they will face. Furthermore, many unanticipated events may arise in the future that will attract legislative attention, and since they are unanticipated they will not be addressed in the campaign. The time/effort that the legislator and his staff devote to these issues may mean that less effort will be made to pursue promised policies.

22. In fact, in the US various aspects of the legislative processes are structured to enhance the credibility of legislators’ promises to interest groups. As Kroszner and Stratman (1998, 1163) explain, for instance, because “interest groups cannot enforce fee-for-service contracts with legislators, legislators have an incentive to create specialized, standing committees which foster repeated dealing between interests and committee members. The resulting reputation equilibrium supports high contributions and high legislative effort for the interests.” Stratmann (1991, 1992, 1996, 1998) also explores various relationships between the amount and timing of interest group campaign contributions, the votes of the recipient legislators, and the impact of such contributions on elections. Contributions are significant determinants of legislators’ votes, and they do have significant impacts on elections.

demands of the major criminal justice lobbies (Berk, et al. 1977, 85-86). The agreed bill process is one wherein lobbyists from affected groups and a few members of relevant legislative committees negotiate directly in making important decisions (Berk, et al. 1977, 11; Heinz, et al. 1969; Benson 2011). Any open legislative debate generally is simply rhetoric for public consumption after the negotiations have been concluded. Thus, the important part of the legislative process takes place behind closed doors and involves only groups representing narrow ranges of interest. This domination by lobbyists in the setting of legislative agendas is not unique to criminal law issues or to California, of course. Judge Neely (1982, 80), an economist, former West Virginia legislator and Chief Justice of the state's Supreme Court, wrote, for example, that because of tremendous demands on legislators' time and resources,

It is not possible to initiate programs; the most we can expect for legislators is to react to programs ... paid lobbyists on all sides bang out the compromises and refine legislation long before a legislator is required to take a position on it. The development of comprehensive, politically acceptable legislative packages requires scores of man-years of work, and no single legislator or even group of legislators has resources like that at their disposal. It is the business of paid lobbyists to bring to legislators proposed packages of legislation from which to work Not only do lobbyists draft bills and provide legislative packages, they follow the progress of the legislation as well, organizing support, informing supporters of impending obstacles, and structuring trades that will perhaps assure some compromised but on balance favorable action.

As Peltzman (1976) suggests, however, when there are competing interest groups none of them are likely to get everything they want as the legislature will attempt to allocate benefits and costs in order to maintain a majority in the next election.²³

Because of the legislators' focus on reelection and the rational ignorance of voters regarding issues that do not have large per-capita impacts on their well-being, legislators' decisions tend to be made on the basis of limited time horizons (Lee and Buchanan 1982; Benson and Johnson 1984). Politicians have little incentive to consider consequences beyond their next reelection efforts. Incentives to criminalize are clearly tied to reelection concerns, as "the data show that Congress creates more criminal offenses in election years" (Baker 2008, 1).²⁴ This focus on reelection means that legislators tend to pursue policies that appear to meet relatively immediate expectations of powerful interest groups that can influence the

23. If a legislator does not face significant competition, the incentives to carefully weigh all interest group demands are weakened, of course, so a dictator or king may focus more on pursuing his personal interests. In markets there are always incentives to limit completion in order to gain market power, and the same holds in politics, even in representative democracies. Thus, for instance, the two dominant political parties in the United States have created election laws that raise substantial barriers to entry for third party candidates. Similarly, incumbents have significant advantages in elections, in part because they can use their position and the funding supporting them to influence voters. Therefore, they also may be able to pursue some issues of personal interests, including those consistent with their ideology. This might be achieved by shifting additional support to the groups who pursue actions consistent with those preferred by the legislator.

24. Baker (2008, 5) reports numbers of new criminal offenses created each year by the US Congress between 2000 and 2007, for instance: 2000 (65), 2001 (28), 2002 (82), 2003 (51), 2004 (48), 2005 (13), 2006 (145), 2007 (20). Congressional elections occurred in 2000, 2002, 2004 and 2006.

next election, even when the longer-term consequences of the legislation are predominantly negative. Simply appearing to be “tough on crime” may be sufficient, since by the time that the potential evidence about impacts accumulates, the election generally is over. Indeed, as Larkin (2013, 739) notes, “Adding criminal statutes to an otherwise entirely civil regulatory scheme allows Congress to cash in on the leverage that criminal investigation enjoys with public and the media.” Furthermore, it is very difficult to measure the consequences of a particular pre-reelection legislator’s action or determine causal linkages. If such consequences are recognize a legislator can blame them on other legislators who prevented passage of the precise legislation preferred or enforcement agencies that failed to effectively enforce the statutes. Thus, as Larkin (2013, 735-736) explains,

making something a crime only costs whatever it takes to print the relevant pages in the Congressional Record and the United States Code.... outlawing an activity does not require a legislator to learn anything about the investigative and enforcement agencies charged with implementing the statute. In fact, the agencies will draft the bill for him.... Only through new statutes can a legislator have a direct effect on crime. Perhaps more importantly, for some members, only new legislation allows them to be seen as doing something.... The game, therefore, is passing new criminal legislation.

Lee and Buchanan (1982, 354) explain that “so long as government makes its ... decisions on the basis of a time horizon shorter than the period required for full ... adjustment to ... changes, observed tax rates will be higher than those that a far-seeking or ‘enlightened’ government would impose.” The same holds for legislation establishing new regulatory rules and/or crimes, including potential criminal punishment for offenders – such legislation will be far greater than a “far-seeking or ‘enlightened government would impose.” Therefore it is not surprising that Berk, et al. (1977, 299) sum up their findings regarding the production of legislation dealing with criminalization as follows:

Our quantitative material was especially useful in revealing the behavior of individuals. We saw political actors motivated by highly informed, short -run self-interest, armed with varying resources, aggressively trying to advance their agendas. Yet few had any global perspective beyond the vague implications of elastic rhetoric and nothing approaching a detailed blueprint for the entire criminal justice system. Thus, our quantitative analyses documented how myriad comprises across a variety of issues changed the Penal Code in fits and starts with hundreds of small increments whose overall pattern seemed totally devoid of any self-contained teleological implications. While particular Penal Code alterations were certainly no accident, it is hard to see their cumulative impact except in that manner ... few of the individuals whose actions we have described, seriously considered long-run consequences for Penal Code content.

Legislators are involved in other activities that affect the criminalization process of course, as they pass budgets for police, regulatory agencies, prosecution offices and courts, and they presumably monitor the performance of these bureaucracies. Larkin (2013, 735-736) explains, however, that “those powers have manifold limitations. They work indirectly, at best; they cost the public money and cost legislators time; their results are not immediately apparent, if at all; they force legislators to make enemies; they do

not guarantee credit for legislators, rather than law enforcement officials; and even if they do generate credit for legislators, they do not ensure that credit goes to the right legislators.” Indeed, while voters face considerable uncertainty and very high costs of monitoring legislators, the legislators they elect also face considerable uncertainty and very high costs of monitoring bureaucracies. They must try to learn what various interest groups want and what these groups are willing to offer in exchange for the legislative actions they demand, weigh competing demands,²⁵ assess bargaining costs expected to arise in the effort to get sufficient support from other legislators to pass legislation,²⁶ consider the short-term effects of legislation they may pursue (e.g., can the legislation achieve or at least appear to achieve some of the relevant interest groups’ goals, is their likely to be a political backlash that bring more groups into play before the next election), monitor regulatory and policing agencies to determine if they are actually performing the way legislators and their supporting interest groups intend, and so on. The last issue in this list brings up an important point that requires a significant addendum to the Stigler-Posner-Peltzman theory.

2.3. Delegation of Enforcement and the Political Involvement of Enforcement Agencies. The Peltzman model explicitly assumes that competitive legislators supply regulation.²⁷ In fact, however, they supply legislation and delegate the actual enforcement of the regulations (and crimes) to bureaucratic agencies (rule making powers also can be and often are delegated to regulatory agencies). The incentives and behavior of these bureaucrats must also be considered in order to understand one of the primary sources of demands leading to overcriminalization and many of its most undesirable consequences.

There is a large literature on the economic (or public-choice) theory of bureaucratic decision-making.²⁸ The basic assumption is that public employees pursue their subjectively determined objectives, just like everyone else. In this light, Breton and Wintrobe (1982, 72) note: “In addition to size, budgets, discretion, prestige, and self-preservation, it has been suggested that security, the avoidance of risk or responsibility, secrecy, complexity, career promotion, leisure, internal patronage, and a bureaucrat’s

25. In the US much of the legislative process has been structured to facilitate legislators’ determination of what interest groups want and assessing the relative weights of conflicting (and complementary) demands (Kroszner and Stratmann 1998; Benson 1981; 2005, 115-118).

26. Logrolling (vote trading) goes hand in hand with the specialized standing committee system (Benson 1981) mentioned in footnote 22, for instance, so the legislator will have to vote for other legislation that he may have little interest in order to get his legislation passed.

27. The Stigler-Peltzman approach implicitly assumes that bureaucrats preform as legislators and interest groups expect them too, perhaps because the cost of monitoring bureaucracies is assumed to be low. This assumption has been widely rejected for several decades, however (e.g., Tullock 1965; Niskanen 1968, 1971, 1975; Lindsay 1976; Breton and Wintrobe 1975, 1982; Katzman 1980; Faith, et al. 1982; Benson and Greenhut 1986; Giroux 1989; Zardkoohi and Giroux 1990; Johnson and Libecap 1994; Benson 1995). Some of the reasons for rejecting the assumption are discussed below, and in Sections 3-5.

28. For a somewhat dated and therefore incomplete review, see Benson (1995). There also is a growing empirical literature examining implications of this theory. Some of that literature, particularly as it applies to police behavior, is discussed below.

personal conception of the common . . . good are objectives of bureaucrats, either one at a time or in groups.” They suggest that all of these factors may influence a bureaucrat’s choices and that no general theory of bureaucratic behavior can be built by specifying a particular objective.²⁹ Thus, their analysis focuses on incentives created within the bureaucratic institutional setting (e.g. intensity of inter-bureaucratic competition for budget shares, intra-bureaucratic competition for promotions, barriers to mobility, ability of superiors and sponsors to monitor performance, etc.) as the determinants of which particular objective(s) should appear to dominate in a particular bureau.

Breton and Wintrobe (1982) characterize the bureaucratic institutional process as one dominated by “entrepreneurial competition,” wherein individual bureaucrats pursue their subjective goals by selectively seeking and implementing policy innovations. This competition is multidimensional. It includes general competition for control of resources (budgets) as well as competition for positions and promotions in the formal bureaucratic structure, and membership in the informal networks that bureaucrats develop to facilitate nonmarket exchanges of benefits, information and support in order to control the allocation of resources. Competitive strategies employed include “(i) alterations in the flows of information or commands . . . ; (ii) variations in the quality or quantity of information leaked to the media, to other bureaus . . . to special interest groups, and/or to opposition parties and rival suppliers; and (iii) changes in the speed of implementation of policies” (Breton and Wintrobe 1982, 37–38). These strategies and selective behavior in general are possible because of the way bureaucratic organizations and hierarchies work, including the fact that monitoring by sponsors is very costly. Indeed, the use of such strategies can increase monitoring costs. In addition, many bureaucratic outputs are not measurable and cannot be objectively evaluated. Many bureaus also have a number of different outputs (see Section 3’s discussion of police duties for instance). Therefore, a bureaucrat has incentives to produce measurable outputs in quantities that correspond to the monitor’s desires, while exploiting unmeasurable outputs in order to gain advantage in the competitive process or pursue some other objective (Lindsay 1976).

Legislators are presumably responsible for monitoring bureaucratic performance, so it might be assumed that they (or at least the relevant oversight committee members) will be in a position to recognize and counter bureaucratic efforts to make monitoring more difficult. Time available for assessing relative interest group demands decreases, however, as a legislator spends more time scrutinizing bureaucratic performance. Therefore, legislators face a trade-off. Indeed, as one former state legislator (and later, Chief Justice of a state Supreme Court) wrote,

29. Some models assume that a particular element in the utility function dominates. Tullock (1965) sees bureaucratic behavior as driven by a desire for job security, for instance, while other models assume that utility can be maximized through pursuit of bureau size, or through budget maximization (Niskanen 1968, 1971). Migué and Belanger (1974) propose that bureaucrats seek discretion reflected by a budget with excess revenues over actual costs. As explained below, police officers, prosecutors and judges all have considerable discretion, and this discretion also may be a major source of satisfaction for public officials (Parker 1992).

When, as a young man, I went to the state legislature as a freshman member, I was utterly confounded by the amount of time devoted to sorting out special-interest legislation ... The reason, of course, is obvious: special-interest constituencies are organized and can deliver publicity votes and campaign contributions ...

In any stable of interest groups an individual legislator must please, there are two types of horses: those whom he must not actively antagonize and who can be induced to support or at least be neutral about his candidacy and those who actively help his election either by delivering voters or by delivering money that can be used to deliver voters.

In the service of the second group, the average legislator uses up all of his personal credit, political credit and most of his creative energy and time. The intellectual, emotional, and physical demands on the average legislator are difficult to support. Correspondence must be answered, constituents must be entertained, committee meetings must be attended, staff must be organized and consulted so that other members bills will be understood, speeches and other appearances must be made at home, and finally floor votes must be cast. It is not possible to initiate programs; the most we can expect is for legislators to react to programs (Neely 1982, 67-80).

Clearly, monitoring the performance of bureaucrats is not high on the typical legislators list of priorities when it comes to allocation of his time and effort.

Consider public police in this context. Many of the subjective goals of police (and other bureaucrats) cannot be achieved without a budget. Therefore, as Sherman (1983) explains, police policy-makers are “preoccupied” with the questions of how many police are needed and how big the police budget should be. Justification of budget size and budget increases requires evidence of both the need for police and the fact that police are producing output that appears to be associated with that need. The function of police in the minds of most citizens is to “fight crime” (although, as explained in Section 3, they also place substantial demands on police to provide other services), but how can interest groups, voters, taxpayer and elected representatives tell if police are doing a good job? The number of crimes actually prevented cannot be quantified. Therefore, police need other measurable indicators of their “productivity” (Sherman 1983, 156). The number of arrests is a frequently used measure of “effectiveness,” and this is one of the primary “statistics” police focus on in the budget negotiation process. Indeed, Sherman notes that the budget process rewards those who successfully dispose of cases after crimes are committed more than those who prevent crimes. Another measurable dimension of police activity is response times following emergency calls. Thus, incentives to wait until crimes are committed in order to quickly respond in hopes of making arrests are relatively strong. That such incentives often affect police decisions is supported by Sherman’s (1983, 149) findings that police engage in “waiting to respond” rather than “watching to prevent” crimes. The allocation process is discussed below, but at this point it is important to note that police manpower often is allocated to focus on measurable outputs like arrests while sacrificing the unmeasurable output of crime prevention.

A related aspect of the bureaucratic process emphasized by Breton and Wintrobe (1982, 149) is that as the perceived responsibility for some social ill shifts from outside forces to the government, and hence

to the bureaucracy, bureaucrats seek to shift the blame elsewhere. Police blaming crime on people “crazed by drugs” is an example of this behavior. Criminalization of these sources of blame also adds arguments for larger budgets, more discretion, and so on. Breton and Wintrobe (1982, 150–151) offer two other reasons why bureaucrats advocate a policy of direct control (criminalization) of sources of blame (examples in the US include alcohol prohibition in the 1920s, criminalization and prohibition of various drugs after 1914 and 1937, increased emphasis on drug control in the mid-1960s, and then again in the mid-1980s), even though such policies have a long history of failure (additional reasons become apparent in the discussion of resource allocation in Sections 3 through 5). First, there is always opposition to such a policy, so when it fails the opposition can be blamed for preventing a sufficiently strong effort to combat the problem. Second, since the outcome of the policy depends jointly on the inputs of several different groups and bureau, and the set of possible control methods is very large, when the subset selected fails, bureaucrats can argue one or both of the following: (1) although they advocated a control policy, they favored a different subset of control tools (e.g. more severe punishment, greater spending on some particular control method), so they are not responsible for the failure; and (2) the other groups who had to contribute (e.g. witnesses, judges, legislators who approve prison budgets, other law enforcement agencies) did not do their share. Indeed, a policy can fail completely while at the same time entrepreneurial bureaucrats expand their reputations and end up being substantially better off.³⁰

This discussion of bureaucratic incentives at this point has three purposes. First, it indicates that monitoring costs are significant, adding to the uncertainty facing voters, legislators and interest groups (and voters). Second, it sets up the discussion of police and prosecutorial discretion that is vital to understanding the allocation of criminal justice resources in Sections 3-5. Third, as Breton and Wintrobe (1982, 146–154) explain, one bureaucratic strategy in pursuing their objectives and competing for resources is to “generate” demand for a bureau’s own services through direct lobbying, policy manipulation and the selective release of information, including “selective distortion” of some of that information provided to other interest groups and the media.³¹ This occurs because bureaucrats must

30. Note with Breton and Wintrobe (1982,152), however, that “one need not assume Machiavellian behavior, deceit, or dishonesty on the part of bureaucrats, because in all likelihood the pursuit of their own interest will be, as it is for everyone else, veiled in a self-perception of dedication and altruism.” Indeed, like members of interest groups and politicians, bureaucrats often believe that what they advocate is in the “public interest” without recognizing that their views about what constitutes the public interest are colored by their own interests.

31. For instance, it is primarily as a result of information (much of which is inaccurate and/or unsubstantiated – promulgated by police (Barnett 1984, 53; Michaels 1987, 311–324; Rasmussen and Benson 1994; Benson et al. 1995; Ying and Benson 2013) that it is now widely believed that drug crime is a primary cause of non-drug crime, despite the fact that academic research has, for some time, suggested that the “drug-causes-property-and-violent-crime” argument is not strongly supported. Chaiken and Chaiken (1990) review much of the relevant research at the time and conclude, “There appears to be no simple general relation between high rates of drug use and high rates of crime.” More recently, Martin et al. (2004) found no relationship between measured cocaine use and non-drug crime. See additional discussion in Section 3.

compete with other bureaucracies for the support and attention of sponsors (and individual bureaucrats must compete with other bureaucrats for the attention of supervisors in seeking benefits within a bureau³²). This is one reason for why police and prosecutors are very active advocates of criminalization (other factors are revealed in Section 3).³³ In addition, specialized regulatory agencies with narrowly defined jurisdictions often pursue criminalization of additional actions in an effort to expand their jurisdictions, justify their existence and continue their funding. Indeed, Tullock (1965: 193) suggests that

As an experiment, if one examines the original arguments for establishment of almost any government bureau and compares these arguments with those that may be currently offered for the retention of the bureau, one is likely to find that a considerable shift has occurred in the specification of the objectives that the bureau is supposed to attain. The governmental bureau becomes a permanent fixture, with the objective continually changing. Over time the vested interests of the bureaucrats themselves become more and more important in justifying the organization...

2.4. Reactions to Legislation: Dynamic Considerations. Scarcity of enforcement resources and incomplete knowledge mean that new regulations or crimes cannot be perfectly enforced (see sections 3 through 5 for details). Moreover, incentives always exist to discover new ways to reduce or circumvent the constraints that legislation is intended to impose (Benson 2002, 2004, 2005). The consequence is that a new regulation or politically defined crime leads to spontaneous responses, many of which are not anticipated by the relevant interest group(s), legislators or enforcement bureaucrats, or if anticipated, not explicitly recognized. Indeed, criminalization, including regulation with criminal punishment, can be characterized as an effort by special interest groups to influence the allocation of property rights in a continuous path-dependent spontaneous evolution driven by market, political and bureaucratic entrepreneurial discover processes (Benson 2002, 2005).

New criminalization/regulation actually can create new opportunities for individuals willing to pursue them. As Kirzner (1985, 135) stresses, for instance, a market remains even though regulations attempt to constrain or eliminate it. Incentives are altered, inducing changes in the process of production, exchange processes, and/or consumption (see examples below) but exchange continues even if it is illegal, and the entrepreneurial pursuit of opportunities continues as efforts are made to find and exploit

32. See Stutmann and Esposito (1992) for a very revealing examination of the actual activities of a US Drug Enforcement Agency (DEA) agent, for instance, and note the tremendous amount of time and effort that this agent spent in competing for resources. Also note the significant role that politics played in determining the allocation of drug enforcement resources.

33. See, for example, Berk et al. (1977), Rasmussen and Benson (1994), Benson et al. (1995), and Glaser (1978). Similarly, after an examination of the process that led to drug criminalization following the Harrison Act (1914) and the demand for the Marijuana Tax Act (1935), Lindesmith (1965) contends that the US program for handling the “drug problem” is one “which, to all intents and purposes, was established by the decisions of administrative officials of the Treasury Department.” The Treasury Department’s Narcotics Bureau led the campaign for the Marijuana Tax Act, for instance, and their campaign “included remarkable distortions of the evidence of harm caused by marijuana, ignoring the findings of empirical inquiries” (Richards 1982).

uncontrolled margins and/or avoid the full negative consequences of the new behavioral prohibitions. The evolving market process is likely to be along a path that is different than it would be in a true free market, however, and “wholly superfluous” discoveries are motivated by efforts to exploit new opportunities (Kirzner 1985, 144).

Consider a price ceiling, as in Mises (1949, 762-766), Cheung (1974) and Barzel (1989). The standard textbook prediction is that a permanent shortage arises, but this ignores the potential for rational responses by individuals facing the shortage. Presumably, a price ceiling is intended to transfer rents to consumers but it actually puts the value between what consumers are willing to pay for the quantity produced and the legal price into what Barzel (1989) calls the “public domain,” creating incentives for both buyers and sellers to attempt to capture the value. As Cheung (1974) explains, if buyers and/or sellers can take additional actions to get or provide another unit at a cost below the expected gain, then the shortage is not a permanent equilibrium. For instance, consumers will compete for the limited supply by searching and queuing. These actions are costly, however, so the “full price” consumers pay will rise to include the value of time spent searching or queuing. The money price no longer will determine quantity demanded so the conventional demand curve is no longer relevant and demand based on full price will be lower than the money-price demand. Some consumers with low time values may be better off, but others will be worse off. This full price equilibrium is not actually likely to arise, however, as other margins of adjustment often are discovered. Mises (1949, 763) explains that resource reallocations will occur and Kirzner (1985) predicts that superfluous discoveries will be made. Many of the adjustments will depend on the nature of the good. Sellers may be able to bundle the good with something else that is not under a price control, for instance, or alter some of the characteristics of the good (e.g., reduce quality) in order to reduce costs. When excess demand exists, sellers also have the ability to discriminate among buyers. Some are likely to accept bribes or sell to particular individuals who are in a position to give them something valuable in return. Some may actually increase production in order to sell it in a black-market at prices substantially above the legal price and even market price that would prevail in the absence of the price ceiling. Specialists in search may enter the market, offering to engage in search for consumers at a price below the expected search costs of some non-specialist. Buyers with high time values can employ such specialists and/or pay others to queue for them. When opportunities to buy relatively large quantities arise, perhaps through bribery, individuals can do so and then hoard the extra for later consumption or sale. Examples of such responses to all sorts of criminalization/regulation abound. For instance, as police begin to control drug smuggling over a particular route or using a particular technology, the smugglers respond by developing new routes and techniques to move illegal drugs across borders, and the flow of illicit drugs continues at roughly constant or increasing levels depending on demand (Ying and Benson 2014) – a process that has continued unabated for decades.

The new evolutionary path along which the market moves in the face of regulations is not likely to be desirable from the perspective of the interest groups who demanded the regulations, including the policing bureaucracies. Those expecting to benefit from price ceilings will find that their full prices are rising, for instance, and as Mises (1949, 859) stresses, “As soon as something happens ... that any of the various bureaucratic institutions does not like or that arouses the anger of a pressure group, people clamor for new interventions, controls, and restrictions.” Indeed, as new ways are discovered to avoid or mitigate the intended consequences of regulations and criminal laws, the intended benefits of the regulation for interest groups are reduced if they materialize at all, so groups pressure legislators and enforcement agencies to criminalize and block those actions too. Lobbying intensifies and campaign contributions (or bribes) are offered, legislators respond, resulting in additional legislation and criminalization.

Similar processes occur in the face of criminalization of non-market activities. Consider a simple example. When the federal government in the US attempted to impose 55 mile-per-hour speed limits, truck drivers began using their citizen band (CB) radios to warn each other about speed traps set up by police. CBs were quickly adopted by other drivers as well, and the effectiveness of enforcement was reduced. Using CBs to warn other drivers about speed enforcement efforts was declared to be illegal, but it was almost impossible to enforce. Therefore, radar technology was employed by police to determine speeds of oncoming vehicles a mile or more from their actual location. Soon after that, the market began offering “radar detectors” so drivers could detect the police radar equipment and slow down. Radar detectors were made illegal and “radar-detector detectors” were developed for police. Such superfluous innovations arise in many evolutionary processes that have been redirected through criminalization, leading to more criminalization.

2.5. Negative Externalities as a Consequence of Overcriminalization. When legislation repeatedly makes changes in property rights assignments that affect many parties, negative externalities are generated. Some are implied above, including the resources diverted from productive activities into the political competition for reallocations of property rights and wealth, the superfluous developments that arise in an effort to circumvent regulations, and the discoveries that never do occur because the market evolution proceeds along a different path than it would follow in the absence of the regulations (Benson 2002, 2004, 2005). In addition, tremendous uncertainty results from rapid legislative change.³⁴ As Gainer (2011, 592)

34. Coercive power in the hands of judges also produces legislative externalities. Leoni (1961, 23-24), despite his strong support for court created law as opposed to legislation, notes that without doubt, judicial law may acquire the characteristics of legislation, including all its undesirable ones, whenever judges have the discretion to decide "ultimately" on a case. In particular, when "supreme courts" are established, the members of these courts, or a majority of them, can impose law on all citizens concerned. Thus, establishment of a supreme court actually introduces the legislative process into the judiciary, according to Leoni. The fact is that any government court is in a sense "supreme" if its rulings are backed by coercive power. Thus, the tendency for "legal pollution" arises whether legislation comes from a legislature or from a public court precedent. On top of that, given the allocation mechanism for court time, discussed

notes, for instance, that “the current approach to regulatory violations is not only largely ineffective in providing notice of what is prohibited [because the huge number of criminalized acts is incomprehensible]; it carries the potential for intolerable unfairness to many of the individuals and organizations that are surprised to find themselves prosecuted for such violations.” In this regard, Leoni (1961, 17) explains that

Legislation may have and actually has in many cases today a negative effect on the very efficacy of the rules and on the homogeneity of the feelings and convictions already prevailing in a given society. For legislation may also deliberately or accidentally disrupt homogeneity by destroying established rules and by nullifying existing conventions and agreements that have hitherto been voluntarily accepted and kept. Even more disruptive is the fact that the very possibility of nullifying agreements and conventions through supervening legislation tends in the long run to induce people to fail to rely on any existing conventions or to keep any accepted agreements. On the other hand, the continual change of rules brought about by inflated legislation prevents it from replacing successfully and enduringly the set of non-legislative rules (usages, conventions, agreements) that happen to be destroyed in the process.

A related negative externality is noted by Fuller (1981) when he explains that laws criminalizing voluntary interactions (e.g., gambling, prostitution, marijuana sales and use, and so on), create strong incentives to violate the law. And as Fuller (1981, 232-233) stresses, it is precisely with these kinds of law that “the grossest failures of law have everywhere occurred,” but in addition a negative externality arises. Respect for and fidelity to all law is harmed when large numbers of laws are openly defied:³⁵ “legal morality is seriously affected. There is no way to quarantine this contagion against a spread to other parts of the legal system” (Fuller 1964, 153). Overcriminalization in general has the same affect, however (Larkin 2013, 750-753):

When we know that everyone could be found guilty of something because there is no activity that the criminal law does not reach, we may look at a defendant as being unlucky, not immoral.... Extending criminal law to the point where nearly everyone at some time has done something for which he could be sent to prison erodes the law’s ability to signal that certain conduct and certain people are out of bounds. The law can no longer distinguish “‘us’ from ‘them.’” Once the legislature cuts the criminal law loose from community morality, the average person has no ready guidance.... Moreover, if criminal charges approximate parking tickets in their ubiquity, we have deprived the criminal law of the moral force necessary for it to persuade people to respect and obey its commands. Fear becomes the only reason to toe the line, and there never will be enough cops, prosecutors, and jailers for fear alone to work.

When negative externalities arise in the process of production of some good or service, the conclusion is that there is a market failure and too much of the good or service is being produced. This is the case with government production of laws through legislation, but it is government failure, not market failure. Thus, Auerbach (1982, 9) observes that today in the US, government laws and lawyers have proliferated so

below, it would appear that many of the issues which should get court attention, never get through the system. So not only are there too many legislated laws by courts -- they are not necessarily the laws which the court should be making. As Neely (1982, 84) reported, "... the mass of precedent in law is so enormous that nothing is open-and-shut once it hits the courts."

35. Respect for the legal process is also undermined (Larkin 2013, 720; Gainer 2011, 592), for reasons discussed in Sections 3 through 5.

rapidly as to suggest that our society is burdened by "legal pollution" so that American citizens in general suffer from the malady of hyperlexis." Furthermore, the negative consequences of overcriminalization go well beyond those noted by Fuller, Leoni, Auerback and others, or suggested in the Larkin quote, because of the demands placed on enforcement, prosecution and punishment resources, and the rationing methods that determine how these resources are used. Let us turn to these issues next, beginning with enforcement resources –police and/or regulators.

3. The Allocation of Scarce Enforcement Resources³⁶

Larkin (2013, 722) argues that "The criminal justice system is a public good, and the market cannot reliably produce the ideal amount of such goods." In order to evaluate this claim, the concept of public goods must be carefully considered. Samuelson (1954, 1955) offers a formal definition of "public good" in an effort to justify public provision of various goods due to market undersupply. Subsequent theoretical clarifications (McNutt 2000) produce what economists generally understand the term to imply.³⁷ The key *characteristics of public goods are:*³⁸ (1) *non-excludability, and (2) non-rivalrous*

36. Parts of this section draw on Benson (2010b).

37. Later Samuelson (1969) offers a delineation of the domain of public goods, which is much broader than the one described by this definition: "A public good is one that enters two or more persons' utility. What are we left with? With a knife-edge pole of the private good case, and with all the rest of the world in the public good domain by virtue of involving some consumption externality." In other words, a public good is any good, which, in production or consumption, generates some benefits for someone other than the producer or consumer. If a positive externality arises the result is a public good under this definition, but this sweeping concept of public goods is not used here. It actually may encompass all goods, after all (perhaps a parent gets personal satisfaction or utility, knowing that his or her children eat their vegetables, so vegetables are a public good!). Furthermore, it ignores the institutional setting and the possibility to establish property rights arrangements that internalize these benefits for the relevant decision maker (the parent pays for the vegetables so he or she takes into account both the benefits he or she gets and the benefits he/she expects the children to get; e.g., purchases the types of vegetables that the children like to eat) – see note 38 and 39 for additional discussion.

38. In contrast, private goods are characterized in this public-goods literature as being completely rivalrous in consumption in that one individual's use of the good means that it is completely gone so no other individual can use or capture benefits from using it. The fact is, however, that legal excludability arising with property rights produces the same consequence even if the owner does not completely consume the good, as the owner can dictate use and prevent others from using the good. Indeed, outside of the literature on public goods, "private" generally refers to ownership, and therefore to the right to control access to the good (or resource or service), which is in private hands. The key characteristic of a private good in this widely perceived property rights context, is that it is owned by a single non-government economic entity (e.g., an individual, a firm, a non-government organization) and the owner has a right to exclude any and all other users. Therefore, any non-owner desiring access will have to negotiate with the owner, often paying for the good if an ownership transfer occurs. Thus, a private good or resource need not be entirely consumed as the result of a single use (e.g., a road on a privately owned farm with a locked gate is just as non-rivalrous in consumption as a public road so it can accommodate more traffic than it does, but it is still a private good because non-payers are excluded; the viewing of a movie in a theater with several seats can be simultaneously consumed by many people but they must pay to enter so it is not a public good). In such circumstances, the owner can exclusively use the good repeatedly, or allow simultaneous access by others if the fully internalized benefits of doing so exceed the fully internalized costs, but the good still can only be non-rivalrous to those individuals who are given access by the owner (e.g., people who pay a toll; those who buy a ticket to see a movie). Therefore, in comparison to a public good, a *private good's characteristics are: (1) excludability, (2) possibly, but not necessarily, rivalrous consumption (non-rivalrous consumption is possible for those who obtain permission to access), (3) non-owners must get permission from the owner, often by paying, in order to use/consume the good,*

consumption, which combine to produce (3) free riding incentives, and therefore, (4) 'private provision of these public goods will not occur' (Samuelson and Nordhaus 1985, 713) *because coercive power is required to collect from non-paying free riders* (McNutt 2000, 927-928).³⁹ Non-rivalrous consumption means that even though one person consumes the benefits of the good, everyone else can consume the same undiminished benefits. Non-excludability means, not only that unlimited numbers of people can consume the benefits, but no one can be prevented from consuming them even if they do not pay their share of the costs. Free access (non-excludability) to a non-rivalrous good creates "free-rider" incentives: individuals recognize that they can consume the benefits without paying, so they will not voluntarily pay for the good, and this means that private producers will not produce the good because they cannot collect revenues to cover costs (or at least, that they will not produce enough of the good because, while everyone can free ride, some may not).

Government produced goods and services are not necessarily public goods given the definition provided above, even if no one is excluded from using them. While goods or services made available to a large population of demanders by suppliers free of charge, may be thought of as non-excludable (this reflects the decision of the supplier, not some technological characteristic of the good or service), they are not public goods if they are rivalrous in consumption. They are more appropriately described as common pools (Benson 1994, 2011; Ekelund and Dorton 2003). Indeed, while the common pool terminology usually is applied to a natural resource such as a fishery, it also can describe many goods and services that are freely provided for some reason [often by the state (see Shoup 1964; Neely 1982; Benson 1994, 2011, 97-101; Rasmussen and Benson 1994, 17-37; Ekelund and Dorton 2003), but also perhaps by a private entity, e.g., a free parking lot provided by a retail establishment or mall].

A common pool exists when a substantial number of people have free or "common" access to a scarce good, service or resource that is subject to rivalry in consumption, in the sense that one individual's use diminishes the benefits for other users (this diminution often involves crowding/congestion) and the resulting over use leads to deterioration in both availability and quality for all users. The commons problem, crowding (congestion), overuse and rapid depletion (relative to what would be efficient) reflects

and (4) private provision reliably occurs if it is allowed and profitable.

39. Demsetz (1970) distinguishes between what he called public goods and collective goods, with a public good involving non-rivalrous consumption and a collective good involving non-excludability as well (i.e., Demsetz' collective good is a traditionally defined public good). Indeed, Demsetz (1970) contends that when exclusion is possible indivisibility and non-rivalrous consumption will not stand in the way of private production of "public goods" as he defined them, and following the publication of Demsetz' (1970) article, "many economists concluded that non-excludability is generally the only serious problem in the provision of public goods" (Cowen 1988, 9). Goldin (1977) goes one step further, explaining that there are actually no goods which are inherently public goods because there are always institutional choices available that can be used to exclude; that is, to create a situation of selective access. Finally, Benson (1994) contends that in reality there are no true public goods because free access ultimately leads to crowding/congestion and therefore rivalrous consumption. Thus, so-called public goods actually end up being common pools, a concept discussed below.

the non-price rationing process of first-come-first serve. Everyone knows that if they do not rush into the commons and capture benefits quickly, others will move to capture them, the benefits will deteriorate in quality due to overuse or even be totally dissipated. This result has been called the "tragedy of the commons" (Hardin 1968), of course, and it arises as a negative externality because of free access: no user is fully liable for the cost of his or her use. Crowding and rapid quality deterioration, however, are not the only consequences of common access to a rivalrous good or resource. The deterioration in quality could be at least partially offset with appropriate investments in maintenance, but individuals do not have incentives to make such investments because they cannot prevent others with free access from consuming the benefits or charge them for benefits they obtain (e.g., other drivers will add trips on the highway). This is the positive externality problem of underproduction of maintenance.

While it might be contended that "non-excludable public goods" and "free-access common pools" are simply two terms for the same concept because the free-rider/under-investment implications are the same, this inference is inappropriate.⁴⁰ Free riding is the decision to consume without paying for the **personal benefits** gained, while common pool underinvestment is an unwillingness to pay for **benefits that others will capture**. These are two very different motivations (many supposed examples of free riding are actually common pool under-investments). To emphasize the distinction, *a common pool is characterized by: (1) non-excludability, (2) rivalrous consumption (generally resulting in congestion), (3) excess use because of negative externalities, and under-maintenance due to positive externalities, and (4) either production by nature (a natural resource) or by some person or organization with incentives to provide it free of charge* (often a government, as discussed below). With these definitions in mind, consider the allocation of "publicly" provided policing.

3.1. Rationing Public Law Enforcement Resources. Tullock (1970, 83-84) asserts the following:

Let us say that hiring a police force having a reasonable degree of efficiency would cost each individual ten dollars a year. If I refuse to contribute my yearly allotment, I will receive almost as much protection as if I did make the contribution... and I would, on the whole, be wiser not to pay. On the other hand, if everybody made this calculation, we would have no police force and thus would all be worse off than if each paid the ten dollars. Therefore, we join together and form a police force that has as one of its duties coercing people into paying the ten dollars.

While this seems like a reasonable "public-good" argument, it simply does not characterize reality.⁴¹

40. They can be related because initially a good or resource can have the characteristics of a public good but given the inevitable congestion that arises with free access, it will become a common pool. People do have incentives to limit access to the commons if they are allowed to, of course, so a common pool should persist only if the cost of limiting access is higher than the benefits or if some coercive power prevents privatization (Johnson and Libecap 1982).

41. In addition to the rivalrous consumption point made below, the fact is that many and perhaps all aspects of policing are also excludable. As a result, it is estimated that there are approximately three times as many private security personnel in the US than there are public police, and private police forces serve the railroad industry in the US and Canada as well as many of the 3000 plus colleges and universities in the country. For discussion of the

Since scarce police (and regulatory) resources are not rationed by willingness to pay a money price, as in a free market, they must be rationed in some other way (Shoup 1964). One method for doing so is first-come-first-serve. For instance, the closest patrol officer often responds to a call and is not available when another call from the same general area comes in, so a more distant patrol officer must respond. The quality of the service is lower for the second caller. At some point, all patrol officers are occupied, so the next caller must wait (i.e., queue) until one of the officers completes work at another location. The facts that quality declines for subsequent users and that waiting (queuing) occurs illustrates that police resources are rivalrous in consumption (similarly, as detailed below, using police to pursue enforcement of one type of crime, means victims of some other types of crime are less well served). Therefore, these services are common pools, not public goods (Benson 1994, 1998, 2011; Ekelund and Dorton 2003).⁴²

As the time cost of waiting grows and quality of good or service declines in a free access common pool, many potential demanders may opt out of the queue and choose not to try to consume the good or service. With regard to policing, many crime victims choose not to report crimes. Annual Victimization Surveys by the US Department of Justice (DOJ) routinely indicate that over 60 percent of the crimes against persons and property are never reported to the police. The 2012 survey report indicates that only 34 percent of all property crimes and 44 percent of violent crimes were reported by victims (Truman, et al. 2013, 4), and reporting also varies across the individual property crime and violent crime categories. Only an estimated 28 percent of rape/sexual assault victims report the crimes, for instance, compared to 56 percent of robbery victims, 62 percent of aggravated assault victims, 55 percent of burglary victims, 79 percent of victims of auto theft, and 26 percent of theft victims (reasons for the variation in reporting behavior across crime types are considered below). This crowding out effect further illustrates that policing is not a public good.

Many demanders who enter the queue and report crimes also may not ever be served. Backlogs of thousands of supposedly open police cases actually receive little or no attention, waiting for ever to be

rapid growth and wide array of private protection and investigation services available in the US, see Benson (1998, 2014), and Blackstone and Hakim (2010). For discussion of similar growth and availability in much of the rest of the world, see Benson (2012) and the report from the Graduate Institute of International Development Studies (2011).

42. Edwin Chadwick, a nineteenth-century economist and utilitarian reformer, may be the first theoretically oriented individual to analyze the allocation of criminal justice resources (circa 1829–41) as an evolved publicly provided good with open-access common-pool characteristics (Ekelund and Dorton 2003). Chadwick’s primary goal was crime prevention: “A good police would be one well-organized body of men acting upon a system of precautions, to prevent crimes and public calamities; to preserve public peace and order” (Chadwick 1929, 252). Given this goal, he identified the evolved the publicly provided crime control system as a common pool (without using this terminology of course), and contended that the system misplaces incentives for crime prevention, creating wasteful resource dissipation due to the common access to policing and other criminal justice services. He recommended a number of interrelated incentive alterations to alleviate the free access problem (see Ekelund and Dorton 2003). Chadwick’s insights about the common pool nature of publicly provided criminal justice resources were generally ignored for over a century and a half.

resolved. In Tallahassee, Florida, for instance, a 2002 article in the *Tallahassee Democrat* newspaper explained that there were approximately 15,900 crimes reported to police in the city during 2001 that required investigation if they were to be solved. Of those, roughly 7,000 had no obvious leads for investigators to follow, so no investigator was even assigned to deal with them. They were simply filed away and ignored. Furthermore, another 4,000 cases that actually had leads were not assigned to investigators, probably because they were not considered to be important enough by the police officials deciding which cases warranted attention and which did not (this reflects the other rationing practice that becomes relevant with excess demand – rationing by the enforcement personnel based on some discriminatory criteria – as discussed below). Only 5,900, about one third of the reported cases, were assigned to investigative personnel. These were the only cases with any real chance of being investigated, but individual investigators generally do not have sufficient time to effectively deal with their assigned caseloads, so only a portion of the assigned cases were effectively investigated.

Adding more police never solves these kinds of problems for very long, particularly given the overcriminalization incentives of legislators discussed above, because, while doing so may lead to more crimes being investigated and temporarily reductions in the time spent for some of those in the queue, others seeing that waiting time has been reduced opt back into the queue (e.g., report crimes). Waiting time grows once again, and service quality declines back to essentially the same level it was before resources were added. More people are served but observable excess demand (queues, inactive files) end up being roughly the same as it was before (much of the excess demand is not observable, of course, as many potential users still opt out). It generally would take a massive infusion of government spending to provide the quantity demanded for any publically provided free-access good or service, because everyone who values the good at anything above a monetary price of zero wants it. Since time must be spent in the queue, it is not really free, of course, so rationing still occurs. Furthermore, an increase in police resources and arrests adds to crowding problems for other parts of the system (courts, jails and prisons are discussed below). The criminal justice system (and regulatory system) is a complex vertically (and horizontally) linked system of common pools. Changes at one level or function change demands on other levels and for other functions.

One of many documented examples illustrating the crowding problem due to increased police efforts to control a particular crime (perhaps due to an increasing in police resources, but probably due to a reallocation of resources, as explained below) involves crime labs. As police resources allocated to the control of drug crime were increased in Illinois as a result of the 1984 upsurge in the war on drugs (Rasmussen and Benson 1994, Benson 2009), the number of drug seizures increased, and the demands placed on the state and local crime labs increased dramatically. For example, between 1983 and 1988 the Chicago Police Department's crime lab faced a 108 percent increase in drug cases, from 17,639 to 36,639.

Labs also had to perform relatively complex analyses more frequently with the increasing flow of drug evidence. The result: “At many labs, drug analysis capabilities have been unable to meet the increased demand for services. Consequently, drug analysis backlogs and the ability of some labs to provide timely information to police and prosecutors eroded” (Illinois Criminal Justice Information Authority 1989, 56). The Illinois state crime lab had a 37-drug-case backlog at the end of 1983, but there was a 1,806-case backlog at the end of 1988. The lab processed 75 percent of all of its drug cases within one to seven days in 1983, but this fell to 19 percent by 1988, when 53 percent of all drug cases were taking more than four weeks to process (i.e., waiting time for police, prosecutors and courts increased). Similarly, an internal audit of Chicago’s crime lab found that a 2,162-case backlog in January 1986 had increased 118 percent by September of that same year. Indeed, in July 1986, the Chicago courts dismissed 88 drug cases because analysis results were not available from the Chicago lab in a timely fashion (opted out of the queue); and in December of that same year, 776 cases were dismissed for the same reason. The State lab added 12 new chemists in 1988 but the backlog continued to increase. The Chicago lab added 20 chemists in 1987 and 1988, but the effect was simply to reduce the number of court cases dismissed due to the unavailability of crime lab reports. Dismissals were not eliminated. Again, adding resources does not solve crowding problems given the rationing process.

When demand cannot be met even for many of the people who wait, another rationing mechanism becomes relevant – bureaucratic discretion allows them to discriminate among demands. Consider, for instance, Anthony Batts, the police chief of Oakland, California, who announced in October 2010 that his department would no longer respond to citizen calls on 44 criminal and noncriminal matters typically handled by the police, including grand theft, burglary, embezzlement and auto accidents (Benson 2010a). This was Chief Batts’ response to Oakland’s decision to lay off 80 police officers because, at the height of the recent depression, the city was trying to deal with an approximate \$30 million budget deficit without raising taxes. As in most cities, expenditures for police accounted for a significant portion of Oakland’s budget. With a 776-person force, the city was spending about \$250,000 per officer per year, including salary and benefits. Salaries alone averaged \$95,000, but the benefits included an extraordinarily generous pension plan, which can exceed 100% of final pay for career officers after they retired.

Chief Batts’ decision illustrates that when excess demand is present, rationing can involve discrimination by the person who has discretionary authority to choose who to serve in a particular situation. This is a particularly stark example, but the fact is that individual police officers have considerable discretion regarding which crimes to enforce and which criminals to pursue. Suppliers of services facing persistent excess demand naturally develop discriminatory rules and processes to decide how to do allocate the services they do produce. In the case of police, individual officer’s allocation

decisions may be influenced by earlier administrative decisions, as the police chief or sheriff decided how many officers to assign to homicide, robbery, burglary, vice, traffic and other divisions. The allocation of policing resources to specific divisions and functions simply divides the large common pool into numerous separate common pools. Decisions still have to be made regarding how to ration those pools of resources. In light of the numbers reported above, for instance, supervisors of investigative divisions in the Tallahassee Police chose which crimes to assign to investigators and which to ignore. Individual investigators chose which assigned cases to investigate. Certainly, these choices are likely to be influenced by pressure from supervisors, police management, politicians, victims, and others, but considerable discretion still remains. The subjective decisions by individual police officers within these various divisions ultimately determine how much attention any particular case gets. Indeed, individual police officers are always in a position to discriminate among demanders of their services, and/or choose among an array of actions that can be taken. The decision of a patrol officer to give one speeding driver a warning while giving another a traffic ticket for the same kind of infraction (maybe because one driver is more contrite, friendlier, more attractive, politically influential, a friend, racially compatible, or offers a bribe) is a well-known example. So is the decision of a vice officer or border patrol officer to let a drug dealer go while keeping the money and drugs for his own use, and the decision to allow a prostitute to ply her trade in exchange for special favors.

Some of these examples reflect the fact that allocative discretion inevitably leads to opportunities for corruption (Benson 1988, 2011, Benson and McChesney 2004, McChesney 2010). Public officials do not want to admit that corruption is a natural result of non-price rationing of public services, claiming instead that only a few “bad apples” engage in such behavior (Benson 1988). In fact, however, serious investigations following a corruption scandal always reveal much more pervasive corruption behavior (e.g., Knapp 1972). After all, one obvious rationing process is to dismiss those criminals or violators of regulations who are willing and able to pay (and aggressively pursue criminals when a victim or other demander of the service is willing to pay or has sufficient political influence to cause trouble for the official making the rationing decision). Other discriminatory criteria are also used, of course, as suppliers of services facing persistent excess demand naturally develop discriminatory rules and processes to decide how to allocate the services they do produce.⁴³ These decisions may reflect many factors, including political pressures, the individual police officials’ subjective evaluations of the relative merit of efforts to control different crimes, the perceived importance and influence of the offender or victim, how sympathetic various victims are, personal prejudices (e.g., race, gender), and perhaps the self-interest

43. If demanders know what these discriminatory rules are they can avoid queuing and simply try to meet the discriminatory requirement established by the public officials, but the discrimination rules are generally not widely known, in part because they vary considerably across public officials with discretion to discriminate and/or officials do not reveal them, so queuing often persists.

motives of the individual police official (see discussion below). Given this kind of discretion, it seems appropriate to look more closely at the allocation decisions individuals in these positions make.

The job of public police is crime control, at least in the eyes of most citizens (as noted below, they have other jobs too), and in particular, control of the core crimes discussed above. This involves crime prevention and pursuit of offenders when crimes occur. One very imperfect indicator of demand for police services is crimes reported.⁴⁴ In the US, the Federal Bureau of Investigation’s (FBI) annual Uniform Crime Report (UCR) provides data on reported murder, rape, aggravated assault, robbery, burglary, larceny, motor vehicle theft, and arson, the so called “Index I” crimes or core crimes. Table 3.1 lists the reported number of these crimes and crimes rates per 100,000 population calculated from these numbers, along with arrests and clearance rates.

Table 3.1
Reported crimes, crime rates, arrests, and clearance rates in the US, 2012

Crime	Reported crimes	Crime rate	Total arrests	Clearance rate
Murder & non-negligent manslaughter	14,827	4.7	11,075	0.625
Forcible rape	84,376	26.9	28,098	0.401
Robbery	354,520	112.9	103,661	0.281
Aggravated assault	760,739	242.3	388,362	0.558
Burglary	2,103,787	670.2	283,582	0.127
Larceny–theft	6,150,598	1,959.3	1,282,352	0.220
Motor vehicle theft	721,053	229.7	68,845	0.119
Arson	52,766	16.8	11,433	0.204

Source: US Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services division, *Crime in the United States, 2012*, Table 25, http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/25tabledata/coverviewpdfs/table_25_percent_of_offenses_cleared_by_arrest_or_exceptional_mean_by_population_group_2012.xls; Table 1, http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/1tabledata/coverviewpdf/table_1_crime_in_the_united_states_by_volume_and_rate_per_100000_inhabitants_1993-2012.xls; and Table 29, <http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/29tabledata/decpdf>

Clearly police do not prevent many crimes in the US and they also do not successfully clear most the crimes committed. In terms of efficiency, however, the clearance rates may appear to suggest that, in

44. Reported crimes are imperfect measures of the demand for police services, in part because people often report crimes for reasons other than their desire for or even expectation that police attempting to solve the crime. The crimes most likely to be reported are those involving substantial property loss that is insured, such as theft of motor vehicles and motorcycles. In other words, when individuals have purchased private insurance to protect their wealth they report crimes in order to obtain evidence of the loss for their insurance company, not because they expect the police to recover the property. Essentially, insurance can serve as a substitute for protection (Benson 2012, 2014). Similar reporting behavior characterizes other countries that take victimization surveys. For example, the 2004 Australian victimization survey found that 94 percent of motor vehicle thefts were reported to police compared to 37 percent of assaults/threats. See Johnson (2005, 37) where it also is explicitly noted that the highest rates of reporting are for loss of insured property.

a relative sense, more police resources are allocated to solving reported violent crimes than reported property crimes.⁴⁵ This seems reasonable from most normative perspectives, including efficiency (Polinsky and Shavell 2000, 71). Presumably the crime that imposes the greatest per-crime costs for victims, murder, is given the most attention by police. However, more careful consideration of the individual violent and property crime categories raises some questions about the generalization of even this implication. While a much larger percentage of murders are cleared than other violent crimes, a substantially higher percentage of aggravated assaults are cleared relative to forcible rape offenses. Does this suggest that police are more concerned about – that is, allocate more resources to – pursuit of criminals who commit aggravated assaults than criminals who commit forcible rapes? It probably does not. Instead, assault offenders are probably more likely to be identified by victims and/or witnesses than are rape offenders, making it relatively easy to make arrests for assault. The same holds for murder, as the majority of murders are committed by family members or other people known to the victim and to others who know the victim. Similarly, it is doubtful that pursuit of larceny offenders is considered to be more important than pursuit of burglars, but it probably is easier in most cases to catch reported larceny offenders than burglars. The point is that the relative success of police in their various duties depends on both the allocation of resources and the cost-effectiveness, or productivity, of those resources in these various activities. This point is reinforced when a broader set of arrest statistics is considered, since the core crimes in Table 3.1 are a relatively small portion of the crimes that police are expected to enforce. One reason for the relatively large number of core crimes that are not prevented and the relatively small clearance rates for many of these crimes is that police efforts to control the crimes listed in Table 1 are only a portion of their law enforcement duties, as illustrated by the fact that far more arrests tend to be made for other crimes that are not systematically reported (e.g., most must be observed by police or discovered through police investigations). To illustrate this, Table 3.2 provides the UCR data for total arrests in the US in 2012. Only 17.8 percent of total arrests are for the so-called “reported” or “Index I” core crimes.⁴⁶ Index II arrests encompass many of the legislated crimes where overcriminalization is most pronounced (police do not necessarily arrest all legislated crime offenders, however, as specialized regulatory agency are charged with their enforcement). Notice, for instance, that the “all other offenses”

45. The clearance rate does not equal reported crimes divided by arrests, in part because some arrests clear multiple crimes and in part because some arrests made in one time period (2012) clear crimes reported in earlier time periods.

46. Reported crimes, and therefore crime rates, are not measures of actual crimes, since a substantial portion of crimes are not reported as explained above. This is an important point to consider in interpreting Figure 1 regarding crime trends in Korea. The data for that Figure are reported crimes for both the customary/core crimes and the legislated/regulatory crimes. The US data only offers reported crimes for the customary crimes in part because most other types of crimes are not reported at high rates. In fact, many of them are “victimless” crimes that must be discovered through observation and investigation. Thus, the data used for Figure 1.1 are likely to be significantly biased downward relative to true crime rates, just as reported crimes in the US are, and the bias is likely to be much greater for the regulatory crimes than for the customary crimes.

arrests are about 1.6 times Index I arrests.

Table 3.2:
Estimated numbers of arrests in the US, 2012

Index I (Reported Violent and Property Crimes)	
Murder and non-negligent manslaughter	11,075
Forcible rape	18,098
Robbery	103,661
Aggravated assault	388,362
Burglary	283,582
Larceny-theft	1,282,352
Motor vehicle theft	68,845
Arson	11,433
Total Index I	2,167,408
Index II (Other Crimes)	
Other assaults	1,199,476
Forgery and counterfeiting	67,046
Fraud	153,535
Embezzlement	16,023
Stolen property; buying, receiving, possessing	97,670
Vandalism	228,463
Weapons; carrying, possessing etc.	149,286
Prostitution and commercialized vice	56,575
Sex offenses (except forcible rape and prostitution)	68,355
Drug abuse violations	1,552,432
Gambling	7,868
Offenses against the family and children	107,018
Driving under the influence	1,282,957
Liquor laws	441,532
Drunkenness	511,271
Disorderly conduct	543,995
Vagrancy	27,003
All other offenses	3,448,856
Suspicion	1,532
Curfew and loitering law violations	70,190
Total Index II	10,029,551
Total Index I and Index II	12,196,959

Source: US Department of Justice, Federal Bureau of Investigation, Criminal Justice Information Services division, *Crime in the United States 2012*, National Arrest Data, Table 29, <http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/29tabledataadecpdf>

Table 3.3 provides somewhat comparable data from Korea's *The Annual Crime Report* (ACR). ACR uses different classifications, however, so exact comparability is difficult. The two overarching categories in the ACR can be described as customary crimes and regulatory (or administrative) crimes. Crimes in the former group (e.g., violent, property, and other crimes) are listed in the Criminal Law, while crimes in the latter group are stipulated in numerous different substantive laws enacted by the National Assembly. For comparative purposes, the crime categories in Table 3.3 are rearranged following

those of the US UCR in Table 3.1. All Index I crimes are in the customary crime category of Korea, whereas Index II crimes includes some customary crimes (e.g. forgery and counterfeiting, fraud, and embezzlement) and all regulatory crimes. Some crime classifications differ between the US and Korean reporting systems, so those that are not comparable are included in ‘All other offenses’ in Table 3.3.

Table 3.3
Estimated numbers of arrests in the Korea, 2012

Index I (Reported Violent and Property Crimes)	
Murder and non-negligent manslaughter	1,098
Forcible rape (and sex offenses) ^{a)}	18,864
Robbery	3,503
Aggravated assault	108,791
Burglary	7,370
Larceny-theft (and motor vehicle theft) ^{b)}	108,199
Motor vehicle theft	-
Arson	1,398
Total Index I	249,223
Index II (Other Crimes)	
Other assaults	264,117
Forgery and counterfeiting	31,457
Fraud	279,334
Embezzlement	44,009
Stolen property; buying, receiving, possessing	5,517
Vandalism	30,438
Weapons; carrying, possessing etc.	388
Prostitution and commercialized vice	25,557
Sex offenses (except forcible rape and prostitution)	-
Drug abuse violations	7,501
Gambling	36,233
Offenses against the family and children	274
Driving under the influence	213,504
Liquor laws	-
Drunkenness	-
Disorderly conduct	19,828
Vagrancy	-
All other offenses	776,317
Suspicion	-
Curfew and loitering law violations	-
Total Index II	1,734,474
Total Index I and Index II	1,983,697

Source: *The Annual Crime Report*, The Supreme Prosecutors’ Office of Korea.

a) In Korea, rape includes forcible rape and sexual offense.

b) In Korea, theft includes larceny-theft and motor vehicle theft.

Overall, Table 3.3 provides a similar picture for Korea in terms of allocation of arrest resources, when compared to the US. Arrests for customary crime constituted 52.8 percent of the 1,983,697 total

arrests while regulatory crime accounted for 47.8 percent. Significantly, only 12.6 percent of total arrests are for the US's Index I or core crimes category. This proportion is even lower than the corresponding figure of the US (17.8 percent). In other words, using the US classifications, Index II arrests in Korea are seven times Index I arrests.

Comparisons of reported crimes and clearance rates in the US shows that police resources are clearly scarce (unfortunately, clearance rates are not available for Korea). Yet, data on Index II arrests, and on the wide variety of activities that police engage in,⁴⁷ demonstrate that police resources are being allocated to do many things beyond prevention of core Index I crimes and pursuit of core crime offenders. Understanding the processes of police allocation allows consideration of some of the consequences of the allocation of policing resources in the face of overcriminalization. First recognize that the allocation matters because policing affects the level of crime.

3.2. Deterrence Through Policing. A substantial empirical literature testing hypotheses generated by economic models of crime has developed since Becker's (1968) path-breaking theoretical model was published. The literature typically focuses on a supply of crime-specific offenses, hypothesizing that the crime rate is related to the probability and severity of punishment for the crime, the expected benefits from the criminal activity, returns from alternative legal activities, and other socioeconomic factors. The standard empirical model in the pre-1990 literature on the economics of crime, first used by Ehrlich (1973), is a simultaneous equations system in order to deal with the presumed two-way causal relationship between crime rates and police resources. In such models, the dependent variable in the "supply-of-offenses" equation typically is a UCR crime rate (per capita reported crimes), CR_{ij} , for a particular type of crime, i , in jurisdiction j . CR_{ij} presumably depends on: (a) the expected gain (EG_{ij}) for people who consider committing crimes i in jurisdiction j , adjusted for (b) the probability of arrest (PA_{ij}) for crime i in the community (and perhaps other factors affecting expected punishment, such as the probability of prosecution given arrest), and (c) the expected severity of punishment (SP_{ij}) for crime i , as

47. Even the expanded arrest statistics in Tables 3.2 and 3.3 provide only part of the picture of police resource allocation. Blumberg (1970, 185) explains that approximately 80 percent of police resources are allocated to what he calls "social-worker, caretaker, baby-sitter, errand-boy" activities. A 1990 US Bureau of Justice Statistics (BJS) survey of state and local police departments in the US bears this out (Reaves 1992), reporting that police have responsibilities for many activities, a substantial portion of which do not deter any crimes or produce any arrests: 96 percent of the surveyed departments were responsible for accident investigation, over half performed the community's telephone and radio emergency communications and dispatch services for all emergency response agencies (fire, ambulance, search and rescue etc.), 43 percent had animal control duties, 33 percent did search and rescue, 18 percent had responsibility for emergency medical services, 18 percent provided court security, 14 percent did civil defense, 10 percent provided civil process serving and so on. With so many duties, scarce public policing resources are simply unable to respond to many of the calls they receive (Reaves 1992, 4). Similarly, Blundell (2007, 4) reports that in the United Kingdom (UK) there are police forces where only one in 58 police officers is on patrol at any particular time, only one in 40 is available for emergency call response, and in 2004/2005, Metropolitan Police spent £101.9 million on non-incident-related paperwork, almost as much as on investigating robberies and house burglaries (£104.4 million).

well as (d) the legal economic opportunities (OC_j) available in the community, and various other control variables V_j :

$$CR_{ij} = f(EG_{ij}, PA_{ij}, SP_{ij}, OC_j, V_j) \quad (1)$$

The variable of immediate interest, PA_{ij} , is produced by the police (POL_j) in community j .⁴⁸ Other community factors, X_j , also influence the production of arrests, of course, and they are included in X_j :

$$PA_{ij} = g(POL_j, X_j) \quad (2)$$

The “demand for police services” in community j which induces community politicians to fund such services presumably depends on the overall level of core crimes, CR_j , in the community, the level of income or wealth (W_j), and other control variables, Y_j :

$$POL_j = h(CR_j, W_j, Y_j) \quad (3)$$

Simultaneous estimation techniques were generally employed in the early literature, often consider all three equations, although some studies combine the first two equations into

$$CR_{ij} = f(EG_{ij}, POL_j, SP_{ij}, OC_j, V_j, X_j), \quad (4)$$

and estimate it simultaneously with equation (3).

Most of the econometric tests of various versions of simultaneous equation models following Ehrlich (1973), support the deterrence hypothesis, but critics such as Cameron (1988) and Brier and Fienberg (1980) also expose apparent inconsistencies between the theoretical analysis and some of the empirical findings. For example, Cameron (1988) examines 22 studies estimating equations using POL_j as an explanatory variable for CR_{ij} as in equation (4), and reports that 18 do not find a significant relationship, or they find a significant positive relationship. Cameron also notes that while crime rates are generally significantly and negatively related to the probability of arrest in estimates of equation (1), the probability of arrest in equation (2) often does not appear to be significantly related to the level of police resources. The failure of measures of aggregate police manpower or budgets to negatively influence crime rates directly, or indirectly through the probability of arrest, leads critics such as Cameron (1988, 308) to question the validity of the deterrence hypothesis. There are several potential explanations for the apparently inconsistent findings about the impact of police resources on crime, however, including shortcomings in the data, and methodological issues that a large number of subsequent studies have identified and emphasized (e.g. see Levitt, (1997, 1998), as well as Tauchen (2010) and Klick and Tabarrok (2010)).⁴⁹ This presentation focuses on one issue that involves both data and methodological

48. The level of SP_{ij} also depends on resource allocation decisions, of course, so similar analysis can be and has been done with it. The added complexity of doing so here does not add much insight so this variable is assumed to be exogenous for simplicity. Such an assumption would actually be valid, however, if punishment is provided by a different jurisdiction than policing. In the US policing is predominantly provided by local government, for instance, while prisons and other “correction” services (e.g., probation supervision) are provided by state governments. This issue will be considered further below.

49. Panel data techniques dominate the modern literature (see footnotes 52 and 53) and the need for careful selection

problems but that also is key to the analysis of consequences of overcriminalization: the use of aggregate measures of police resources, whether manpower or budget, in empirical models of specific types of core crimes. These models are miss-specified because they do not account for the allocation of policing resources (Benson, et al. 1994). After all, as noted above, core crime arrests account for only a relatively small part of total police activity, and the total arrests for any one Index I crime type account for an even smaller portion of police output. As a consequence, a marginal, or even a substantial, change in aggregate police resources does not necessarily have a positive impact on the probability of arrest for any particular Index I crime type (or even for total Index I crimes).⁵⁰ An active and effective police patrol could result in arrests of burglars, robbers, vandals, vagrants, drug buyers and sellers, and so on. A homicide division is not very likely to arrest burglars, vandals or vagrants, however, nor is a police officer assigned to guard a school (except perhaps for vandals) or a courthouse. Furthermore, some police resource allocations result in no arrests of any kind.⁵¹ Clearly, given the wide variety of uses for police resources, it is at least possible for a change in total police resources to have no measurable impact on some types of Index I crime.⁵² Overcriminalization enhances this possibility.

Suppose that a community that relies on tourism is experiencing large numbers of robberies and as

of instruments is emphasized, for instance, by Levitt (1997, 1998, 2002) and McCrary (2002). Other estimation strategies also have been used in an effort to avoid simultaneity. Marvell and Moody (1996) employ a Granger-causality strategy, for instance.

50. The hypothesis that additional aggregate police resources reduce each specific crime rate requires one of two conditions. One is illustrated by the assumption that Polinsky and Shavell (2000, 62) employ in their review of the theoretical literature modeling public enforcement: “In many settings, enforcement may be said to be general in the sense that several different types of violations may be detected by an enforcement agent’s activity... To investigate such situations, suppose that a single probability of detection applies to all harmful acts, regardless of the magnitude of the harm.” In contrast, specific deterrence means that the probability of arrest is independent for each crime type. Clearance rates in Table 3.1 suggest that the assumption of that “a single probability of detection applies to all harmful acts, regardless of the magnitude of the harm,” is not valid. This assumption is also not supported when victim-reporting behavior (discussed above) is considered. Polinsky and Shavell (2000, 62) note that this extreme general deterrence assumption is not necessary if a second condition holds: an assumption that changes in total police resources have a positive impact on the probability of arrest for all core crime categories: “The only requirement is that the probabilities for different acts are linked, each a function of the same enforcement expenditure.” In other words, specific deterrence may actually apply, but if a change in total police resources results in resources allocated to each crime category changing in the same direction, then the assumption that the aggregate amount of police resources is positively related to the probability of arrest for each crime category is valid. As illustrated below, this also is not an appropriate assumption.

51. Consider a public relations officer, for instance, or an officer in charge of civil defense, officers engaged in search and rescue. Also see note 47 in this regard.

52. To the authors’ knowledge, there are only three academic publications that, using Korean data, estimated crime supply functions: Min (2011), Kim and Byeon (2012), and Byeon et al. (2013). The first studies violent crime, whereas the last two consider all customary (or conventional) crime, which contrasts with regulatory (legislated or political) crime within different model specifications. All use panel data methods (see footnotes 49 and 53) and attempt to test the deterrence hypothesis. Min (2011) includes police power as a deterrence proxy, but does not find a statistically significant estimate. Kim and Byeon (2012) and Byeon et al. (2013), however, use probability of arrest and the probability of prosecution as deterrence variables. Estimation results strongly support the deterrence hypothesis for both probabilities, although the probability of prosecution is consistently found to have a higher level of deterrence in both studies. This issue is considered in Section 4.

a result, tourism is declining. The tourism-related merchants in the community demand that local police make a significant effort to reduce robberies so they can regain lost business. In response, a decision is made by local government legislators to require that police increase efforts against robbery. There are two possible ways to attack the robbery problem. First, the same legislators may allocate a sufficiently large budget to police to allow for more resources to be allocated to the robbery division without sacrificing current police efforts against any other crimes. Doing so has opportunity costs for politicians, however, as it either requires increased taxes or reduced expenditures for other publicly provided goods and services like education and infrastructure. Therefore, it is likely that competing political demands for other public services and against tax increases will have to be taken into account, and the resulting compromises will mean that at least part of the response will come from elsewhere by shifting of some police resources away from other uses in order to specifically focus on robbery. While the addition of some new resources to deal with robbery could be positively correlated with the probability of arrest for crimes that are associated with robber, like homicide, it could be negatively correlated with the probability of arrest for household burglary and larceny due to the unobserved reallocation of resources.

Alternatively, assume that the political demand is for increased effort against some non-core (Index II) crime, such as driving under the influence of alcohol or drugs, or some new activity just criminalized by the legislature. In this case, resources conceivably could be moved from efforts targeted at core crimes in general, resulting in an apparently insignificant or even negative relationship between aggregate police resources and the probability of arrest for all core crimes. Under these circumstances, the statistical relationships cited by Cameron (1998) do not support his questioning of the validity of the deterrence hypothesis. These correlations are spurious. The question becomes: do such reallocation decisions occur, and if they do, are they important enough to produce the results that are so troubling to critics of the economics of crime literature?

If controls for the allocation of policing resources to activities other than the crime i are added to equation (2) or (4), the deterrence hypothesis may well be supported, as these equations may suffer from missing variable bias without such controls. To alleviate this bias, $APOL_{mj}$, police resources allocated to m other activities, should be added to the relevant equation (2 or 4). Let n represent the number of activities that consume police resources so $n - 1$ is the number of such activities other than crime i :

$$PA_{ij} = g(POL_j, APOL_{mj}, \dots), m = 1 \text{ to } n - 1 \quad (5)$$

$$CR_{ij} = f(EG_{ij}, POL_j, SP_{ij}, OC_j, APOL_{mj}, \dots), m = 1 \text{ to } n - 1 \quad (6)$$

Unfortunately, data on the allocation of policing resources are not available across jurisdictions. This missing-variable problem might be alleviated, at least to a degree, however, by using proxy measures for the allocation of police resources to at least some activities other than control of crime i . A growing

number of studies support this expectation.⁵³

3.3. Tradeoffs in the Allocation of Public Law-Enforcement Resources. The rapid increase in illicit drug enforcement in the US between late 1984 and 1989 noted by Benson, Rasmussen, Kim and Zeuhlke, and the obvious impact of this increase on prison crowding and early release in Florida,⁵⁴ led them to hypothesize that with the growing emphasis on drug enforcement, relatively fewer criminal justice resources would be available to control other kinds of crime. The first academic publication indicating a potential tradeoff in the allocation of policing between drug enforcement and the control of other crimes is Benson and Rasmussen (1991).⁵⁵ A substantial number of empirical studies now report that this tradeoff hypothesis holds for police resources allocated to drug enforcement. These empirical studies use different data sets, different data periods, and different empirical techniques, but support for the hypothesis is robust across all of them.⁵⁶ Three of these studies are briefly discussed to illustrate the tradeoff implications of police resource allocation.

The first published study to directly test the tradeoff hypothesis arising from drug enforcement provides estimates of the determinants of property crime (Benson et al. 1992). This study employs 1986 and 1987 data from Florida's 67 counties in a simultaneous equations model typical of the economics-of-crime literature at the time. Equations (1), (3) and (5) are estimated controlling for $APOL_{dj}$, the allocation of policing resources to drug enforcement (along with another potentially important control variable added in equations (1) and (3): a proxy for the size of each county's drug market⁵⁷). Drug arrests divided

53. Note that one consequence of this missing variable problem is that the simultaneous determination of a crime rate i , and aggregate police resources may not be detectable if it actually exists. Therefore, findings in Layson (1985) and Trumbull (1989) are not surprising. Both test for exogeneity using Hausman's (1978) test, confirm it, and use OLS estimators. This is, at best, indirect evidence of the particular missing variable bias being examined here, of course, as many missing variables plague cross-section studies. Indeed, Cornwell and Trumbull (1994) show that panel data provide better estimates of deterrence effects than cross-section econometric techniques, although they do not consider the resources allocation issue unless these allocations are fixed effects. Panel methods are now the modus operandi for most economics-of-crime studies (e.g. Lott and Mustard (1997); Levitt (1997, 1998); Doyle et al. (1999); Benson et al. (1999, 2001); Zimmerman and Benson (2007)).

54. Benson and Rasmussen obtained a series of grants and contracts from the Florida Legislature (and later from sources in Kansas and Illinois) to study drug enforcement issues. They were given access to data from the Florida Department of Law Enforcement and the Florida Department of Corrections. Various Florida State University graduate students and faculty participated in various projects, including Thomas Zuehlke, Iljoong Kim, David Sollars, and Brent Mast. A book and a substantial number of academic journal articles resulted.

55. This study presents a simple empirical model of the probability of arrest for property crimes (an estimate of equation (5), above where i is property crime) that includes controls for the relative drug enforcement effort, and concludes that as drug enforcement increases, the probability of arrest for property crime decreases.

56. Reviews are provided by Benson (2009) and Shepard and Blackley (2010).

57. Naturally, various proxies are employed for many variables, as in all of the economics-of-crime studies using aggregate jurisdiction-level data. The one of most interest here is the proxy for drug enforcement efforts, but the measure of the size of the local drug market also is important; it is developed using recidivism data in a "catch-and-release" model similar to the method used to estimate wildlife populations. The wildlife-management literature estimates wildlife populations by tagging and releasing a sample of the population in one time period and then capturing a second sample in the next time period (Scheaffer et al. 1979). The portion of the second sample tagged in the previous period is assumed to provide an estimate of the probability of capture, so an estimate of the total

by total arrests is used to control for relative drug enforcement effort in equation (5).⁵⁸ This variable is a rough gage of the portion of total police resources allocated to policing drug markets, particularly given the separate control for drug market activity. As it rises, the hypothesis is that the probability of arrest for property crimes falls, *ceteris paribus*. The deterrence hypothesis is supported after controlling for the allocation of police resources to drug control. The property crime rate is negatively and significantly related to the probability of arrest for property crime, and the coefficient for POL in the PA equation is positive and significant. The estimated elasticity between the probability of arrest for property crime and total sworn police officers is 0.172. Importantly, the tradeoff hypothesis is also supported since the portion of resources allocated to drug control is negatively and significantly related to the probability of arrest for property crimes. The estimates of coefficients on PA in equation (1) and APOL in equation (5) implies that a 1 percent increase in drug enforcement's share of total enforcement results in a 0.199 percent reduction in the probability of arrest for property crime, and a 1 percent reduction in the probability of property crime arrest in turn implies a 0.826 percent increase in property crime (Benson et al. 1992, 687).⁵⁹ Together, these coefficient estimates suggest that a 1 percent increase in drug enforcement relative to total enforcement increases property crime by 0.164 percent.⁶⁰

population is the number captured in the second period divided by the fraction previously tagged. Benson et al. (1992, 685) analogously estimate the population of drug market participants using the number of drug offense convictions from a jurisdiction in a period and the portion of those convictions that are recidivists from a previous period. While this is a crude estimate, it may provide a reasonable control for that segment of the drug population that local citizens are aware of and the criminal justice system tends to focus on. The recidivism data is from a large-scale study of drug policy for the Florida Legislature in the late 1980s and early 1990s (Kim, et al. 1993). Additional proxy variables are chosen from among those typically used in economics-of-crime models.

58. Some drug enforcement studies assume that drug arrests relative to population or some similar variable is a control for drug market size (Corman and Mocan 2000; Entorf and Winker 2008). In the absence of a separate measure of the level of drug market activity, *D*, as a control variable, however, it is not possible, statistically, to determine if drug arrests or other policy-related variables are determined by the size of the drug market or the allocation decisions of police or both. Controlling for drug market activity separately clearly strengthens the assumption that the drug arrest variable proxies allocation decisions. Also see note 37 in Shepard and Blackley (2010) for discussion of empirical evidence that drug arrest rates are not a measure of drug use.

59. Several other studies examine the drug control/property crime tradeoff using various measures of drug enforcement (drug arrests per capita, drug arrests relative to total arrests, drug arrests relative to Index I arrests) to control for police resources allocated to drug enforcement, and produce results that corroborate Benson et al. (1992) (Sollars et al. 1994; Mendes 2000; Shepard and Blackley 2005, 2007, 2010). In addition, while Corman and Mocan (2000), and Entorf and Winker (2008) assume that their drug arrest measures represent drug market activity rather than relative police resource allocations, their statistical results are consistent with the tradeoff hypothesis, as Benson, (2009) explains (also see note 37 in Shepard and Blackley (2010)). While none of these other studies attempt to control for drug market size, leaving interpretation of their findings open to speculation for reasons discussed in note 58, the fact that Benson et al. (1992) (and Resignato (2000) discussed below) produce similar results with such a control suggests that these studies do not suffer significantly from missing variable bias.

60. Drug market size has two impacts on the level of property crimes in Benson et al. (1992). First, the direct effect implies that a one percent increase in drug market size results in a 0.183 percent increase in property crime. Perhaps, as is often hypothesized, some drug users commit property crimes to finance their drug purchases. In addition, an increase in drug market size leads to an increase in the number of police officers in the jurisdiction in equation (3), and an increase in the size of the police force increases the probability of arrest for property crimes. In other words, policing budgets tend to increase as local drug markets expand. These estimates imply that a one percent increase in

Resignato (2000) tests to see if violent crime is a function of drug use and if drug enforcement tradeoffs occur. In this context, Goldstein, with various co-authors (Goldstein 1985, 1989; Goldstein and Brownstein 1987; Goldstein, et al. 1992), suggests that there are three potential causes of “drug-related” homicides. One is a psychopharmacological effect of drug use: drug use may lead to violent behavior. Another possibility is economic compulsion: it may be that “drug users engage in economically oriented violent crime, e.g. robbery, in order to support costly drug use” (Goldstein and Brownstein 1987, 15). A third category, “systemic factors,” arises because drug prohibition means that drugs are bought and sold in “black markets.” Violent competition for market shares and the use of violence to protect property rights and enforce contracts, are both common in illegal markets. Drug users and drug dealers are also attractive targets for robbery since they generally have either cash or drugs and are not likely to report their victimization.⁶¹

Resignato (2000) employs data from the 24 Drug Use Forecasting (DUF) cities over the 1987–1995 period to estimate models of violent crime using two different dependent variables, the total violent crime rate and the murder rate.⁶² These data allow controls for drug use as well as drug enforcement effort. Resignato, therefore, tests the systemic factors and/or tradeoff hypotheses (although he cannot separate the two) since they both imply a positive association with drug enforcement efforts. He also considers the psychopharmacological and/or economic-compulsive hypotheses (again, he cannot separate the two) because they both imply a positive relationship between the level of drug use and violence. Both OLS estimates of equation (1) and fixed-effects models are estimated,⁶³ controlling for several other determinants of violent crime. The drug enforcement proxy variable, the ratio of drug arrests to total arrests, is positive and significant in all regressions, supporting the expectation that violence is caused by systemic factors and/or tradeoff effects. Since several other studies support the tradeoff hypothesis with

the size of the drug market reduces the level of property crime by 0.049 percent. Therefore the estimated total impact is that a one percent increase in drug market size increases property crime by 0.134 percent. These estimates appear to support the drugs-cause-crime hypothesis, but Benson et al. (1992, 689) note that this also “supports the hypothesis that there are two largely distinct but partially overlapping groups of drug users: those who commit other crimes and those who do not.” The estimates cannot distinguish between these two hypotheses.

61. Goldstein et al. (1992) examines information about homicides in New York and concludes that systemic violence is the dominant source of drug-related homicides by a substantial margin.

62. Annual jurisdiction-level data on drug use for a limited sample of 24 US cities is provided by the National Institute of Justice’s Drug Use Forecasting (DUF) program. To obtain the measure of drug use in each of the 24 cities, urine samples are collected from individuals who are arrested. This is not a measure of the entire drug market in a city. It does indicate the level of drug use among that part of the population that police deal with, however, and, therefore, presumably the population that is likely to influence police decision-makers’ perception of the magnitude of the “drug problem.”

63. DUF data are attractive because they include a measure of drug use, but with only 24 cities, they also limit the number of variables and interrelationships that can be considered. Simultaneous equations (3) and (5) cannot be tested, so OLS results are likely to suffer from simultaneity bias. Fixed-effects controls reduce this problem as well as the missing variables problem. The drug-use variable is significantly positive in the fixed-effect model for murder. This may suggest that there is some psychopharmacological and/or economic compulsive effect of drug use on murder, but not on violent crime in general.

regard to violent crime,⁶⁴ it is likely that systemic factors do not account for the entire relationship. A one percent increase in the drug arrests/total arrests variable leads to an increase in the violent crime rate of between 0.169 percent and 0.219 percent depending on model specification, and similarly, a one percent increase in drug arrests/total arrests leads to an increase in the homicide rate of between 0.164 percent and 0.205 percent.

Benson et al. (1992), Resignato (2000) and at least another ten studies not discussed here' support the hypothesis that the increasing the allocation of scarce policing resources to drug enforcement leads to more property crime and/or more violent crime.⁶⁵ Benson et al. (1998) also estimate a more general empirical model to examine the consequences of police resource allocation decisions. They exploit the fact that the 1980s “war on drugs” in the US represents a substantial change in law enforcement policy. Because their purpose is to examine the tradeoff hypothesis more broadly, however, a new model is developed. They focus on changes in crime rates in the face of changing criminal justice policy, assuming that police are in the business of producing crime deterrence. By allocating capital and labor to control various crime types, police influence the level of such crimes. Of course, there are also inputs to this production process that are not controlled by police, such as legal opportunity costs of potential criminals, the probability of conviction given arrest, and the severity of punishment given conviction, as well as community characteristics such as the age and income distribution of the population, and degree of urbanization. Therefore they assume that production of crime deterrence for three categories of crime can be characterized as

$$C_{Ijt} = C_{Ijt}(L_{Ijt}, K_{Ijt}, W_{jt}, M_{jt}) \quad (7)$$

$$C_{IIjt} = C_{IIjt}(L_{IIjt}, K_{IIjt}, X_{jt}) \quad (8)$$

$$C_{Djt} = C_{Djt}(L_{Djt}, K_{Djt}, Y_{jt}) \quad (9)$$

for each jurisdiction j during time period t . C denotes the level of crime in each category, with subscripts I for index I core crimes, D for drug crimes, and II for non-drug index II (non-core) crimes. The police labor and capital allocated to the control of each subscripted crime type in each jurisdiction during the time period are represented by L and K respectively, W is a vector of non-policing factors which influence the level of core crimes (i.e., probability of conviction and severity of punishment for Index I crimes, opportunity costs of potential criminals, community characteristics) in a jurisdiction, X denotes a

64. While several other studies also consider the tradeoff between drug enforcement and violent crime control, only Resignato (2000) includes a control for drug use. As with the property-crime literature, these other studies generate similar implications to Resignato's (Rasmussen et al. 1993; Brumm and Cloninger 1995; Fajnzylber et al. 1998; Miron 1999; Shepard and Blackley 2005, 2007, 2010). Corman and Mocan (2000) and Entorf and Winker (2008) also produce statistical results that are consistent with the tradeoff hypothesis (see notes 59 and 60).

65. Data from Portuguese municipalities, a New York City time series, panel data from various US cities and counties, country-level international data, and data from German states are employed in these studies. Similarly, OLS, simultaneous equations, panel-data fixed-effects, and time-series methods are used by various researchers, but the conclusions are quite robust.

vector of jurisdiction-specific factors beyond those controlled by police that influence the level of non-drug non-core crimes, Y represents a vector of non-police factors that influence a jurisdiction's drug crimes, and M is a vector of those aspects of drug markets in a jurisdiction that affect core crimes.⁶⁶

Empirical estimation of the relationships in equations (7) through (9) is not possible due to data limitations. However, by considering changes in resource allocation rather than their levels, and then manipulating the model to provide a reduced-form equation, a model with much less significant data requirements is developed. Benson et al. (1998) note that relative factor productivity in the production of deterrence may differ across crime types, so they assume that police allocated resources so that

$$1 + A = (\partial C_{Dj} / \partial L_{Dj}) / (\partial C_{Ij} / \partial L_{Ij}) = (\partial C_{Dj} / \partial K_{Dj}) / (\partial C_{Ij} / \partial K_{Ij}) \quad (10)$$

$$1 + B = (\partial C_{IIj} / \partial L_{IIj}) / (\partial C_{Ij} / \partial L_{Ij}) = (\partial C_{IIj} / \partial K_{IIj}) / (\partial C_{Ij} / \partial K_{Ij}) \quad (11)$$

where A and B are constants (note that the time subscript is not included because the changes in L and K occur over time), and the ratios $\partial C_{ij} / \partial L_{ij}$ and $\partial C_{ij} / \partial K_{ij}$ are partial derivatives (marginal products) for crime category $i = I, II, D$.⁶⁷

In order to focus on changes rather than levels, Benson, et al. take the total differentials of equations (7), (8), and (9). Assuming specific deterrence by crime category, the total investment in new police capital is $dK_j = dK_{Ij} + dK_{IIj} + dK_{Dj}$, and the total change in police labor is $dL_j = dL_{Ij} + dL_{IIj} + dL_{Dj}$.

Substituting the resulting equations into the total change in crime $dC_j = dC_{Ij} + dC_{IIj} + dC_{Dj}$, produces

$$dC_j = (\partial C_{Ij} / \partial L_{Ij})dL_{Ij} + (\partial C_{Ij} / \partial K_{Ij})dK_{Ij} + (\partial C_{Ij} / \partial W_j)dW_j + (\partial C_{Ij} / \partial M_j)dM_j + (\partial C_{IIj} / \partial L_{IIj})dL_{IIj} + (\partial C_{IIj} / \partial K_{IIj})dK_{IIj} + (\partial C_{IIj} / \partial X_j)dX_j + (\partial C_{Dj} / \partial L_{Dj})dL_{Dj} + (\partial C_{Dj} / \partial K_{Dj})dK_{Dj} + (\partial C_{Dj} / \partial Y_j)dY_j \quad (12)$$

A series of algebraic manipulations and substitutions produces an equation for dC_{Ij} :

$$dC_{Ij} = (\partial C_{Ij} / \partial L_{Ij})dL_{Ij} + (\partial C_{Ij} / \partial K_{Ij})dK_{Ij} + (\partial C_{Ij} / \partial W_j)dW_j + (\partial C_{Ij} / \partial M_j)dM_j + (1 / (1 + B))(\partial C_{IIj} / \partial X_j)dX_j + (1 / (1 + A))(\partial C_{Dj} / \partial Y_j)dY_j - ((1 / (1 + B))dC_{IIj} + (1 / (1 + A))dC_{Dj}) \quad (13)$$

Benson et al. (1998) provide an econometric estimation of this equation. Annual data for Florida's 67 counties are obtained for 1983 through 1987. This period is chosen in part because Florida adopts

66. Inclusion of M_j is motivated by the tradeoff literature discussed here, as well as the 'drugs-cause-core-crime' argument. An alternative hypothesis is Levitt's (1998): as the risk of arrest increases for those who commit drug offenses (dealers, producers, smugglers etc.), holding the policing efforts against core offenses constant, there may be a substitution effect because criminals seeking income find core property crimes relatively more attractive than drug distribution activities.

67. Levitt (1998) estimates models of seven Index I core crimes and includes arrest rates for combinations of the other six crimes in each specific crime rate regression. This is not a test of the tradeoff hypothesis, however (indeed, he does not contend that it is). He does not control for police actions against non-core Index II crimes including drug crimes, or for relative efforts against various crimes. His results do show that resources allocated to some core crimes affect other core crime rates, but presumably through channels other than those examined in the tradeoff literature discussed here. He focuses on the incentives for criminals to substitute one crime for another based on probabilities of arrests.

determinant sentencing in 1983, and the resulting Sentencing Guidelines remain fixed until revisions in 1988. The Guidelines were fully implemented during 1984. In addition, significant changes in the severity of punishment occur toward the end of 1987, when an early-release program is implemented at the state level – an exogenous change that is likely to impact all deterrence estimates.

A primary econometric advantage of estimating a difference-form model is that the jurisdiction-specific fixed effects arising from unobservables fall out, thereby increasing the potential for unbiased estimates of the coefficients in the deterrence model. Furthermore, factors that change in the same way across all locations should be captured in the constant term and not bias the coefficients on other variables. As a consequence, the bias in the estimated coefficients attributable to the omission of unobservable variables that are fixed over time may be eliminated. This does not solve all of the data problems, of course. One particular data issue is of particular relevance in the context of overcriminalization. No data are available to measure changes in drug crime levels or in other non-drug non-core index II crime levels over time. This data limitation meant that estimation of equation (13) have to involve an explicit assumption that C_{Iij} and C_{Dj} did not change significantly at the county level in Florida over the 1983–1987 period. While the lack of data makes these assumptions unavoidable, Benson et al. (1998) discuss a number of reasons to expect that they are not too unreasonable over the period, even with new crimes being legislated.

The coefficients on the changes in police labor, changes in police capital, changes in various non-police factors that influence Index I crimes, and changes in drug market factors that influence these crimes are estimates of the partial derivatives (marginal products) while the coefficients on the dX_j , dY_j , dC_{Iij} and dC_{Dj} depend on the A and B values from equations (10) and (11) chosen by the relevant decision-makers. Coefficient estimates suggest that reallocating sufficient resources to make one more drug arrest a year results in about 0.7 more Index I crimes per year (Benson et al. 1998, 96). Changes in police labor also appear to have an effect on core crime after controlling for allocations to drug enforcement.⁶⁸

68. The coefficient on the change in police labor is insignificant when year-to-year changes are considered, but when the 1983 to 1987 change is used, the coefficient is significant. First differences can be substantially affected by measurement error, of course, because first-differencing removes much of the signal. Longer differences retain more of the signal, however, so the results should be less biased. Therefore the coefficients for the 1983–7 change estimates are likely to be less biased. On the other hand, changes in spending on capital apparently are positively related to changes in Index I crime. This suggested that police in Florida are “overcapitalized.” The coefficient estimate suggests that an annual \$10,000 increase in police capital is associated with four to five additional Index I crimes. This overcapitalization relationship does not generalize, however, as Benson et al. (2001) apply a similar fixed-effects model to Florida data from a different time period, and find no significant relationship between police capital and index I core crime. The potential for a negative relationship, or at least no relationship between crime and police capital, is actually quite consistent with implications from a number of experiments involving police resource allocation, however, so the possibility should not be dismissed. Benson et al. (2001) consider the possibility that the implications from the 1980s data when both crime rates and drug enforcement are rising might not

3.4. Police Resource Allocation. As the economics-of-crime literature indicates, higher crime rates are correlated with more police resources (i.e., in empirical models of equation (3)), supporting the assumption that taxpayers/voters demand more police services if crime rates are high. As illustrated above, however, it does not follow that more police resources in aggregate lead to lower crime rates, because the additional resources may be allocated to activities other than Index I enforcement (e.g., pursuit of participants in drug markets). Indeed, as Milakovich and Weis (1975, 10) note, police have a “vested interest” in keeping crime rates relatively high: if crime rates drop too much, then support for more police and larger budgets declines; and “like all bureaucracies, criminal justice agencies can hardly be expected to implement policies that would diminish their importance.” Thus, if police do respond to such incentives, additional funding need not lead to a substantial decrease in reported crime rates. Seidman and Couzens (1974, 457–493) contend that police do respond, even by exaggerating the level of crime at times in order to gain increases in budgets.

Vice and narcotics crimes appear to be particularly attractive for police (and prosecutors), as Blumberg (1970, 184–185) emphasizes: there is a “bureaucratic fetish . . . to ferret out . . . cases which can be most easily processed . . . As a result, we have spent much of our limited resources . . . [to arrest] addicts, alcoholics, prostitutes, homosexuals, gamblers, and other petty offenders, simply because they are readily available and produce the desired statistical data.” The “easy” narcotics and vice arrests generally are low-level street prostitutes, drug dealers and drug users, of course, not organized crime bosses, drug wholesalers, drug smugglers and money launderers. While the Blumberg quote is dated, the attraction of drug market arrests remains (Benson 2009).⁶⁹ Also note that these easy arrests are not core crimes reported in crime rate statistics. They are Index II or non-core arrests, so while they are measures of output, they are not likely to have a major deterrent effect on core criminals. Indeed, by reallocating police resources to make drug arrests, both arrests as a measure of output and crime rates as a measure of the “need” for more police resources rise, as explained above (Benson, et al. 1992, 1998; Resignato 2000; and others⁷⁰), and police budgets rise accordingly. As long as observable and measurable outputs are

generalize over time by revisiting the empirical relationship between drug enforcement and Index I crimes using data from the 1994–7 period from 67 Florida counties. By controlling for the same variables as Benson et al. (1998) in a fixed-effects model, the estimates again reveal a tradeoff. A one percent increase in drug arrests relative to total arrests is associated with a 0.18 percent increase in Index I crimes. Even though crime rates are falling over the period, the statistical analysis suggests that crime rates would have fallen further if drug enforcement had been reduced. The coefficients on police labor and police capital are both insignificant, however, as are the coefficients on the probability of conviction. Crime falls dramatically during the sample period while police labor (and conviction probabilities) do not change much at all, so very little relationship can be identified.

69. In fact, it increased dramatically with passage of the Federal Crime Bill in 1984 which created opportunities for local police to keep assets seized as part of drug enforcement activities (Benson, et al. 1995, Benson 2009). While local police changes in behavior and policy following this legislation and subsequent asset seizure legislation shows that police have considerable discretion, the research is not discussed here.

70. See notes 62 and 67.

produced in quantities that satisfy the oversight monitor, monitors tend to allow police bureaucrats to maintain considerable discretion in the allocation of bureau resources (Stumpf 1988, 327–332; Williams 1984, 77–105; Benson et al. 1995; Benson 2009, 2010b), reinforcing the discretion arising from the common pool nature of police services.

Since core crime rates tend to rise as police shift resources to deal with non-core crimes, and legislation of new crimes generally results in at least some police response through reallocation of resources, overcriminalization should mean core crime rates are higher than there otherwise would be. Furthermore, increasing the number of crimes should make growing numbers of arrests possible, so overcriminalization provides police with two powerful arguments for larger police budgets: core crime rates remain high and police are producing a lot of arrests. This combination of effects creates strong incentives for police to seek criminalization of increasing numbers of activities (Benson 2011), and there is evidence that they are, in fact, very active in lobbying for increased criminalization, as explained above. Thus, the overcrowding of the criminal justice commons through legislative action (overcriminalization) is encouraged by the incentives of police. Police administrators and police officers (and their unions) have complementary incentives in consideration of such legislation, even when they do not agree about other issues. And, of course, the increased crowding (excess demand) also provides police with more discretion. Indeed, as Bent (1974, 3–6) notes, the huge number of statutes that have been produced by federal, state and local legislatures mean that “the average policeman is faced with a monumental task . . . the overload of statutes has made impractical the mechanical application of law . . . Instead, this overload invites the influence of prejudices of individual police officers . . . resulting in the law being administered unevenly and selectively.” This uneven and selective application of the law is even greater when prosecutor discretion comes into play.

4. Overcriminalization and Prosecutorial Behavior

The textbook view of criminal law is that legislators create it, police enforce it and judges interpret it. Overcriminalization means that the criminal justice system does not work like this. As explained above, there are far too many criminal law violators for police to arrest. This means that law as enforced can differ from law as written. Discretionary police decisions about who to arrest and prosecutor decisions about who to charge with what and how to achieve a sentence determine law as enforced. Therefore, the criminal law that actually is applied is determined by police and prosecutors, not legislators, as Stuntz (2001, 521) notes, “the definition of the law-on-the-street necessarily differs, and may differ a lot, from the law-on-the-books.” Furthermore, overcriminalization transfers adjudication powers to prosecutors, reducing the role of judges as interpreters of the law. Indeed, as Parker (2011, 735-736) points out

prosecutorial discretion is ubiquitous throughout the criminal system, and largely dominates its

outcomes...prosecutors decide who to investigate, how to investigate, who to charge, what to charge, how many redundant charges to present, what evidence to present, how that evidence is presented, who is not charged, who is immunized (and therefore probably a prosecution witness), who is implicated but not immunized (and therefore denied as a defense witness), what to take up under the asymmetrical criminal appeals statute, whether to plea bargain, how to plea bargain, what is in the plea bargain, and so on, *ad infinitum*—and all largely beyond any judicial scrutiny whatsoever.

.... In this respect, overcriminalization has exacerbated a preexisting anomaly into a serious problem. Under traditional criminal law, this pocket of unaccountable official action was both limited and temporary: the prosecution ultimately had to justify its legal and factual case at trial; criminal prohibitions were simple and few; and penalties were finite. But under current law, the myriad of criminal prohibitions can be combined into a multiplicity of vague and overlapping counts that often defy common logic, and present innovative theories of liability, providing a credibly threatened sanction of complete destruction of the defendant, which produces a conviction by plea bargain in most cases.

Plea bargains are the primary means of achieving convictions in the US, but all prosecutors have considerable discretion regarding prosecutorial procedures, and most prosecutions do not involve trial. The alternative may not be referred to as plea bargaining but some method of non-trial resolution is required in order to deal with the excess demand for prosecution (and court) time. In Korea, for instance, “summary prosecution” is prosecution without a formal trial with court decisions based on documents submitted by prosecutors.

While legislators and their supporters may believe that they are defining law and directing the allocation of criminal justice resources, including punishment, the actual consequence of excessive numbers and types of criminal statutes is to empower prosecutors, making them the real lawmakers. “Criminal laws that are couched in broad, vague language invite the executive branch to argue, *ex post*, that an actor’s conduct violated the provision. Prosecutors offer a new interpretation of the statute, effectively asking courts to formulate a new type of crime. Once courts accept the government’s position, more conduct becomes criminal. By using broadly-worded statutes with undefined terms, Congress effectively delegates authority to the courts to determine if the conduct at issue is encompassed by the statute” (Moohr 2011, 689).⁷¹ But the courts have, in turn, shifted much of this power to prosecutors. No doubt, many legislators realize this, however, since, as Stuntz (2001, 210) notes, “Prosecutors are better off when criminal law is broad than when it is narrow. Legislators are better off when prosecutors are better off.”

By criminalizing more and more behavior, legislators can create the perception that they are tough on crime. Furthermore, it is easier for prosecutors to produce convictions when they have more charges to choose from, so they encourage legislators to criminalize more behavior. Suppose, for

71. If prosecutors or courts generate new laws that legislators disagree with, the legislature “has constitutional authority to enact corrective legislation, [but] legislators seem more likely to do so when judicial interpretation has narrowed, rather than broadened, the scope of a criminal law” (Moohr 2011, 689).

instance, that a particular crime is difficult to prosecute, but that certain kinds of behavior that is much easier to prove usually accompany or at least correlate with the crime. Perhaps producing a drug for retail sales is relatively difficult to prove, for example, but producing the drug requires the use of certain equipment (e.g., spoons, bowls) and other inputs (e.g., substances to cut the hard drug). Possession of such “equipment” and/or other inputs can be made illegal. By making these accompanying or correlating behaviors illegal, prosecutors can enforce the original crime when they believe it has occurred, “but more cheaply, by enforcing the substitutes” (Stuntz 2001, 519). Similarly, by criminalizing the same behavior several times with overlapping statutes, a single act can be treated as if several crimes have been committed, each with its own penalties. The potential punishment becomes “grossly disproportionate to the harm ... and empower prosecutors to stack charges against a defendant to coerce a guilty plea” (Larkin 2013, 720); this “is not the exception, but the rule” (Stuntz 2001, 519).

4.1. Discretion at Work: Plea Bargaining and Summary Prosecution. Prosecutorial bargaining power increases whenever a set of related, overlapping actions are criminalized. After all, when multiple charges can be made the likelihood of conviction at trial should be higher, creating incentives for the accused to bargain. Furthermore, if some of the charges are for easy-to-prove “crimes” the probability of conviction rises even more. In addition, “Charge-stacking, the process of charging defendants with several crimes for a single criminal episode, likewise induces guilty pleas, not by raising the odds of conviction at trial but by raising the threatened sentence” (Stuntz 2001, 520). Prosecutorial power to make law also is enhanced because “prosecutors can avoid having to test their theories at trial by using significant leverage to virtually force even innocent, or at least questionably guilty, defendants to plead guilty” (Ribstein 2011, 628). Indeed, overcriminalization creates “an enormous problem with plea bargaining, particularly given that over 95% of defendants in the federal criminal justice system succumb to the power of bargained justice.... [A] symbiotic relationship exists between plea bargaining and overcriminalization because these legal phenomena do not merely occupy the same space in our justice system, but also rely on each other for their very existence... plea bargaining and overcriminalization perpetuate each other, as plea bargaining shields overcriminalization from scrutiny and overcriminalization creates the incentives that make plea bargaining so pervasive” (Dervan 2011, 645-646).⁷²

72. Dervan (2011, 646) goes on to suggest that “the answer to overcriminalization does not lie solely in changing imperfect prosecutorial incentives or changing the nature of corporate liability—it may also lie in changing the game itself. Perhaps the time has come to reexamine the role of plea bargaining in our criminal justice system.” The US inherited much of its legal procedure from England, including plea bargaining. The use of plea bargaining expanded dramatically through the last half of the nineteenth and the twentieth centuries. Following the American Civil war, which ended in 1865, plea agreements began to rise, and “while courts uniformly rejected these early attempts at bargained justice, deals escaping judicial review continued to be struck by defendants and prosecutors” (Dervan 2011, 646). Both plea bargaining and overcriminalization were flourishing by 1900. More crimes and more

Summary prosecution presumably involves similar factors. Someone accused of a crime should not demand a criminal trial or challenge a summary prosecution if the expected punishment is greater through trial than through summary prosecution. Therefore, easy cases to prosecute (e.g., because of the large number of crimes a prosecutor can threaten to pursue at trial, or the ability to charge easy-to-prove correlates to more serious but difficult-to-prove crimes), presumably are more likely to be dealt with through summary prosecution unless the case also is a high profile case, as explained below. The primary goal of summary prosecution in Korea presumably is to speed up the prosecution process for relatively less serious crime. It can be used for setting a fine but not for imprisonment. According to article 448-1 of the Korea Criminal Procedure Act, summary prosecution can be used at the request of prosecutors, but presumably the defendant can object. One way to induce acceptance by the defendant may be to offer to reduce a charge (or punishment) to allow a fine while threatening to pursue imprisonment if the case has to go to trial. Evidence provided below appears to support this conjecture.

4.2. Prosecutors' Incentives and Constraints. If prosecutors were omnipotent and benevolent government officials in pursuit of the public interest, discretionary power would not be of concern, but “prosecutors are neither demons nor angels; they are, like the rest of us, only human” (Parker 2011, 735-736). They pursue their own objectives in the context of the incentives and constraints they face. Many, and perhaps most, have objectives that they perceive to be in the public interest, but those perceptions are generally colored by personal interests, and they can be dominated by personal interests. Thus, “even if one grants that abuses of prosecutorial power are the exception rather than the rule, they are far from rare. The overcriminalization literature is replete with examples, and Professor Ribstein’s paper presents statistical data. There is a gross disparity between documented instances of prosecutorial misconduct and disciplinary action against the miscreants” (Parker 2011, 736). The Ribstein (2011) paper referred to by Parker also considers the incentives and constraints that prosecutors typically face in order to explain why prosecutorial abuses are far from rare.⁷³

prosecutions led to court crowding and plea bargaining became increasingly acceptable in order to alleviate the resulting delays. About 50 percent of federal criminal cases were concluded through bargains between prosecutors and those accused of crimes in the early 1900s. According to Dervan (2011, 650), however, the strong “symbiotic relationship between overcriminalization and plea bargaining was born” as a result of the Eighteenth Amendment prohibiting the production and use of alcohol, an action that turned a very large portion of the population into criminals. By 1916, 72 percent of federal criminal cases ended with a plea bargain and by 1925, the portion reached 90 percent. While alcohol prohibition was repealed, narcotic prohibition, which occurred during the same period, was not, and with the addition of marijuana to the list of prohibited substances in the 1930s, the use of plea has continued to expand. State prosecution of criminal law is also dominated by plea bargaining today, with the portion of cases ended through bargains typically well above 90 percent.

73. Ribstein (2011) uses agency (or principal-agent) theory to explore the incentives and constraints facing prosecutors, and the likely consequences of these incentives and constraints. He points out that prosecutorial behavior reflects many of the same agency cost problems that influence corporate officials: “The prosecutorial context shares the following general characteristics with agency costs in firms: (1) delegation of control by the principal to the agent; (2) the agent’s imperfect incentives to maximize the controlled assets’ value because the agent

Among the potential personal objectives, prosecutors may hope to move into lucrative private practices, or into judgeships: “Prosecutors’ jobs therefore may become revolving doors into lucrative and prestigious careers, with their newly-minted firm jobs providing, in effect, contingent fees for public prosecutions” (Ribstein 2011, 630). Ribstein explains that the chances of achieving such career goals depend, at least in part, on the notoriety of cases the prosecutors deal with [also see (Glaeser et al. 2000, 266)]. Demonstrating the ability to “handled such cases are valuable to prominent firms who want prominent hires” (Ribstein 2011, 630). In addition,

increasing the number of successful prosecutions can make the revolving door more lucrative, and thereby increase the incentive to bring prosecutions even if they are not in society’s best interests. Creating and expanding theories of criminal liability [a component of overcriminalization] may increase the private sector’s demand for former prosecutors who can defend ... [against] these charges and counsel ... [defencants] on how to avoid criminal liability. In other words, prosecutors turn up the fire so they can sell extinguishers (Ribstein, 2011, 631).

As a result prosecutors are likely to pursue cases that attract notoriety and “easy cases” that require less time to prepare for trial (Gordon and Huber 2009, 136) and/or provide substantial bargaining power for prosecutors in a plea-bargaining or summary prosecution process. Given resource constraints including limited time, these cases are likely to raise the number of successful prosecutions, the prosecution rate (number of prosecutions divided by the number of case brought to prosecutors) and the conviction rate, which are often employed in evaluating their performance (Rasmussen et al. 2009, 48), both for budget negotiations and for future career opportunities. Thus, as Garoupa and Klerman (2002, 116) explain, a government dominated by rent seeking is more aggressive in enforcing laws against minor crimes because they are cheaper to enforce and generate more net revenues.

Kim and Kim (2013) consider prosecutors’ incentives as they relate to regulatory crimes, focusing on Korea and the impact on prosecutors’ careers when they are dispatched to bureaus in charge of (economic) regulations. The Prosecutors’ Office of Korea dispatched prosecutors to regulatory bureaus for the first time in 2000. These bureaus include the Korea Fair Trade Commission, the Financial Supervisory Service, the Korea Deposit Insurance Corporation, and two other ministries involved in economic regulations. By comparing the career histories of the dispatched prosecutors to those of non-dispatched prosecutors, they are able to provide some support for the expected benefit of these assignments in terms of the likelihood of promotion. Kim and Kim also interviewed several prosecutors who almost unanimously reported that gaining prosecuting experiences in these regulatory bureaus enhanced their career opportunities.

does not bear all the costs and benefits of her conduct; (3) the principal’s monitoring and agent’s bonding expenses incurred to control agency costs; and (4) residual loss incurred by the principal because monitoring and bonding are not fully effective”(2011, 624). Thus, much of the behavior that corporate officials are accused of when they are being prosecuted arise from the same underlying incentives facing prosecutors, but as suggested below, “prosecutors face weaker institutional, regulatory and market discipline than corporate agents” (Ribstein 2011, 619).

Even if a prosecutor does not want a lucrative private sector position or a judgeship, he will face political pressures to aggressively prosecute. Larkin (2013, 737) explains that a legislator's "opportunity to claim credit can be as fleeting as one press conference. Prosecutors must actually use these new statutes for a legislator to receive credit for fighting crime on an ongoing basis. Prosecutors who make that choice thereby make an ally in the halls of the legislature — an ally who can help pass more laws that benefit prosecutors." If a prosecutor fails to prosecute, however, legislators can call prosecutors to account, and "they have incentives to do so as an easy response to public demand for action" (Ribstein 2011, 631).

Since there is no direct measure of the value of prosecutorial efforts, relatively simple indicators of effort like the prosecution rate and number of convictions tend to become important, but the focus on these measures can skew incentives and "induce prosecutors to ignore the social costs of misguided prosecutions" (Ribstein 2011, 633). It is virtually impossible to determine if this occurs, however, unless the prosecutor is induced by a bribe and the corruption is discovered. As a result, it is very difficult to discipline prosecutors for arbitrary decisions, carelessness, frivolous actions, intentional discrimination, abusive behavior, or self-interest motivated decisions. Beyond that, prosecutors in the US "have absolute immunity in connection with prosecutions and qualified immunity when acting as investigators or administrators" (Ribstein 2011, 634). In theory, prosecutors can be criminally liable for violations of defendants' constitutional rights, but Ribstein only uncovered one conviction under the 1866 statute establishing this liability.

Presumably prosecutors face other kinds of constraints. For instance, if a sufficiently widespread perception of unfair prosecution causes voters to perceive a high risk of mistreatment, a prosecutor may lose the next election or fail to be reappointed. As long as the prosecutorial misdeeds result in excess costs for a relatively small number of people accused of crimes, however, such political concerns are probably minor, particularly if those accused criminals do not have effective political voices. As a consequence, "political discipline of prosecutorial over-reaching may be a function of social class" (Ribstein 2011, 636).

The grand jury system in the US could also constraint prosecutorial discretion and abuse, but this is at best "only a rough screen given the ex parte nature of the proceeding and grand jurors' tendency to rely on prosecutors" (Ribstein 2011, 636). Similarly, individual prosecutors may be monitored by superiors, but again, this is likely to be a weak constraint. Chief prosecutors probably face even stronger political pressures to generate convictions than lower level prosecutors, and they probably are more interested in lucrative private opportunities and judgeships. Any indication that people in their office are misbehaving could severely damage their chances of achieving such goals, so they may prefer to remain ignorant about such possibilities rather than discovering them through effective monitoring. Beyond that,

in the US, at least, “civil service job protection also limits prosecutors’ ability to discipline their subordinates, who may claim that the discipline is politically motivated. Further, some prosecutorial misconduct can be hard to detect, such as failures to disclose exculpatory evidence to defendants. These factors help explain the almost total lack of internal discipline of prosecutors despite substantial indications of prosecutorial misconduct” (Ribstein 2011, 636). Judges also have the power to dismiss cases, and even sanction or censor prosecutors, and they have done so at times. Such actions also are rare, however, in part because judicial detection of serious misconduct is often very difficult. Prosecutors presumably also are subject to attorney ethics rules, but again, evidence of prosecutorial misconduct is difficult to obtain, and “the minimal frequency of internal and external discipline at least indicates that even serious mistakes are not punished” (Ribstein 2011, 636).

Given incentives and constraints outlined by Ribstein, prosecutors pursuing high profile prosecutions can simultaneously obtain large numbers of convictions if they “cut corners” (2011, 633) using the kinds of tactics in plea bargaining discussed above, but this in turn leads to mistakes and abuses of power (whether intentional or unintentional). For instance, “prosecutors can unilaterally determine the shape and scope of the trial by threatening potential defense witnesses. By compiling a long list of unindicted co-conspirators, prosecutors serve notice on defense-friendly witnesses that they may become defendants who lack immunity from prosecution if they testify. ... If defendants tried to exert similar leverage on prosecutors’ witnesses, the government could charge them with a crime” (Ribstein 2011, 629). Larkin (2013, 753) also points out that “Overcriminalization also creates a serious risk of arbitrary enforcement. One risk is that prosecutors will make charging decisions based on ... factors, such as the value that a particular case holds for an ambitious lawyer or the number of points it will add to his batting average. As Judge Alex Kozinski put it, “a ubiquitous criminal law becomes a loaded gun in the hands of any malevolent prosecutor or aspiring tyrant.””⁷⁴ In fact, “prosecutors can inflict significant costs just by deciding to prosecute, even before the adversary system comes fully into play. High-profile defendants or potential defendants, who are frequent prosecutorial targets, may suffer substantial reputation loss and defense costs even if they are ultimately exonerated” (Ribstein 2011, 628). Ribstein (2011, 632) suggests that an example of prosecutorial actions that inflict such cost by attracting “media skewing” is “what might be called the “corporate crime lottery” in which cases are more likely to be brought against unpopular executives of failing firms, such as Jeff Skilling of Enron Corporation, than against popular executives of successful firms, such as Michael Dell, Steve Jobs, and Warren Buffett.”

4.3. Overcriminalization, Prosecutorial Discretion, and the Efficacy of Criminal Law. Even if prosecutors do not intentionally pursue particular high-profile cases or attempt to maximize convictions

74. Silverglate (2009) describes many situations in which prosecutors are empowered by the vagueness and breadth of criminal laws, as well as several prominent examples of prosecutorial excesses. Also see Bharara (2007).

through plea bargaining, the discretion that they (and police) have and the huge array of crimes they can pursue creates the possibility for (and widespread perception that) discriminatory, arbitrary and even random decisions determine who ends up being charged and prosecuted (Ribstein 2011, 633-634):

We presume that the majority of the community is law-abiding and that the decision to single out one person for arrest and prosecution rests on the legitimate ground that there is sufficient proof that he has broken the law, not because of his race, religion, or any of the other analogous, invidious factors. If almost the entire community is guilty of some crime, though, we no longer can rely on that presumption. The question of why a particular individual was selected becomes far more debatable, particularly given that arrest and charging decisions are generally invisible and, absent a confession of wrongdoing by the prosecutor or extraordinary circumstances, are virtually unchallengeable. Rather than promote neighborhood wellbeing, criminal enforcement has an *in terrorem* effect on the community.

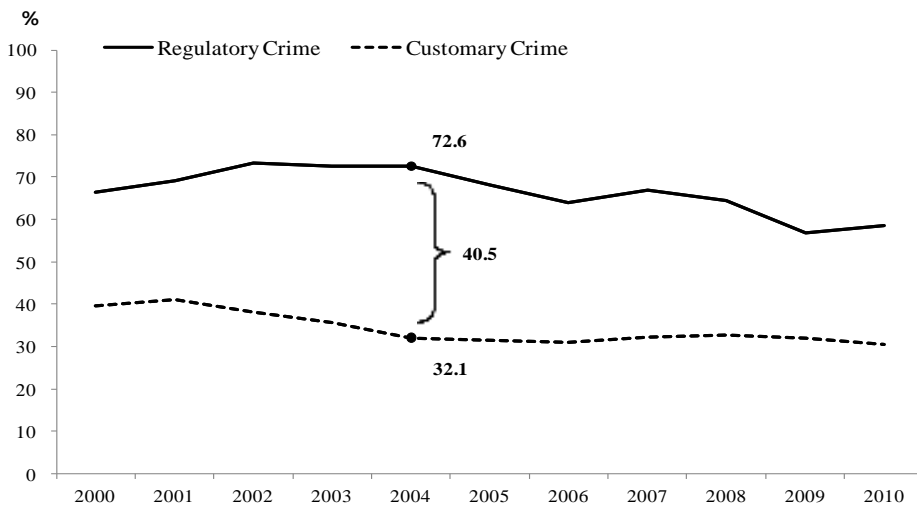
Under these circumstances, the intended deterrence effect of criminalization is undermined. The fact that virtually everyone regularly breaks some criminal law whether they know it or not, and the apparently random and arbitrary decisions by police and prosecutors regarding which laws to enforce, when and where to enforce them, and what the punishment will be, create the impression that the system is like a lottery. There is a relatively low probability that violating any particular law will result in arrest, prosecution and punishment so citizens are rationally ignorant about the content of the law, at least outside the core crimes, and even in these cases the details of the law (e.g., regarding potential punishments) are generally unknown. As a result, the criminal law's ability to inform is destroyed. It cannot communicate

with the regulated population (and particularly with those portions of the population who are most inclined to do things the rest of us find bad or dangerous), and thereby seeks to reinforce good conduct norms and attack bad ones. If that is criminal law's primary job, its breadth and depth ensure that the job will be done badly. As any parent knows, sending messages requires consistency.... Broad codes cannot be enforced as written; thus, the definition of the law-on-the-street necessarily differs, and may differ a lot, from the law-on-the-books. How can a new criminal statute be enforced across the board when so many existing statutes go unenforced? Which means that, with rare exceptions, the legislative message cannot make it through the enforcement filter unscathed... no one knows how any given criminal statute is enforced in any given state.... information about local prosecutors - which statutes lead to prosecutions, in what sorts of cases, with what results - does not exist anywhere.... And the decentralization of prosecution and police, both of which are controlled locally, not at the state level, ensures that such signals will be surrounded by what statisticians call "noise": variations from place to place that make it costly or impossible to hear what the legal system is trying to say... the law's messages are likely to be buried, swamped by local variation and hard-to-discern arrest patterns, by low-visibility guilty pleas and even lower-visibility decisions to decline prosecution (Stuntz 2001, 521-523).

4.4. The Allocation of Prosecution Resources in Korea. The predictions outlined above suggest that prosecutors will systematically select easy cases in order to increase convictions, along with high visibility cases that can lead to promotion or future career opportunities. In this context, they also

have incentives to prosecute regulatory crimes emphasized by influential political interests (Kim and Kim, 2013). An examination of Korean data supports this. Kim and Kim focus on prosecution rates, defined as the number of persons prosecuted divided by the number of persons disposed (a disposition occurs when an offender is brought forward (registered to) the prosecutors' offices by either the police or various regulatory bureaus). Prosecutors then investigate the case and subsequently clear (complete) the case, generally in one two ways. They can dismiss the case with no charge or prosecute the case. This completion, whether dismal or prosecution, is the disposition, so the prosecution rate is the portion of cases brought forward that are disposed through prosecution (as noted below, prosecution itself also involves two options: summary prosecution or trial). Although the prosecution rate for total crime was about 52 percent in the 2000s, the prosecution rate for regulatory crimes was 67 percent, almost twice the 34 percent rate for core/customary crimes. In other words, only about a third of the core crimes brought forward to prosecutors are actually prosecuted, while about two-thirds of the legislative/regulatory crimes brought forward result in prosecution. Figure 4.1 shows that the prosecution rates also vary over time (note that the difference between prosecution rates for the two crime categories varies, with a maximum of 40.5 percent in 2004).

Figure 4.1
Trend in the Prosecution Rate by Prosecutors

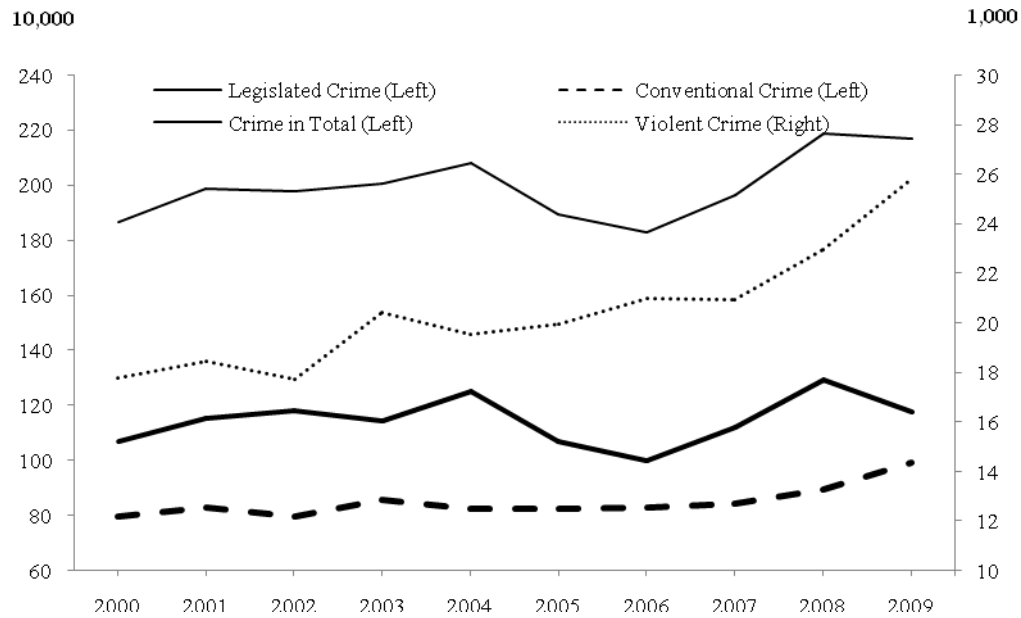


Source: *Annual Crime Report*. The Supreme Prosecutors' Office of Korea

Recall in this context that the level of core or customary law crime started rising in the early 1990s, as shown in Figure 1.1, and the rate of increase itself rose in the late 1990s before slowing again in the 2000s. The average number of customary crimes has been about 860,000 since the late 1990s, about 2.5 times the level for the previous 10 years, but the actual level of these core crimes continued to rise through the period. The average growth rates for customary crimes over the 2001-2005 period is about 0.8 percent, but the growth rate jumped again and for the last three years of the 2000s it is about 3.8 percent.

Violent crime (e.g., homicide, robbery, rape, arson) in Korea increased much faster in the 2000s, however, with an average growth rate throughout the 2000s of 4.6 percent. This increasing rate almost doubled to 9.0 percent for the last 3 years of the decade. This suggests that the mix of customary crimes has shifted to more serious (violent) forms of activities as the overall level of crime has risen (this issue is considered in more detail below). Figure 4.2 shows these relationships over the 2000-2009 period.

Figure 4.2
Frequency of Customary and Legislated Crimes, 2000-2009



A decline in the prosecution rate of customary law crimes is one of the major factors generating the period of rapid increase in these crimes according to Kim and Byeon (2012). They find that changes in customary law crimes is determined in part by changes in the prosecution rate, and conclude that the expectation of prosecution has a strong deterrence effect. Figure 4.1 shows that the prosecution rate for customary crimes fell until around 2006, and then rose slightly until about 2008 before falling again. These changes are juxtaposed with the changes in customary (conventional) crime in Figure 4.3 so the relationships are easier to see.

The relationship between violent crime and prosecution is also illustrated in Figure 4.4 where the negative relationship between the probability of prosecution and violent crime is very obvious. Figure 4.5 shows the same relationship for one particular violent crime, rape, because additional analysis of prosecutorial decisions about this (and total violent crime) crime is presented below.

Figure 4.3
Trend in Conventional Crime and the Probability of Prosecution

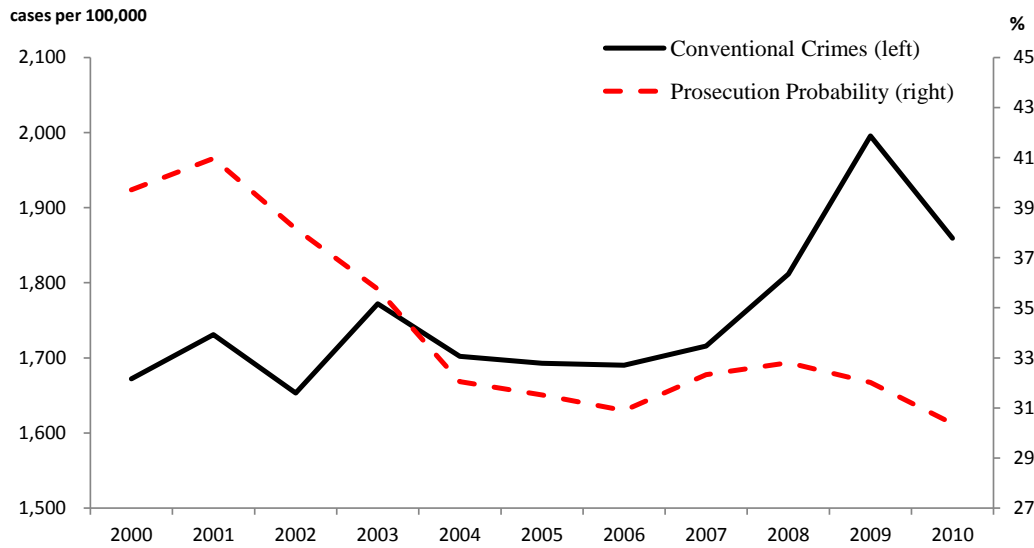
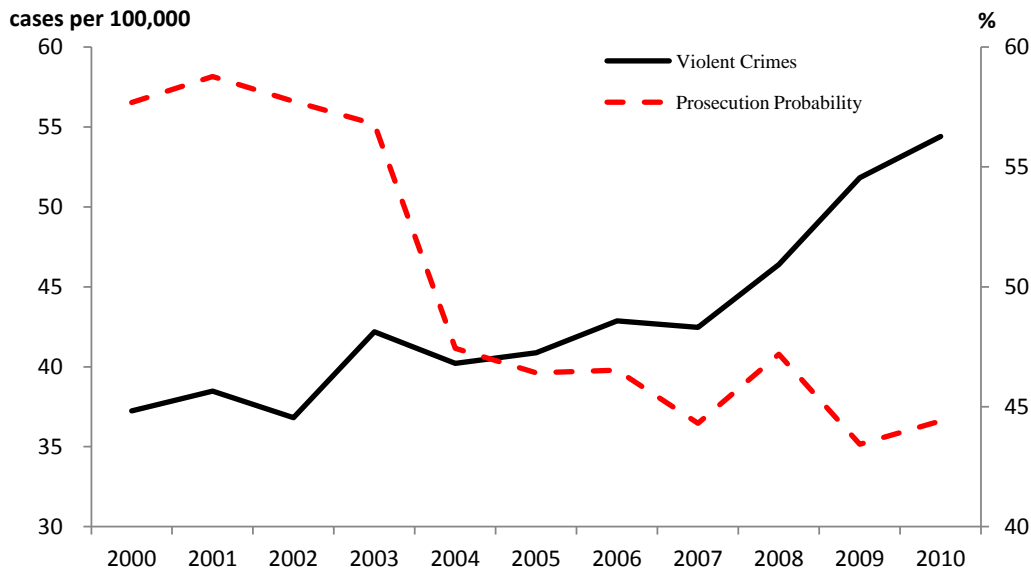


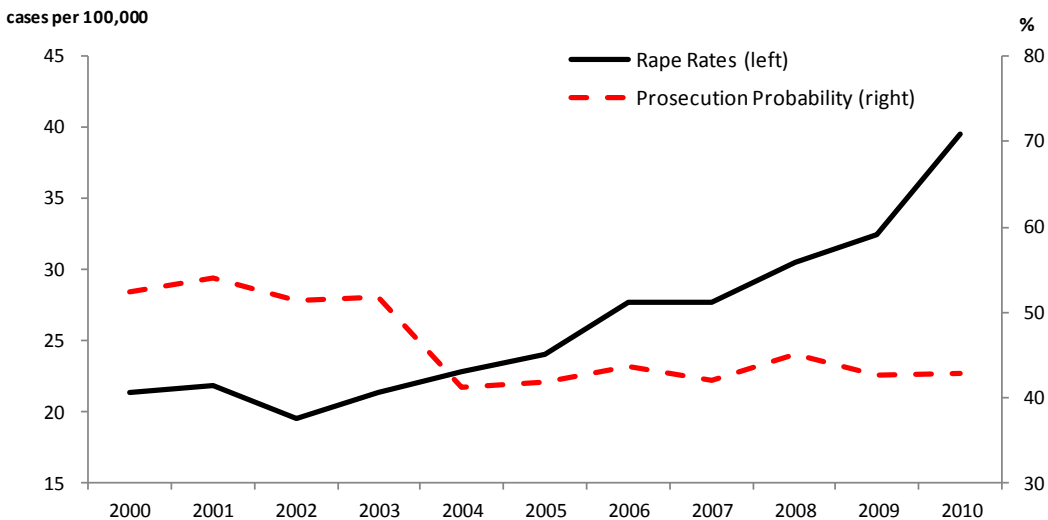
Figure 4.4
Trend in Violent Crime and the Probability of Prosecution



Prosecution resources in Korea are clearly scarce. There were 1,491 prosecutors in 2010, for instance, relative to the country’s population of roughly 50 million. On average, 1,311 criminal defendants were disposed of per prosecutor that year. As illustrated in Figure 1.1, growth in regulatory crime has been substantial and a very high level of these crimes occurred in the 2000s. Figure 4.1 shows that prosecutors maintained high prosecution rates for these crimes, although increasing demands on scarce prosecution resources due to increasing numbers of crimes of all types apparently forced reductions in this effort after 2004, perhaps enough to modestly increase efforts to prosecute customary

law crimes which had been increasing very rapidly. In this light, the following sequence of hypotheses can be proposed: (1) increasing criminalization places more demands on prosecutors and this results in a shift in prosecutorial effort toward newly legislated crimes, both because more regulatory crimes exist and because of the relative priority that prosecutors tend to put on pursuing these career-enhancing regulatory-crime prosecutions; (2) the reallocation of prosecutorial effort toward regulatory crimes lowers prosecution rates for customary crimes, thereby reducing the deterrence impact of expected prosecution, and these core/customary crimes increased. In other words, there is a significant tradeoff in the allocation of prosecution resources, just as there is with police resources, so increased criminalization tends to lead to increases in the core customary law crimes. Kim and Kim (2013) provide an empirical analysis of this implication. They employ panel data from Korea over a 10-year period from 2000 through 2009. Data on crime rates and deterrence variables were from *The Annual Crime Reports*, while population and socio-economic control variables were from the website of KOSIS (<http://kosis.kr>) provided by the Statistics Korea. In addition, the numbers of prosecutors were obtained from all district prosecutors' offices in Korea.⁷⁵

Figure 4.4
Trend in Rape and the Probability of Prosecution



Kim and Kim (2003) estimate supply of crime equations (equation (1) above) but with inclusion of prosecution rates which in turn depend on the allocation of prosecution resources between legislated and core/customary crimes. They find that, all else equal, when the number of the prosecutions of legislated/regulatory crimes per 100,000 population increases by 10, the customary crime rate per 100,000 increases by 1.3, on average, an estimated 657 crimes in 2009. Furthermore, as the demand on prosecutors to deal with customary crimes also increases so congestion worsens, the total effect of

75. There are 57 district (and branch) offices, but, in light of data availability and the homogeneity of office sizes, these offices were grouped to represent 13 metropolitan areas.

prosecuting regulatory crimes, the increase in core crimes, increases steadily. For instance, in 2008 the Incheon metropolitan area had relatively high levels of core crimes prosecutors were expected to deal with while also seeing a sharp increase in the number of legislated crimes per 100,000 population prosecuted (by 400 compared with the previous year). Kim and Kim (2013) estimate that approximately five percent of the total number of core crimes (including murder, robbery, and rape) in the Incheon metropolitan area during 2008 are due to the level of prosecutorial effort directed at regulatory crimes.

The results in Kim and Kim (2013) suggest that the opportunity cost of increasing prosecution of political/legislated crimes is considerable, as core crimes against persons and their property are less effectively deterred and those crimes rise significantly. They do not directly consider the expected social benefits of this resource reallocation, but presumably, prosecuting legislated crimes is expected to produce benefits by deterring such crimes. As suggested above, however, such deterrence effects tend to be undermined by overcriminalization and the resulting rational ignorance about the mass of legislated crimes. Even if there is some deterrence impact, there are other reasons to expect that the benefits of prosecuting more legislated crimes are low relative to the costs in the form of greater levels of core/customary crimes. For instance, core crimes against persons and property are likely to produce, on average, greater direct and indirect harms than those caused by many regulatory crimes. In particular, the number of violent crimes in Korea has increased very sharply in recent years, as noted above. In addition, overcriminalization in the first two senses discussed above (government efforts to control too much behavior, much of which should not be illegal, and criminalization of behavior that should be controlled through civil law) suggests that prosecutions of many legislative crimes should not occur at all (the benefits are minimal), so the increasing costs to Koreans as more core crimes occur because of shifting prosecution resources to legislated/regulatory crimes often either produce no offsetting social gains or the net gains are low relative to what they would be if the issue was dealt with through civil law.⁷⁶

One additional issue regarding prosecutorial discretion deserves attention – the use of summary prosecution. As explained earlier, summary prosecution is allowed when a person is to be charged with a crime that is to be punished by a fine, but not for punishment by imprisonment. Therefore, it might be surprising to some to learn that summary prosecution is heavily used for violent crimes including rape. The summary prosecution rate for rape averaged 33 percent through the 2000s, rising for 10.65 percent in 2000 to 47.47 percent at the end of the decade. In this context, empirical models are discussed below explaining violent crime and rape. Table 4.1 presents the results for the violent crime rate using data from 2000 to 2009 since there are some missing observations for 2010. The first model controls for the

76. Kim and Kim (2013) also tested to see if enforcement of legislated crimes might result in cross-crime deterrence (e.g., high levels of prosecution in general might provide general deterrence against all types of crime, including core crimes), but found no indication that this is occurring.

probabilities of arrest and of prosecution while the second adds the summary prosecution rate.

Table 4.1
The Supply of Violent Crime

Variable Description	Model 1	Model 2
Probability of arrest for violent crimes (%)	-0.2486** (0.1077)	-0.2191** (0.1066)
Probability of prosecution for violent crimes (%)	-0.3529*** (0.0979)	-0.2343** (0.1103)
4-Year dummy as a control variable (i.e., for the 4 years when the growth rate of the dependent variable exceed the average of the 10 years)	3.6327*** (1.2072)	3.1785** (1.2029)
Percentage of the male population aged 35 to 39 (%)	6.8013* (3.9466)	3.0263* (4.2399)
Number of divorces per 100,000 population	0.2327*** (0.0748)	0.2261*** (0.0735)
Number of female heads (aged 45 ~ 69) per 1,000 households	0.3148* (0.1772)	0.0522 (0.2112)
Unemployment rate of male (%)	2.8400*** (0.9973)	2.7507*** (0.9798)
GRDP per capita in construction industry (KRW)	0.4491 (5.0869)	0.7077 (4.9944)
Proportion of summary prosecution to total proportion for violent crimes (%)		0.2487** (0.1135)
<i>Constant</i>	6.0768 (29.9567)	29.2113 (34.8935)
<i>adj.R² †</i>	58.5%	60.1%

Note: · ***, **, and * represent statistical significance at the 1%, 5%, and 10%, respectively. Standard errors in parentheses.

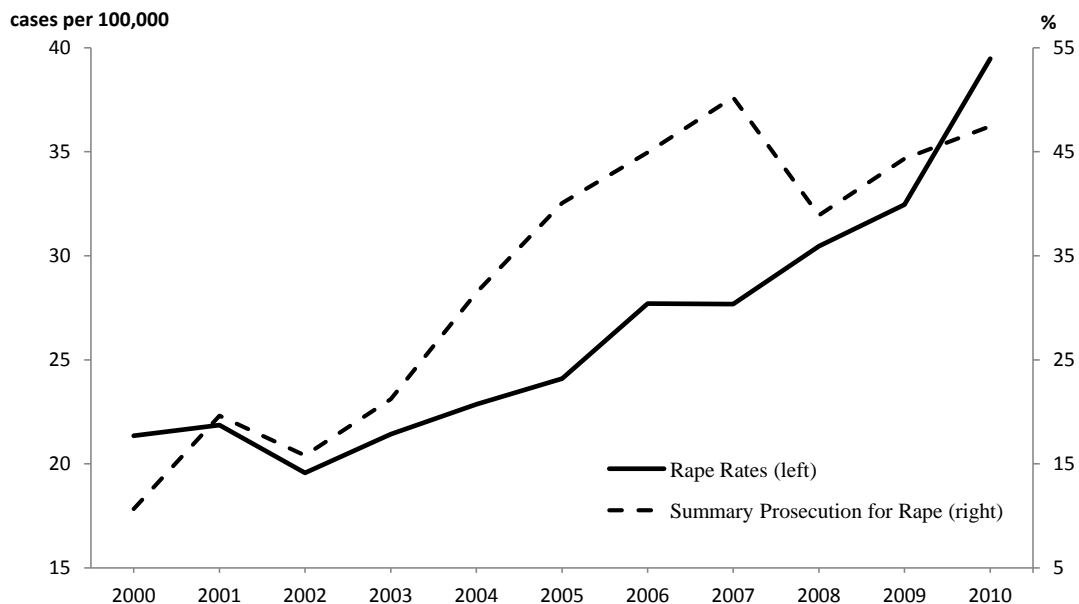
† The *adj.R²* was calculated from the LSDV estimation.

Note that the probability of prosecution is a significant deterrent in model 1. In fact, its coefficient is larger than the coefficient for the probability of arrest, and is consistent with in Kim and Byeon (2013). Adding the summary prosecution rate in model 2 actually reduces the magnitude of the coefficient on the probability of prosecution, although it remains significant and relatively large. More importantly, using summary prosecution has a direct offsetting effect, as doing so is positively related to the amount of violent crime. Clearly, summary prosecutions do not deter violent crimes the way trial prosecutions do, possibly because summary prosecutions imply relatively mild punishment, and/or because they do not garner the media attention that trials do so potential criminals are not as likely to be aware of them.

The results for the rape rate are somewhat similar although the coefficient estimate of for the probability of prosecution in the first model is -0.251 (significant at the 1% level) and it falls to -0.14 when the summary prosecution rate is added in the second model (it also is only significant at the 10% level). The coefficient for the summary prosecution rate is 0.310 (significant at the 1% level). In this

context, Figure 4.5 shows the summary prosecution rate for rape along with the crime rate, providing a visual representation of the statistical relationship.

Figure 4.5
Crime Rate and Summary Prosecution Rate for Rape



5. Overcriminalization and Punishment

The Web page for The Sentencing Project (2013) points out that “The United States is the world's leader in incarceration with 2.2 million people currently in the nation's prisons or jails -- a 500% increase over the past thirty years. These trends have resulted in prison overcrowding and state governments being overwhelmed by the burden of funding a rapidly expanding penal system, despite increasing evidence that large-scale incarceration is not the most effective means of achieving public safety.”

In the US, local prosecutors and judges have common access in sending convicted criminals to state-provided prison space. Prosecutors are elected officials in the US, while judges are either elected or appointed by elected officials. Inasmuch as prosecutors and/or judges have incentives to demonstrate to their local constituencies that they are tough on crime, imprisonment is a relatively attractive punishment. Their incentives are to send more convicted criminals to prison than they would if they had to internalize the external costs imposed on others who use the system (options to state prison include locally funded jails, diversion programs such as drug treatment, state run probation systems, etc.). Even if they recognize that their actions add to the prison-crowding problem, their personal benefits (the local political support they get from their tough image) may exceed their personal costs (perhaps the anxiety associated with the recognition that they are crowding prisons and raising costs to society at large).

As explained above, state legislators and the federal Congress in the US also crowd the criminal

justice commons by passing laws that criminalize more activities and/or increase the penalties for crimes. A legislature also has the power to budget more funds to prisons in order to increase the number of prison beds, but for reasons suggested above, the temptation to overcrowd the commons is likely to prevail. Legislators can reap political benefits by passing longer sentences for crimes, so they appear to be tough on criminals, while the costs of doing so, prison crowding and the accompanying programs to alleviate crowding, do not materialize immediately. Since expanding criminal justice resources involves the politically unpopular task of either cutting other government functions or raising taxes, the politically astute course of action is to appear tough without paying for it.

5.1. Prison Crowding. The result is that prison populations in many states and in the federal prison system in the US exceed capacity every year. Crowded conditions have existed for as long as there have been prisons (Benson 2011, 71-73), but in the United States that fact apparently did not come to the attention of the general population or cause tremendous concern for legislators until a series of federal court rulings in the 1970s and 1980s mandating that crowded prison conditions be alleviated. By October 1987, forty-five states, the District of Columbia, Puerto Rico, the Virgin Islands, and an undetermined number of county and municipal governments were under court order to remedy jail and/or prison conditions. Thirty-four of the states were under explicit orders to ease crowded conditions (Hackett et al. 1987, 5) while others had orders to improve specific components of the prison system that had insufficient capacity, such as medical care. Similarly, a Bureau of Justice Statistics (1988:1) estimate of 1987 jail capacity utilization in the 358 largest local jurisdictions, whose 611 jails housed about 76 percent of all jail prisoners in the country, found that the overall occupancy was 111 percent of rated capacity. At the time, 102 of these 358 jurisdictions were under court order to reduce the number of inmates they held.

Crowding can be temporarily relieved by building more prisons or by releasing current prisoners before their sentence is served, perhaps through a permanent parole program with parole board members having the power (discretion) to decide who is released, and/or by an emergency early release program reflecting the discretion of corrections officials who decide on release criteria, but once the court order is satisfied, the problem always resurfaces. For instance, on December 31, 2011 the federal prison population was 138 percent of rated capacity even with a reduction of over 16,700 total prisoners over the previous two years (Carson and Sabol 2012, 21 & 31). Similarly, 23 of the 50 states had populations that were 100 percent or more of estimated capacity. Among the most crowded state systems were Illinois with prison populations that were 144 to 163 percent of capacity depending on the capacity determination process used (designed capacity, operational capacity, and rated capacity are defined below), while California was between 106 and 175 percent despite reducing total prisoners by over 21,700 over the previous two years, Alabama was between 100 and 196 percent, Hawaii was between 111 and 161 percent, Massachusetts was 143 percent, Nebraska was between 117 and 147 percent, Delaware between

113 and 157 percent, North Dakota was between 133 and 140, Wisconsin was 130 percent, and so on (Carson and Sabol 2012, 21 & 31). The three measures of capacity used in the US are: 1) design capacity – The number of inmates that planners or architects intended for the facility; 2) operational capacity - The number of inmates that should be accommodated based on a facility's staff, existing programs, and services; and 3) rated capacity - The number of beds or inmates assigned by a rating official to institutions within the jurisdiction.

While the federal courts have imposed limits on how crowded prisons can be in the US, so at various times, most state prison systems and many local jails have been forced by federal court order to alleviate crowding, individual legislators, prosecutors and judges who make the decisions that crowd prisons are not liable for the costs of their decisions. As a result, state corrections systems (and county sheriffs or local police departments) must come up with ways to alleviate the crowding. This is generally done by releasing prisoners early based on such factors as good behavior in prison ("good time credits"), which has no relationship to the danger that the released criminal poses to society. Thus, for instance, Kuziemko and Levitt (2004), estimate that on average one criminal is released early for every drug-law offender sent to prison. Dangerous violent criminals have been released early numerous times, only to commit more violent crimes within a short period.

A quick random search of the internet resulted in several examples. One, Shawn Corbally was sentenced to 25 years in prison for brutally beating and raping an Indianapolis woman in 2000.⁷⁷ While serving his prison time, his Indiana Department of Corrections conduct history shows that he was cited 23 times for breaking prison rules including use of a dangerous weapon, three separate batteries, and other conduct listed as disorderly, disruptive and rowdy. Some of Corbally's earned "good time credit was taken away because of the violations, but most of the lost credits were restored even though his behavior continued to show pattern of poor conduct. Ultimately, Corbally received more than eleven years of good time credit, the primary reason that he served less than 12 years of his 25-year sentence. A few months later he was charged with two more rapes. When a Department of Corrections spokesman was asked by a newsperson why Corbally received over eleven years of good time credit even though his record included a large number of conduct violations while in prison, the reply sent by e-mail stated "Corbally lost 765 days of credit time, of which only 441 days was restored," and "Corbally spent nearly 15 months LONGER in prison than he would have if he had behaved better." In another of numerous examples, Robert Ransom was arrested on March 27, 2014 and charged with kidnapping, raping, and torturing a 16-year-old girl in Los Angeles.⁷⁸ He is also a suspect of murdering two women and a child, doing so by

77. This information is from Bob Segall "13 Investigates: Violent criminals released too soon?: 13wthr.com, <http://www.wthr.com/story/19919959/violent-criminals-released-too-soon>, Posted: Oct 25, 2012 9:36 PM EST Updated: Mar 11, 2014 3:48 PM EST.

78. This information is from Eric Leonard "Early-Release Felon Charged with Kidnapping, Rape, Torture," KFM

setting them on fire (the kidnapped girl was covered in gasoline when she escaped from the van Ransom had been holding her in). California state prison officials report that Ransom was released from prison early in June, 2013 and returned to Los Angeles where he was to be supervised by probation officials. The early release reflected the fact that the corrections department considered him to be a “non-violent offender” because his most recent prison term was for possession of a firearm by a felon, not a violent act, even though he had previously served prison sentences for two carjackings and an assault with a firearm. Such early releases often occur as non-violent property or drug criminals are sent to prison, forcing the corrections system to choose someone to release.

Most states have used parole systems in an attempt alleviate prison crowding but parole arrangements have not been adequate, for the most part. For instance, California's attempts to control the prison population with parole resulted in rising caseloads for parole officers, who were quick to return technical violators to prison in order to lighten this burden (Phillips, et al. 1992). In Florida, where the parole system had been phased out, the demand for scarce prison space grew dramatically in the 1980s. New prisons were built, but Florida's legislature was reluctant to spend the funds necessary to build prison capacity at a pace that was sufficient to accommodate increased demand. Florida's prison population rose from 26,170 at the end of the 1981/82 fiscal year (FY) to 38,059 as of June 30, 1989, implying an increase of 45 percent in the supply of prison space, while annual prison admissions rose by 203 percent over the period, from 14,301 in FY 1981/82 to 43,387 in FY 1989/1990. Note that a substantial portion of the increased pressure on the Florida prison system traces directly to the war on drugs. There were 1,620 Florida prison admissions for drug offenses during FY 1983/84, accounting for 12.9 percent of total admissions. By FY 1986/87 this figure had risen to 22.9 percent of total admissions (5,274). The trend continued with 15,802 drug admissions for FY 1989/1990 or 36.4 percent of total admissions. Thus, prison admissions for drugs rose by 875.4 percent between FY 1983/84 and FY 1989/1990, while non-drug admissions rose by only 153 percent (from 10,896 to 27,585).

The increased flow into the prison system in the face of federal court mandates to maintain less crowded conditions forced Florida to implement a program to “facilitate the transition from prison to civilian life” in fiscal year 1986/87 which lowered sentences to be served in FY 1987/88 by thirty-seven days for eligible inmates. This was not sufficient so an Administrative Gain Time Program was implemented in February 1987, resulting in a 122-day reduction in sentence for almost all prisoners scheduled for release in FY 1987/88. The consequences were dramatic. In January 1987 inmates were serving an average of 52.8 percent of their sentences, but as drug admissions continued to rise during 1987, the prison crowding problem became acute and gain time accelerated. By January 1988 the average

AM640 <http://www.kfiam640.com/articles/local-news-465708/earlyrelease-felon-charged-with-kidnapping-rape-12268715#ixzz31GxNdoFl>

portion of sentence served had fallen to 40.6 percent, and by December 1989 it sank to 33 percent. In fact, about 37 percent of the prisoners released in December 1989 had served less than 25 percent of their sentence, and some served less than 15 percent. The results were predictable. For instance, Charles Street was released from prison in November 1988 seven years before the end of his 15-year sentence for attempted murder. Ten days later he killed two Metro-Dade police officers. A prison guard testified at Street's murder trial that the following conversation had occurred: Street told the guard, "I'll be out of here soon," and the guard replied, "You'll be back;" Street responded "You're wrong! I'll kill the next mother ... that tries to bring me back to prison."⁷⁹ But under Florida's Administrative Gain Time program Street had to be released to make way for new prisoners, including four who were convicted for writing bad checks.

Judges and prosecutors presumably do consider crowded conditions in their sentencing decisions, at least to a degree, because they do not send all offenders to prison. In fact, probation is the most commonly used sanction in the US, and the typical sanction for first-time offenders. Roughly three times as many convicted offenders are placed on probation each year as are sentenced to prisons and jails combined. But as Byrne (1988,1) notes, "Although prison crowding draws national attention and increased resources, 'probation crowding' poses a more immediate threat to the criminal justice process and to community protection." The probation population has been increasing at roughly the same rate as the prison population, severely taxing the ability of the system's limited resources to monitor and supervise probationers. All alternatives to imprisonment, other than forgiveness and release, require the use of scarce resources for monitoring, so the potential for crowding arises even if judges and prosecutors do not herd criminals into the common pool prisons.

Crowding is only one aspect of the problem. Prisons are intended to serve several functions (produce several outputs), including punishment of convicted criminals, deterrence of potential criminals, incapacitation of dangerous criminals, and rehabilitation of criminals who can be reformed. All of these outputs of the prison system decline in quality because of crowding. Early release programs mean that criminals are not punished to the degree that judges, victims, and others in society feel justice requires. Potential criminals recognize that prison sentences are rarely fully served and that the portion of sentences served declines with increased admissions after capacity is reached, so deterrence is diminished. Some unrehabilitated and insufficiently deterred criminals like Charles Street are released early despite the need for continued incapacitation, and commit more crimes. Finally, when prison budgets are consumed by efforts to accommodate overflowing prison populations, resources are generally not available for effective rehabilitation programs; and if they are, early release may mean that criminals are not enrolled in

79. This conversation and other details about Street are from a series of *Sun Sentinel* newspaper articles available at "IN THE NEWS Charles Street" <http://articles.sun-sentinel.com/keyword/charles-street/featured/3>

rehabilitation programs long enough to benefit from them.

Individual prosecutors and judges are not liable for the costs of their decisions. Instead, costs are imposed on taxpayers who face the ever increasing cost of building more prison space; on victims who are not satisfied with the level of punishment offenders actually incur; on citizens who are victimized by prematurely released criminals and other criminals who are not sufficiently deterred; on criminals who may have reduced opportunities for rehabilitation and are faced with the increased violence and abuse that may accompany prison crowding; and on corrections officials who must focus their efforts and resources on coping with crowded conditions rather than on other functions, such as rehabilitation and treatment.

The Illinois Department of Corrections (1989a, 8-9) reported some of the consequences of crowding on the prison population, as well as the cost of administering prisons. Four Illinois prisons experienced significant increases in population without increases in design capacity between 1985 and 1988. These four prisons, crowded through double- and multi-celling, housed roughly 18 percent of the increase in medium and minimum security prisoners over the period (the rest of the increase was housed in new facilities), but they accounted for 48 percent of the increase in attempted suicides by inmates, 23 percent of the increase in adjustment reports, and 31 percent of the increase in inmate deaths for all medium and minimum security prisons in Illinois. Problems with the prison population seem to increase faster than the population itself when crowded conditions set in. Thus, for instance, when the daily populations of Graham and Centralia prisons increased by 33 percent through double-celling, total disciplinary reports increased by 63 percent, revocation of good time rose by 1,552 percent, and assaults on staff increased by 120 percent.

Free access by judges and prosecutors really means that punishment resources are rationed on a first-come-first-served basis. The first prisoner of a particular type sentenced gets the first open space of that type in the prison system. But rationing by first-come-first-served generally means rationing by waiting in queues, as backlogs of unmet demands build up. Thus, county jails fill with prisoners waiting to be placed in state prisons (and for trials). In fact, 52 percent of the prisoners held in local jails during 1987 (the period discussed above when so many prisons and jails were under court orders to reduce crowding) were queued up, awaiting arraignment or trials, and a substantial portion of the remaining 48 percent were convicted inmates being held until they could be transferred to another authority (Bureau of Justice Statistics, 1988:1). Among the 358 largest jurisdictions, for example, 26,838 of the 224,811 inmates were being held for other authorities, and 11,257 of those were being held specifically because the state prison was too crowded to accept them, given court mandates (Bureau of Justice Statistics, 1988:1).

When rationing by waiting becomes prevalent and the time cost of waiting grows, many potential demanders opt out of the queue and choose not to be served. Thus, judges approve prosecutors' plea

bargains sentencing offenders to probation or to county jail time (sentences of less than a year tend to be served in county jails while longer sentences are supposed to go to state prisons), and grant more suspended sentences than they otherwise would. Furthermore, many crime victims choose not to report crimes as noted above. Also as stressed above, simply increasing the supply of resources is not likely to solve the queuing problem. Building more prisons may mean prosecutors and judges are even less willing to consider alternative forms of punishment, particularly if resources going into the probation system and other alternatives are not simultaneously expanded, so prison crowding remains a problem. For example, under Illinois law, some drug offenders are given the choice of obtaining treatment, provided that certain statutory requirements are met. If an offender chooses treatment, and if an examination concludes that the offender is an addict who is likely to respond to treatment, then the court can impose a sentence of probation with treatment monitored by TASC (Treatment Alternatives for Special Clients). In FY 1988 there were 1,082 adults so sentenced (Illinois Criminal Justice Information Authority, 1989:129-130). However, insufficient resources had been allocated to treatment facilities, so in February 1988, for example, 275 people sentenced to TASC-monitored treatment were on a waiting list, eight-six of whom were incarcerated while waiting for an opening in a treatment program, while the rest were under community supervision. Thus, the shortage of treatment facilities adds to the crowding of both jails and community supervision. People eligible for treatment continue to exceed those accepted into treatment, those accepted exceed those placed, and the gap between eligible and placed continues to widen.

5.2. Prison Crowding and its Consequences: A Case Study.⁸⁰ Understanding the consequences of increasing enforcement of non-core crimes on prisons might be enhanced by a detailed examination of one state's experience in the face of significant police resource reallocations. Once again, the fact that the US saw a dramatic increase in drug control efforts beginning in the early to mid-1980s provides an opportunity to observe such an event. Illinois' drug arrest rate in 1989 was below the national average, but the state's drug arrests per 100,000 in population over the 1984-1989 period had increased faster than that of any other state. Prison crowding had already become so significant in Illinois during the late 1970s and early 1980s that the state instituted a forced release program, beginning in June 1980. Multiple ninety-day increments of meritorious gain time were applied to inmates' sentences, on top of the traditional day-for-day good conduct credits. From FY 1980 to FY 1983 there were 10,019 inmates released early (after serving relatively small portions of their sentences) as a consequence of this program. A total of 2.66 million days of gain time was awarded to 63,616 inmates over this period; but in July 1983, the state Supreme Court ruled that only one ninety-day increment of meritorious gain time per

80. This case study (and several of the other examples relating to the crowding consequences of increasing drug enforcement) is drawn from Rasmussen and Benson (1994).

inmate could be awarded under the state's law, and this occurred just as the drug war was about to expand. Thus, the state's prison population exploded, growing by an average of 234 inmates per month over the next year.

Illinois was faced with moderating its early release program and either finding other mechanisms for allocating scarce prison space or building more prisons. "Ideal capacity" for the Illinois prison system more than doubled between 1978 and 1988 (from 8,150 to 16,310) by building more prisons. "Rated capacity" also increased from 10,944 in 1978 to 19,993 in 1988, in part by double-celling prisoners, while the actual population rose from 11,736 to 20,544. Following the court-ordered change in the forced release program in 1983, double-celling was immediately instituted, and efforts to build new facilities increased. By the end of 1985, four new facilities had opened: Jacksonville with designed capacity for 500 beds, Lincoln with 558, Dixon with 582, and Shawnee with 986. These were followed by new facilities in FY 1986, Danville, and in FY 1987, Hill, both of which were designed to hold 896 prisoners. Existing and recently built facilities were also expanded (building continued in 1989 as well, but the case study focuses on the period prior to this).

While the number of prisoners held increased steadily throughout the 1980s through new construction and double-celling, the cost of holding each prisoner simultaneously increased. Thus, the percentage increase in Department-of-Corrections expenditures exceeded 10 percent each year between 1983 and 1986 and by over five percent in 1987. These large increases produced a 105.4 percent increase in the state expenditures for corrections from its 1982 level of \$268.9 million to its 1988 level of \$552.2 million (Council of State Governments, various years). Nonetheless, prison construction and increased expenditures were not sufficient to bring capacity up to the level of actual use. Double-celling continued and more meritorious gain time was granted. In fact, meritorious gain time increased steadily after 1984. In 1986, for example, the average number of meritorious-gain-time days was thirty-six, but by 1988 it had reached seventy (Illinois Department of Correction, 1989a, 28). Illinois prisons were 28 percent over design capacity in 1988, and 47 percent over by the end of 1991. As a result, double- and multi-celling of prisoners increased. Thus, the very substantial prison construction program clearly did not eliminate crowding or early release, although relative to some states, such as Florida, North Carolina and Oklahoma, Illinois' early release program was quite modest.

Prison crowding and early release requirements reflect both demand and supply considerations. Illinois prisons are less crowded than Florida's, in part because Illinois increased the supply of prisons relatively fast compared to increases in demand, and it appears that this is at least partially due to the fact that Illinois' participation in the war on drugs was more limited than Florida's. A 96 percent increase in drug admissions to prison over a five-year period is not trivial, but compared to Florida's 875 percent it is relatively modest. However, the difference between these states may actually reflect the fact that state

prison crowding was alleviated in another way in Illinois as well. A state law was passed in 1983 mandating that all misdemeanants serve their sentences locally rather than in state prisons. This simply shifted part of the demand for prison space from the state level to the local level. Thus, the average daily jail population for the state rose from 6,848 in FY 1982 to 9,121 in FY 1987.

Local jails hold both pretrial detainees and sentenced prisoners, as noted above, and one impact in Illinois of the actions taken at the state level was an increase in the portion of the local jail population that was serving sentences. Consider three different types of local jails in Illinois: (1) jails with capacities of fewer than 100 persons; (2) all jails that have capacities exceeding 100 prisoners except for the Cook County jail (in Chicago); and (3) the Cook County jail. Among jails in group (1), sentenced offenders accounted for 26 percent of jail days in 1981, but this rose to 33 percent by 1987, in large part because the state had shifted the burden of holding misdemeanants to the local level. Similar figures for group (2) are 18 percent and 23 percent, respectively. Furthermore, total jail population for all jails other than Cook County (i.e., groups 1 and 2) increased steadily over this period, so these percentages involve substantial increases in actual numbers of inmates serving sentences in local jails.

Cook County's response to the increased demand for local jail space was somewhat different. As a consequence of previously growth in the number of prisoners (the jail's inmate population had increased by over 32 percent between 1981 and 1983), in 1983 the U.S. district court ordered the county to alleviate crowded conditions, threatening a fine of \$1,000 per day for each day the inmate population exceeded the number of beds. To avoid the threatened fines, county officials responded by releasing 80-100 accused felons on their own recognizance on certain days and by expanding capacity (500 beds were added in 1985, for example). In 1988, jail authorities began releasing defendants with required bonds of up to \$50,000 on their own recognizance (i.e., without paying even part of the bond). They also experimented with electronic monitoring and home confinement, and the jail's Periodic Imprisonment Unit was moved into a community setting. Even so, the county was fined approximately \$55,000 in early 1989 for persistent crowding. Thus, apparent mitigation of prison crowding in Illinois was deceiving because at least part of the crowding problem was simply shifted to another component of the criminal justice system.

Much of the increased pressure on the Illinois prison system that occurred as the state built more prisons traces directly to the war on drugs, not to increases in core crimes. Between 1985 and 1988 the average sentence for drug offenders increased by 16.7 percent as the number of drug offenders admitted increased by 96.2 percent. The combined effect of these increases in drug sentences and admissions increased the portion of the prison population with drug offenses as their primary conviction from 4.5 percent to 8.2 percent in just four years. These changes reflect both an increase in the level of prison resources through new construction and a reallocation of such resources. However, non-drug prison

admissions rose by a modest 1.9 percent between 1984 and 1988, while drug admissions rose by over 96 percent. Thus, drug admissions were clearly the primary source of growing demand for prison space. Indeed, the war on drugs exacerbated the Department of Corrections planning efforts. The department's *Annual Report* (1989b, 15) noted that “unprecedented increases in court admissions to the department have resulted in prison population levels far exceeding projected levels. By the end of June 1989, the actual population was 855 above the projected population. The primary reason for this growth has been the increased admissions for drug offenders.” The fact that drug admissions as a percentage of total admissions more than doubled over the 1984-1988 period meant that crowding exceeded expectations. Consequently, as noted above, more meritorious gain time was granted each year.

5.3. Is Everyone a Criminal or an Ex-convict? The criminalization and accompanying increase in criminal convictions produces another result: ex-convicts. Given the stigma associated with conviction, ex-convicts often have great difficulty finding legitimate employment. Indeed, recidivism is common in part because legal opportunities are limited (Kim, et al. 1993). Their labor resources are often under-employed, particularly for those people who have been convicted of ‘white collar’ regulatory crimes, if they are employed at all. This reduces the potential productivity of the economy as a whole. How significant might this be? To consider this question, data on ex-convicts from 1996 to 2010 were obtained from the Korean National Police Agency since it was unavailable publicly.⁸¹ Figure 5.1 shows the number of Korean ex-convicts with at least one conviction.⁸² The average growth rate in the stock of ex-convicts is about 4.2 percent, an average increase of approximately 430,000. In 2010, there were approximately 11.08 million Korean ex-convicts, 1.8 times higher than in 1996. Figure 5.1 also shows the ratios of ex-convicts to the total population. The ratio was 13 percent in 1996 but it reached 22 percent in 2010. This implies that one citizen out of five has a criminal record. The ratio rises to 26.5 percent in 2010 if its denominator is replaced by the population over age 15, indicating that around one out of four of the potential group who can be convicted has been.⁸³ A very rough estimation predicts that the ratio to total population will reach 32% in 2020.⁸⁴

81. The Agency informed us that data before 1996 is unavailable because it was discarded.

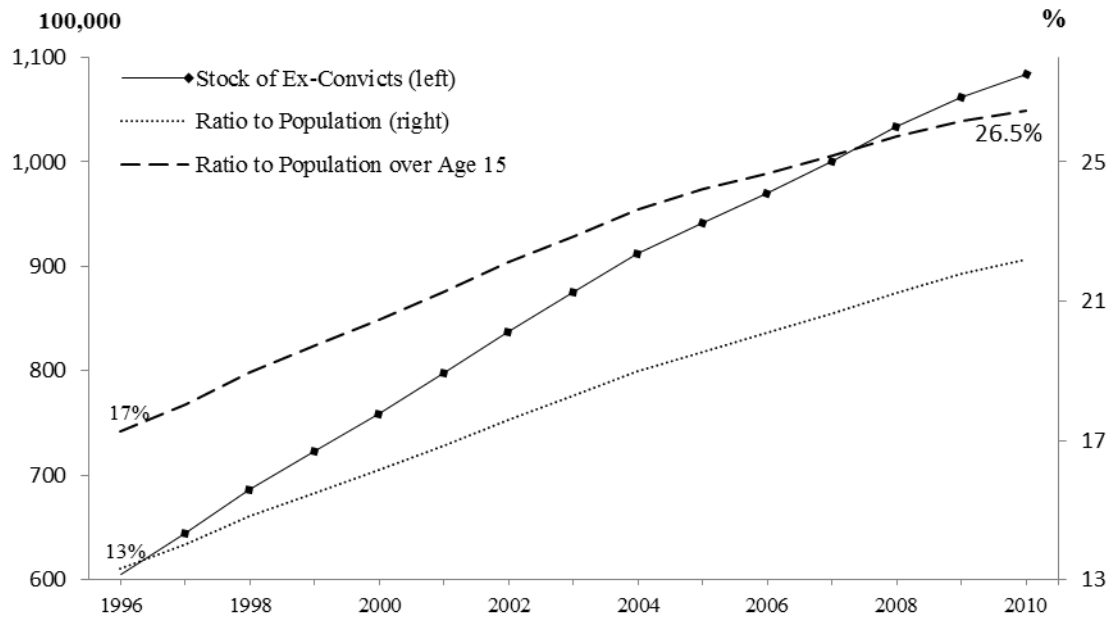
82. According to the Korean National Police Agency and the Department of Justice, these numbers include in principle ex-convicts with all kinds of criminal punishment. However, the database actually excludes ex-convicts with relatively light punishments such as penal detention (up to 30 days) and minor fine (below \$50). As confirmed in the literature and also by several judges, these light cases rarely proceed to prosecutors’ office, as they are mostly finalized by the ‘summary system’ (this is not the trial or summary prosecutions discussed above) and statistics provided here do not include cases resolved in this system.

83. In Korea, 14 is the legal age at which individuals can be being convicted as criminals. However, the population over the age of 15 is used in the database at the Korea Institute of Criminology (<http://crimestats.or.kr>). The database also only determines the size of this age group only every 5 years.

84. This estimation is simply a projection of the averages of the annual growth rates of population and ex-convicts over the 15 years (approximately 0.5 percent and 4.2 percent, respectively).

To put the Korean situation in context, statistics from the ‘United Nations Office on Drugs and Crime (UNODC; www.unodc.org)’ are used. UNODC reports the “UN Surveys on Crime Trends and the Operations of Criminal Justice Systems (UN-CTS).” Data from the latest, 12th, UN-CTS were employed. Due to the differences in perceptions about crime problems and the calculation of various indices across countries, it was necessary to identify the exact cohort that each index refers to step by step. In order to avoid potential heterogeneity stemming from economic status, the initial sample considered consisted of 26 OECD countries.

Figure 5.1
Accumulation of Ex-Convicts and Their Ratios to Population



Sources: The Korean National Police Agency

UN-CTS reports “Person Prosecuted” which, for the most part, corresponds to the total set of the prosecuted for all offenses through both “trial prosecution” and “summary prosecution.”⁸⁵ Four countries in the initial sample did not appear to report data compatible with the other 22, however, so they were dropped.⁸⁶ The observations for the remaining 22 countries were gathered for sample period, 2003 to

85. “Persons Prosecuted” means alleged offenders prosecuted by means of an official charge, initiated by the public prosecutor or the law enforcement agency responsible for prosecution” (UN 2003, 98). Although the definition appears to include all offenses, the numbers of Korean ex-convicts presented earlier can be compared to these numbers as a check. The UN-CTS reports persons prosecuted for Korea from 2003 to 2009. These statistics are identical to those in the *Prosecution Yearbook* (2012, 614) up to 2008, and the 2009 statistic are from *Annual Crime Reports* (2009, 428). Both reports are published by the Supreme Prosecutors’ Office of Korea, and the numbers presumably include Persons Prosecuted for all offenses. See footnote 91 for additional discussion.

86. Persons prosecuted per thousand population for the US, for example, was at most one percent of the Korean value. In an effort to see why national data sources were examined and it was discovered that the US data covers only “Felony & Misdemeanor Class A Crimes” (www.uscourts.gov/Statistics/StatisticalTablesForTheFederalJudiciary/December2009.aspx). For similar reasons, Japan (about five percent of the Korean figures per thousand population), Mexico (about seven percent), and Chile (about nine percent) were dropped from the sample.

2008.⁸⁷ UN-CTS also reports “Person Convicted.”⁸⁸ These data are supposed to be output figures for various courts but it was not clear what is included in these statistics. In Korea, for instance, there are two kinds of prosecution, formal prosecution with a court trial and summary prosecution. Recall that courts only consider submitted documents for summary prosecutions. The *Judicial Yearbook* published by the Supreme Court of Korea reports convictions data in considerable detail, and it is clear that UN-CTS statistics for “Persons Convicted” in Korea from 2003 to 2008 includes the number of persons found guilty at district courts (i.e., the first trial), but not those who are summarily prosecuted (a substantial portion of convictions, as explained above). Since the Korean numbers do not include those found guilty through summarily prosecuted, it is likely that “Persons Convicted” for other countries also leaves out such convictions. In order to generate a better proxy and check the proxies, a four-step process. First, “Person Brought” is provided by UN-CTS.⁸⁹ An examination of Korean data-bases indicates that Persons Brought is the number of persons prosecuted and brought to formal trials, so it also does not include summary prosecutions.⁹⁰ The relationships between Persons Prosecuted (PP), Persons Brought (PB), and Persons Convicted (PC) for Korea are depicted in Figure 5.2.

Second, in order see if Persons Brought for the other countries in the sample is consistent with Korea, court data were examined from several countries where documents in English were available. It is clear that Persons Brought is the number of persons prosecuted for all offenses in six countries (Canada, England and Wales, Germany, Scotland, New Zealand, and Northern Ireland).⁹¹ In fact, England and Wales and Northern Ireland documents explicitly state that Persons Brought includes summary proceedings (i.e., summary prosecution). Therefore, Persons Brought reported in UN-CTS is different for Korea and these countries. However, Korea’s UN-CTS statistics can be adjusted using published data on summary proceedings to make it comparable to the data from these other countries.

87. This reflects the fact that the 2009 numbers in the two reports discussed in footnote 89 (1,196,776 and 1,154,372, respectively) are slightly different. The latter report appears to use a different counting rule. Further, the 2009 statistics for persons prosecuted were omitted in four of the 22 countries.

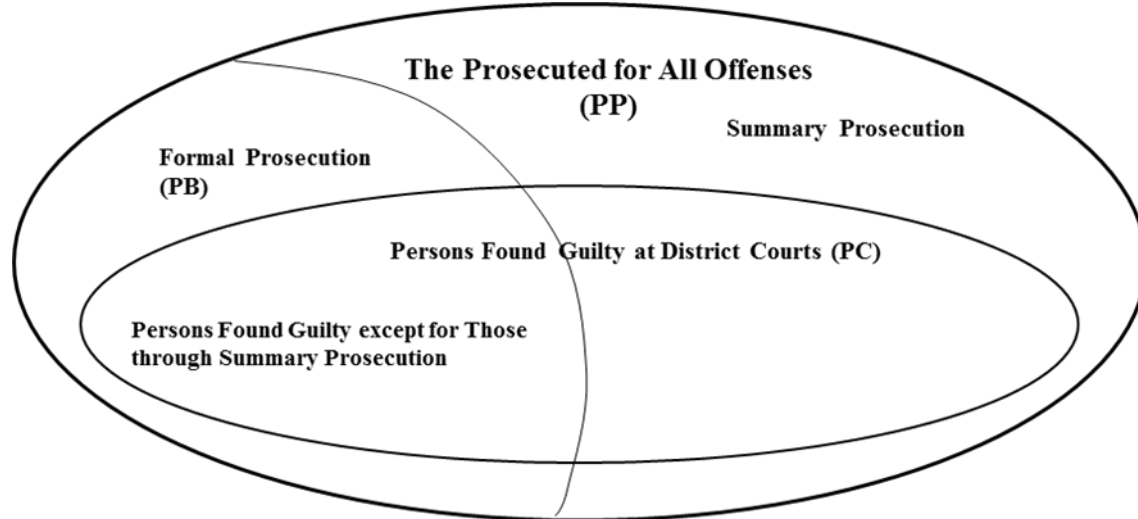
88. “‘Persons Convicted’ may be understood to mean persons found guilty by any legal body duly authorized to pronounce them convicted, whether the conviction was later upheld or not. The total number of persons convicted includes the number convicted of serious special law offences but excludes the number convicted of minor road traffic offences and other petty offences” (UN 2003, 103).

89. “‘Persons Brought before the Criminal Courts’ means persons brought before any legal body authorized to pronounce a conviction.” Persons Brought is provided in a column right next to Persons Convicted in a single file (CTS12_Persons_Convicted.xls).

90. For example, in 2008, the number of Persons Brought to formal trials in *Judicial Yearbook* was 268,572, while the total set of Persons Prosecuted in *Prosecution Yearbook* was 1,316,987. If the number of summary prosecution (1,143,013) reported in *Judicial Yearbook* is added, the total number brought to courts from prosecutors’ offices was 1,411,585 which is slightly different from Persons Prosecuted above. According to personnel in charge of the *Judicial Yearbook*, this discrepancy is always present because it takes time for cases to be received by courts. Thus, Persons Prosecuted appears to hold without a systematic error.

91. On the other hand, Scotland dropped minor offenses except Common Assault from Persons Brought. These will be taken into account later. The same numbers as Persons Brought also appear in court data from Estonia and Czech Republic although the definitions for the variables are unclear.

Figure 5.2
The Prosecuted for All Offenses and Other Statistics in UN-CTS



Third, countries were identified where UN-CTS reported Persons Brought are close to Persons Prosecuted, in order to compare the total numbers of persons found guilty among the total set of people prosecuted. An index, $k = PB/PP$ is calculated for each country to see if all the cases prosecuted are included in Persons Brought; if k equals one, this is the case. Out of 22 countries, 14 including Korea after adding summary prosecutions, have k values close to one, so these 14 countries comprise the final sample.⁹²

Fourth, Persons Prosecuted was checked one more time using non-court data. It would be ideal to use data (i.e., the total set of persons prosecuted) directly provided by the department of justice of each country,⁹³ but unfortunately, after searching for such statistics, this proved to be impossible. Data in English (or Korean) was only available in five countries [England and Wales (Ministry of Justice), Germany (Federal Ministry of Justice), New Zealand (Ministry of Justice), Northern Ireland (Department of Justice), and Scotland (Scottish Government)] allowing the number prosecuted to be identified. While some data in English was available for some of the other countries they did not report persons prosecuted, and data was not available in English for yet other countries. Persons Prosecuted for the five countries

92. 2008 statistics were used unless there were missing values that year. The index, k , was one in 8 countries and was smaller but by less than 0.1 in the others. Thus, the final sample includes Germany, Portugal, Korea, Iceland, Canada, Estonia, England and Wales, Northern Ireland, New Zealand, Israel, Scotland, Hungary, Finland, and Czech Republic.

93. While Korea has only one authority in charge of prosecution, i.e., the prosecutors' offices, there are more than one in other countries (e.g., the Grand Jury in the US). Thus, a search of the statistics reported by the departments (or ministries) of justice rather than prosecutors' offices was performed in order to obtain the total number persons prosecuted.

was confirmed to be the total prosecutions for all offenses through formal or summary prosecution.⁹⁴ Given this confirmation using data provided by the department of justice (rather than court data), it is assumed, cautiously, that Persons Prosecuted in all of the countries with k close to one, is the total of the prosecuted for all offenses.

Table 5.1 lists, in descending order, Persons Convicted per 100,000 population in 2008 for 14 countries. The sample mean is 1,648. Korea's Persons Convicted is 2,855 ranking third. Although Persons Convicted is not identical to the net increase in ex-convicts,⁹⁵ these data suggest that there is a high likelihood that Korea is producing ex-convicts at a relatively rapid rate. Several other countries also are doing so, however, suggesting that overcriminalization is probably a widespread phenomenon.

Table 5.1
Persons Found Guilty at First Trials for All Offenses (2008)

Rank in 2008	Country	Persons Convicted (per 100,000 population)
1	Finland	4,472.7
2	England&Wales	3,047.9
3	Republic of Korea	2,854.7^{a)}
4	Scotland	2,435.6 ^{a)}
5	New Zealand	2,184.7
6	Northern Ireland	1,522.6 ^{b)}
7	Germany	1,060.5
8	Canada	896.6
9	Iceland	876.4 ^{b)}
10	Estonia	862.4 ^{b)}
11	Hungary	842.7
12	Portugal	827.8
13	Czech Republic	731.2
14	Israel	462.0

Note: · Source: 12th UN-CTS of UNODC.

a) Recalculated for Korea with *Judicial Yearbook* by the Supreme Court of Korea and for Scotland with *Criminal Proceedings in Scotland* by the Scottish Government.

b) Replaced by most recent values in UN-CTS due to missing values in 2008: Northern Ireland (2005), Iceland (2004), and Estonia (2004).

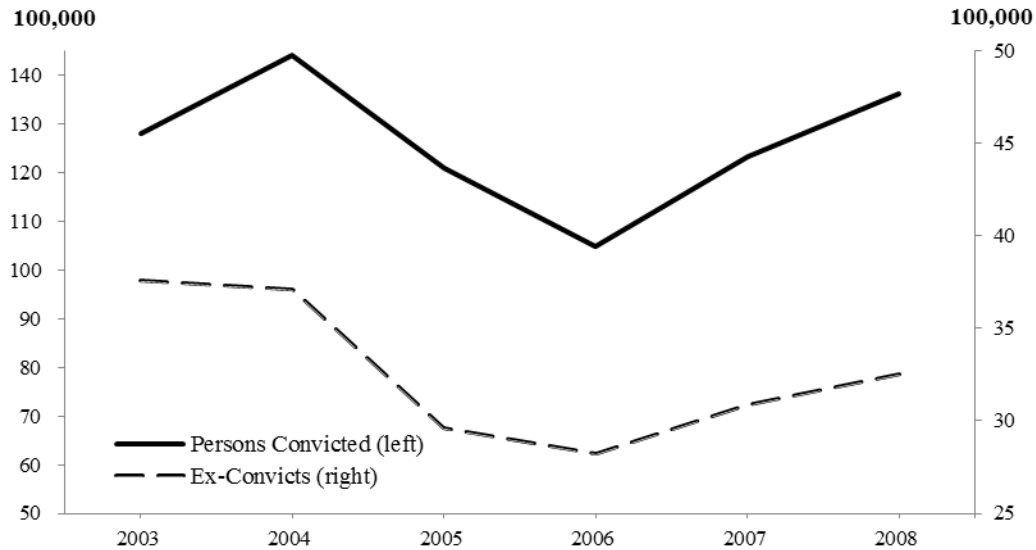
Before proceeding to a more detailed international comparison, consider the two time series, the total number of persons found guilty at district courts for all offenses (Persons Convicted) and the net increases in the total number of ex-convicts from 2003 to 2008, for Korea. Figure 5.3 shows that the

94. Although Scotland's Department of Justice's total number of prosecutions was larger than Persons Prosecuted, the reason could be identified. Scotland does not include minor offenses except Common Assault. However, separate data provides counts of these numbers so the desired variable was constructed.

95. The annual increase in ex-convicts should be smaller than Persons Convicted because some of the Persons Prosecuted are recidivists who should not be counted as a new ex-convict. Also, some people exit the ex-convicts cohort due to death or pardon.

former is about four times the latter. However, a visual inspection readily reveals that they are highly correlated. In fact, the simple correlation coefficient exceeds 0.8. In other words, Persons Convicted appears to be a good proxy for the increase in the stock of ex-convicts.

Figure 5.3
Time Trends of PC and Net Increases in Ex-Convicts for Korea



Source: PC from the 12th UN-CTS and Ex-Convicts statistics from the Korean Police Agency.

Figure 5.4 depicts Persons Convicted per 100,000 population for five countries (England and Wales, Germany, New Zealand, Scotland, and Korea) where Persons Prosecuted was clearly confirmed to be the total prosecutions for all offenses through both formal and summary prosecution.⁹⁶ In Figure 5.4, only Germany has less than 1,587 Persons Convicted per 100,000 population, the sample mean of the 14 countries in Table 5.1 for 6 years. The rest include countries ranked second to fourth in Table 5.1. Their averages, depicted in light horizontal lines, range from 2,792 (England and Wales), to 2,676 (Korea), 2,545 (Scotland), and 1,955 (New Zealand).

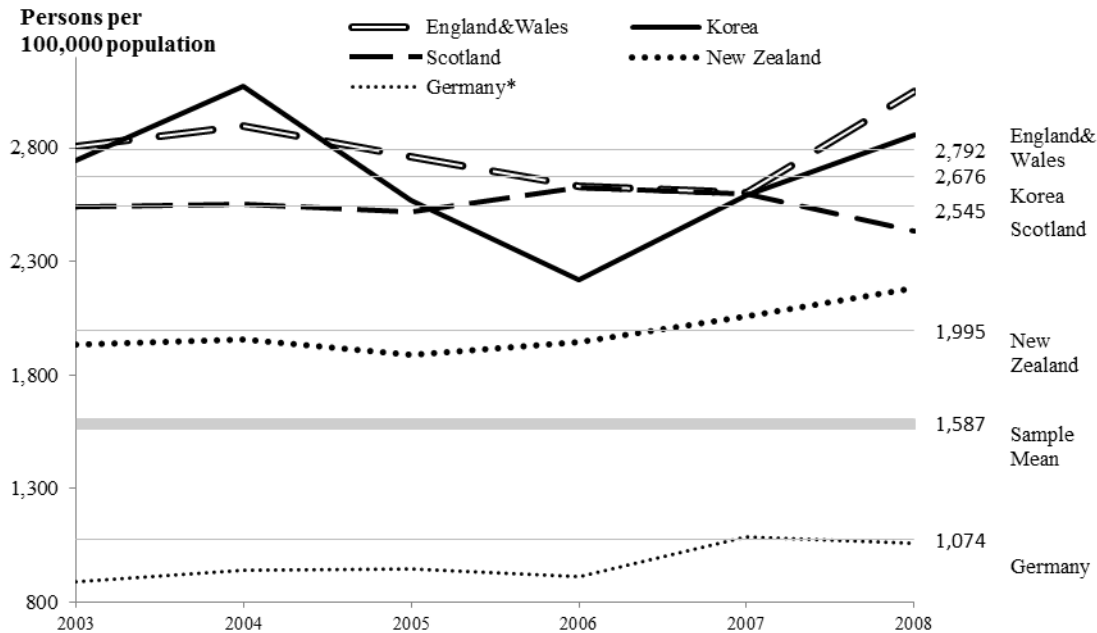
Now consider the trend in Persons Convicted per 100,000 population for six years. Korea has a relatively slow increasing-trend (with a 1.8% growth rate on average). There are fluctuations, however, as after reaching a low of 2,218, relatively rapid growth occurs in 2007 and 2008 with an average rate of 13.5%.⁹⁷ Considering the high correlation coefficient illustrated in Figure 5.3, this appears to indicate rapid growth in the stock of ex-convicts. In fact, the stock was accumulating rapidly during those years as

96. Northern Ireland was excluded from this comparison because PC of the country was available only up to 2005. For Germany, the statistics until 2006 were for former West Germany & Berlin. Thus, it would be more proper to focus on the statistics of 2007 and 2008. Finally, a few missing values were filled by the method of interpolation.

97 This growth rate of Korea for the 2 years was well above that of other countries during this period. England&Wales had a corresponding growth rate of 8% and in New Zealand PC increased at a 6% growth rate. Thus, Korea's growth rate was almost twice as those of the two countries. In contrast, Scotland had a downward trend of -3.7% and Germany also had a reduced level in 2007 at the growth rate of -2.5%.

illustrated in Figure 5.1.

Figure 5.4
Persons Found Guilty at First Trials for Five Countries (2003-2008)



Note: · Source: 12th UN-CTS of UNODC.

- Recalculated for Korea using the *Judicial Yearbook* from the Supreme Court of Korea and for Scotland using *Criminal Proceedings in Scotland* from the Scottish Government.
- For Germany, the statistics before 2006 are for former West Germany & Berlin.

Now consider the hypothesis that the increase in ex-convicts in Korea has been driven by those found guilty of regulatory crimes.⁹⁸ To do so, Persons Convicted are classified into customary and regulatory crimes. The results are summarized in Table 5.2. The ratio of conventional criminals to Persons Convicted is only 28% on average. This is a rather surprising figure because the ratio of conventional crimes to total crimes was approximately 43% during the sample period. In Korea, more than 70% of Persons-Convicted are for regulatory crimes. Thus, considering the high correlation Persons Convicted and the net increases in the total number of ex-convicts, it appears that the growth in the ex-convicts stock is largely driven by regulatory criminals.

Another related point involves the relationship between regulatory prosecutions and convictions. According to the *Prosecution Yearbook*, regulatory criminals accounted for 63 percent of total prosecutions over the six years considered here. This implies that the proportion at the prosecution stage

98. This information was available by the help from the Supreme Prosecutors' Office. This data particularly was useful as it includes the relevant information (i.e., the number of people found guilty at district courts) on those who were prosecuted summarily as well as the formally prosecuted. Of course, we verified that the total number of the prosecuted (i.e., formal plus summary prosecution) provided in this dataset was identical to the statistic officially reported in *Prosecution Yearbook* every year.

appears to be closely related with the composition of Persons Convicted and to the subsequent increase in ex-convicts. Clearly, a more rigorous statistical testing would be required in order to make a more definite statement. In any case, the high percentage was possible primarily because prosecutors prosecuted a much higher portion of accused regulatory criminals (66 percent) than for customary criminals (31 percent).⁹⁹ Thus, it seems that the choice at the prosecution stage is a very important determinant of the composition of ex-convicts.

Table 5.2
The Ratio of Customary Criminals to the Total Persons Convicted at District Courts

(persons)

	2003	2004	2005	2006	2007	2008
PC in Total: A	1,290,679	1,339,670	1,160,715	1,074,375	1,179,907	1,307,542
PC (Customary Criminals): B	364,292	364,461	332,770	332,446	340,915	335,884
B/A (%)	28	27	29	31	29	26

· Source: The Supreme Prosecutors' Office of Korea

Consider the information supplied in this subsection: 1) there was rapid growth in ex-convicts in Korea from 1996 to 2010, 2) the growth of the ex-convicts stock was relatively fast compared to many other countries during the 6 years (2003-2008), and 3) the growth in Korea's ex-convicts is driven primarily by regulatory criminals over the same period. This result can be interpreted as an outcome of overcriminalizing regulatory violations in Korea. After all, the choice regarding which case to prosecute largely determines the composition of newly added ex-convicts. A growing population of ex-convicts appears to be yet another unintended consequence of overcriminalization and the accompanying disproportionate prosecutorial focus on regulatory crimes reported above.

6. Conclusion

In a speech to American Bar Association's Annual Convention on August 12, 2013, US Attorney General Eric Holder announced federal initiatives to reduce the application of minimum mandatory sentences, particularly for non-violent offenders (primarily low level drug law offenders), expand the application of "compassionate release" for prisoners under various circumstances (and for elderly inmates), and to encourage more diversion programs (Holder 2013; also see Department of Justice 2013). He also reported that 17 states "have directed funding away from prison construction and toward

99. For simplicity, suppose that the same numbers of customary and regulatory criminals are brought to the prosecutors' offices. Given the prosecution probabilities cited above, regulatory criminals would account for 68 percent of total prosecutions. The actual percentage of 63 percent reflects the fact that the number of customary criminals brought was slightly greater than regulatory crimes.

evidence-based programs and services, like treatment and supervision, that are designed to reduce recidivism.”¹⁰⁰ Perhaps as a result of these state-level developments, the number of inmates in federal and state prisons has actually fallen for three years now, from a 2009 peak of 1,615,487 to 1,571,013 in 2012 (Carson and Glinelli 2013) (note that the number cited by The Sentencing Project at the beginning of this section includes local jail inmates as well as prison inmates, and recall that one method of reducing prison crowding is to increase jail crowding). This reduction allegedly provides “persuasive evidence of what some experts say is a “sea change” in America’s approach to criminal punishment” (Goode 2013), but a 2.75 percent reduction after a 500 percent increase is far from a sea change. All of these actions should be applauded and encouraged, but they do not go far enough. A true sea change requires a dramatic reduction in the criminalization trend, and indeed, a reversal of that trend to one of decriminalization (Benson 1998, 2012, 2014). Given the institutionalized incentives of the legislative and criminal justice processes, there is no apparent reason to be optimistic about such a reversal. As Stuntz (2001, 510-511) notes,

Surface politics, the sphere in which public opinion and partisan argument operate, ebb and flow... Usually these conventional political forces push toward broader liability [more criminalization], but not always, and not always to the same degree. A deeper politics, a politics of institutional competition and cooperation, always pushes toward broader liability rules [more criminalization], and toward harsher sentences as well.

But the deeper politics of criminal law - the set of institutional arrangements that are steadily making criminal law both larger and less relevant - shows no signs of changing. The solution, if there is one, lies not in arguing about the merits of different rules, but in changing the way those rules are defined and enforced. Until such changes happen, we are likely to come ever closer to a world in which the law on the books makes everyone a felon, and in which prosecutors and the police both define the law on the street and decide who has violated it.

100. And importantly, two states have legalized marijuana consumption with other states considering similar action.

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