

Economic Analysis of Plea-bargaining and prosecution

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Contents

1. Introduction	2
2. Legal background	2
Public or private prosecution	2
Charging discretion – in general	3
Plea-bargaining – in general	4
Other discretionary powers	6
Historical background of plea-bargaining	7
3. Economic analysis of charging and plea-bargaining	8
Plea-bargaining and resource constraints	8
Plea-bargaining and settlements in private law litigations	10
4. Plea bargaining and wrongful convictions	12
The innocence problem	12
Plea-bargaining as a screening mechanism	14
5. Bounded rationality and agency costs	17
Prosecutors' agency costs	17
Defendants and their lawyers	20
6. Prosecutorial discretion's effects on criminal justice systems	23
7. Judicial participation in plea-bargaining	26
8. Plea-bargaining and prosecutorial discretion in civil law countries	28
Bibliography	30

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OREN GAZAL-AYAL AND LIMOR RIZA

1. Introduction

In a speech delivered to American prosecutors in 1940, the US Attorney General and later Supreme Court Justice Robert H. Jackson said: "The prosecutor has more control over life, liberty, and reputation than any other person in America. His discretion is tremendous." (Jackson 1940, p.3). Since then, prosecutorial power in the US and around the world has been increasing steadily. Moreover, in the passing decades, plea bargaining has become the prevailing method of case disposal in the United States and in an increasing number of other countries around the globe.

While this increase in prosecutorial power has usually been criticized by legal scholars, it has generally been viewed favorably in the law and economics scholarship. Prosecutors have the power to charge people and they can use that power, refrain from doing so, or use it as a bargaining chip, in order to promote the goals of the criminal justice system.¹ This paper reviews the law and economics of prosecutorial discretion and of plea bargaining.

2. Legal background

Public or private prosecution

Historically, common law prosecution of criminal cases was left to private entities – mainly the victims of the offence (Cockburn, 1977, p. 15; Beattie 1986, p. 35; Friedman, 1979, 1984). During the 19th century, dissatisfaction with the old system led to the creation of the public prosecution system which currently dominates the criminal justice system. There

¹ The economic literature on crime views deterrence as the main goal of criminal law (see, for example. Becker 1968), giving less weight to the other goals of criminal law, such as retribution, incapacitation and rehabilitation.

[2007] *PLEA-BARGAINING AND PROSECUTION*

are sound economic reasons for the failure of a system that relies on private criminal prosecution. Criminal prosecution is a public good. If private prosecutors do not receive compensation, at least when the prosecution is successful, only a few will be willing to bear the costs of such an action. If compensation is granted to such private entities, wasteful competition between competing prosecutors is likely to emerge. In addition, apprehending violators and gathering information often require the use of force, and invasion of privacy; allowing private citizens to make use of forceful measures is likely to result in abuse of power (Polinsky and Shavell, 2000).

Friedman (1995) argues that the old common law system was functional because in some cases private prosecutors benefited from prosecuting. In some cases, victims had sufficient self-interest in prosecuting violators in order to prevent future offences against them (Friedman, 1995). In other cases, defendants settled the case by paying the prosecutor, and in return, the charges were dropped or not filed at all, even though such compounding of the offence was not always legal (Friedman, 1995, pp. 486-487). While such incentives could induce some private enforcement, they are hardly effective when most defendants are indigent and where many crimes are victimless. Since all modern criminal justice systems rely on public prosecutions, the following discussion concentrates only on public prosecution.

Charging discretion – in general

Charging discretion refers to the prosecutor's power to decide whether to prosecute a person and which charges to file. In common law countries, prosecutors have the power to refrain from prosecuting when they lack sufficient evidence or when they believe that other reasons, often termed "public interests", justify such refrainment. This "opportunity principle" is in contrast to the "legality principle" which is employed in many civil law countries, requiring prosecution when sufficient evidence of guilt exists. Where charging discretion exists, prosecutors often use the power to match the caseload to their limited

OREN GAZAL-AYAL AND LIMOR RIZA

resources. This last factor plays a major role in the economic analysis of prosecution, as discussed below.

While prosecutorial discretion in non-adversarial systems is still limited, these civil law countries have increasingly conferred discretionary charging powers on prosecutors. It seems that by now, in most of the Western jurisdictions, prosecutors have much discretion in deciding whether to file charges for minor offences. The difference between the approaches of the two types of systems – the adversarial and the inquisitorial systems – is more substantial in their attitudes to discretion for more serious offences. In the United States, prosecutors' filing powers are usually subject to grand jury review or judicial approval in preliminary hearing, while the decision not to prosecute is fully in the prosecutors' hands. Most Continental European countries adopt the opposite rule, granting the decision to prosecute to the prosecutors while limiting only the decision to refrain from prosecution. In most common law jurisdictions outside the United States, prosecutors' charging decisions, as well as their decisions not to file charges are usually not subject to review even in the most severe cases.²

It should be noted though that discretion sometimes exists even where it is officially banned. In Italy, for example, prosecution is always compulsory; however, prosecutors can set their priorities and defer the prosecution of some cases to allow handling of other cases. This can often amount to de-facto dismissals (Grande, 2002, pp. 195-196).

Plea-bargaining – in general

After charging a person, the prosecutor can decide whether to proceed to trial or to offer the

² In Canada, prosecutorial discretion is generally unrestricted (Saunders and McMunagle, 2002, p. 202; Piccinato, 2004, p. 10). It is only subject to a limited review based on the Canadian Charter Rights and Freedoms (Stuart, 1995; Gorman, 2000; Piccinato, 2004, pp. 9-10). Similarly, in Australia, the power to decide whether to prosecute or not and which charges to pursue, is bestowed almost fully in the hands of prosecutors (*Prosecution Policy of the Commonwealth* (Commonwealth Director of Public Prosecutions,

[2007] *PLEA-BARGAINING AND PROSECUTION*

defendant a plea-bargain. A plea-bargain is a settlement of a criminal case. It commonly includes the defendant's agreement to plead guilty to some or all of the charges in return for leniency. This leniency usually takes the form of less severe or fewer charges (charge-bargains) or some concession regarding the punishment (sentence-bargains). Although judges have an increasing role in plea-bargaining in many systems, plea-bargains are mostly treated as agreements between defendants and prosecutors. In such a format, sentence-bargaining is somewhat uncertain. In most systems, the parties cannot determine the sentence for the court, and hence sentence-bargaining results only in recommendations that the court might reject. Still courts tend to follow these recommendations.³ Unlike sentence-bargaining, courts have very limited power to review charge-bargaining in common law jurisdictions. With charge bargaining, prosecutors can easily assure that the agreed sentence is reasonable by "making the crime fit the penalty" (Bjerk, 2005). To gain from both worlds, many plea-bargains involve both sentence-bargaining and charge-bargaining, and thus reduce the risk that courts will reject the sentence recommendations.

Plea-bargaining has become ubiquitous. About ninety-five percent of convictions in the United States follow guilty pleas, most of which are a direct result of plea-bargaining (Bureau of Justice Statistics, 2005, Table 4.2). In England and Wales, trials in Magistrates' Courts occur only in 8% of the cases while guilty pleas and convictions in the absence of

Prosecution Policy of the Commonwealth (2004), available at www.cdpp.gov.au/Prosecutions/Policy/Default.aspx.)

³ In some countries, such as England and Wales, prosecutors do not present sentence recommendation to the court. Therefore, in England and Wales sentence-bargains are made only between the judge and the defendant, and prosecutors retain only the power to charge-bargain (Sanders and Young, 2007, ch. 8.2-8.4). In Germany, plea-bargaining takes place in court, with the active participation of the judge, prosecutor and defense attorney (Langer, 2004, pp. 39-46; Turner, 2006, pp. 217-222). In other jurisdictions, like Italy and France, the prosecutors are in charge of the sentence offer, while the judges can only accept or reject the deal as a whole. When judges reject the agreed sentence they must allow the defendant the option to elect a trial (Langer, 2004, pp. 46-53, 58-62). In the United States, most jurisdictions allow the parties to present a sentence recommendation but some also allow them to condition the guilty plea on the acceptance of the agreed sentence.

OREN GAZAL-AYAL AND LIMOR RIZA

defendants account for the rest.⁴ In the Crown Courts, 61.5% of the cases result in guilty pleas while only 14.3% result in conviction by jury (Sanders and Young, 2007).⁵ In other common law countries the picture is similar.⁶

Strictly speaking, plea-bargaining does not exist in non-adversarial systems. These systems do not have the pleading stage, which allows defendants, through a guilty plea, to save the prosecutors from bringing the evidence required for conviction at trial. Yet in the last few decades, several countries in Continental Europe have developed procedures which bear similarities to plea-bargaining. First, in minor offences prosecutors often have the power to offer suspects monetary or other non-incarceration sanctions and if the offer is accepted, a trial is avoided (Van den Wyngaert, 1993).⁷ Second, in several countries including Italy and France, prosecutors can offer defendants a settled sentence which can even include short terms of incarceration, subject to the court's approval. Third, in Germany, judges have become involved in inducing an admission of guilt, which suffices, de-facto, to assure a quick conviction, in return for a sentence discount (Albrecht, 2001, p. 18; Langer, 2004, p. 39; Turner, 2006, p. 214). These new developments have not attracted much attention in the economic literature; hence, this paper focuses mainly on the plea-bargaining in the common law countries.

Other discretionary powers

Prosecutors' discretion is not limited to charging and bargaining. Prosecutors (and, in some

⁴ 74 % of the cases result in guilty plea and 17.5% proved in the defendant's absence.

⁵ The remaining 22.5% result in an acquittal.

⁶ In Australia 97% of the convictions in summary federal offences resulted from guilty pleas in 2003-2004. In indictable federal offences the rate was 86% (Australian Law Reform Commission, 2005, §2.26). The rate of guilty pleas in Israel ranges from about 80% in district courts to 90% in the magistrates' courts.

⁷ Procedures called penal order (Strafbefehl, Ordonnace pénale), conditional dismissals, transaction or compound fine (see also Albrecht, 2001, p. 13, The European Sourcebook of Crime and Criminal Justice Statistics (Aebi ed.), 2006, p. 90). In some countries, like Germany, courts must approve the offer first; in others, like the Netherlands and Denmark, courts approval is not required.

[2007] *PLEA-BARGAINING AND PROSECUTION*

jurisdictions, the police)⁸ have discretion in many other phases of the process including the gathering of evidence, the selection of charges, selection of the instance before which the case is brought and more (Jackson, 2004, pp. 112, 114). Yet charging and bargaining decisions are the most troubling and controversial instances of prosecutorial discretion and thus most economic literature has concentrated on these two junctions.

Historical background of plea-bargaining

Plea-bargaining evolved only in the nineteenth century (Langbein, 1979, p. 261; Fisher, 2003). Until then trials were rapid and inexpensive; thus, plea-bargaining was unnecessary. With the appearance of lawyers in courts, the criminal procedure became much more complex, and courts and prosecutors started looking for ways to encourage guilty pleas (Alschuler 1979; Fisher 2003). As the adversary system and evidence law continued to develop, and, hence, jury trials became too convoluted, the need to turn to non-trial alternatives, such as plea-bargaining, increased.

Langbein (1978) identifies similarities between the development of medieval European law of torture and plea-bargaining. Both, he claims, were developed to overcome the excessive trial's safeguards against false accusations placed at trial. In the Middle Ages, a conviction required either two witnesses or a voluntary confession. Since these rules hampered the system's ability to convict many clearly guilty people, the law allowed a bypass. When the indications against defendants were sufficiently convincing, torture replaced the voluntary confessions. The current plea-bargaining process is a somewhat refined version of the torture system since it coerces and induces defendants to plead guilty in order to overcome the highly regulated, complex and expensive criminal trial. Moreover, plea-bargaining, like torture, is highly coercive and thus risky for innocent defendants.

⁸ For example, in some jurisdictions in Canada the power to initiate a criminal prosecution is granted to the police (Mackenzie, 1999). The police also have discretion as to whether to arrest a person, how to investigate a case, and often, whether to forward the case to the prosecution.

OREN GAZAL-AYAL AND LIMOR RIZA

Langbein (1978) concludes that a simplified trial process is required to assure societies' ability to supply a trial for every defendant. Schulhofer (1984) suggests a simplified bench trial as an alternative to the reliance on plea-bargaining and shows that such a system has been proven workable in Philadelphia. Yet others argue that reducing the cost of trial must result in less accurate trials, and thus raise the rate of wrongful convictions, to the detriment of innocent defendants (Scott and Stuntz, 1992a, p. 1932). When trials are less accurate, prosecutors' incentives to assure that only guilty defendants are prosecuted will also be weakened. Thus, a costly and accurate trial with the option to settle in its shadow protects innocent defendants better than a cheaper and less accurate trial (Scott and Stuntz, 1992a, p. 1950).

3. Economic analysis of charging and plea-bargaining

Plea-bargaining and resource constraints

It is often argued that plea-bargains result in excessive leniency for defendants. After all, the criminal law sets the standards that society has chosen for punishing an offender, and the trial is designed to implement these standards in each case, and to assure that offenders receive the optimal sanction. Since prosecutors have to offer defendants something in return for the guilty plea, "plea-bargaining results in leniency that reduces the deterrent impact of the law" (US National Advisory Commission, 1973, p. 44).

Landes (1971) set the basic framework for the economic analysis of plea-bargaining which has refuted this argument. He shows how plea-bargaining can help prosecutors maximize the number of convictions weighted by their respective sentences. By settling cases, the prosecutor avoids the risk of acquittal and saves trial resources which can be used in other cases. Hence, prosecutors are willing to settle for a lower sentence when the probability of conviction, post-trial sentence and settlement costs are lower and when the

[2007] *PLEA-BARGAINING AND PROSECUTION*

trial costs are higher. Defendants' willingness to accept offers similarly depends on their estimation of the probability of conviction, the post-trial sentence, the trial costs, settlement costs and their attitude to risk. In the end, since trials are more costly than plea-bargains for both parties, a mutually beneficial settlement can usually be reached. A trial can take place only if the defendant's evaluation of the probability of acquittal at trial is higher than the prosecutor's, or the defendant is a risk lover. Landes (1971) also examines his model empirically showing, inter alia, that the difference between trial cost and settlement cost is positively correlated to the parties' tendencies to go to trial. Landes's model was developed and empirically tested in other studies such as those of Rhodes (1976), Weimer (1978) and Forst and Brosi (1977) For example, Weimer's (1978) study of Alameda County data shows that the plea-bargain offer increases with the increase in the probability of conviction and severity of the anticipated post trial sentence and that defendants demand for trials decreases when the plea discount increases.

Easterbrook (1983) relying on the line of literature which followed Landes (1971), presents one of the most comprehensive justifications for prosecutorial discretion. He argues that criminal procedure works like a market system. Prosecutors try to maximize deterrence (or the other goals of criminal enforcement) but they are subject to limited resources. They cannot prosecute all possible cases and proceed with each case to a full trial. Absolute prosecutorial discretion allows them to select cases based on the marginal return in deterrence, and settle cases with a similar aim in mind. "This selection method is presumptively efficient for the same reasons a competitive market is likely to be efficient" (Easterbrook 1983, p. 299). Prosecutors can react to changes in the demand for trials, in the supply of trial services, in the need to deter certain crimes or offenders and in other factors, and accordingly change the allocation of resources between the different offences. Similarly, they can adapt their willingness to settle to the relative costs of trial and settlements. Regulation can never be so adaptive and hence will result in much less efficient allocation of resources. Thus, regulation or review of prosecutorial discretion by

OREN GAZAL-AYAL AND LIMOR RIZA

either judges or grand juries is inefficient. Only absolute discretion can assure that prosecutors' choice of cases and plea-bargaining decisions will optimize the use of resources and maximize deterrence along with other goals of the criminal justice system.

Easterbrook (1983) convincingly argues that if prosecutors want to use discretion to the benefit of all, they can do so. However, prosecutors are not perfect agents of the public interest. While Easterbrook addresses this reservation, he also trivializes it by arguing that any attempt to supervise prosecutors would result in a similar agency problem of the supervising agent, be it a judge, a jury or someone else. This is where Schulhofer (1988) challenges him, arguing that prosecutors are motivated by a favorable public perception, by the desire to avoid risk of embarrassing trial loss, by their relationship with successful private practitioners and more. Though these factors might sometimes be correlated with the public interest, often they are not. These agency costs can only be solved by a regulatory system that does not rely too heavily on discretion and the free market powers (these agency costs are discussed elaborately below). Such regulation should include judicial review of the decision to prosecute and internal prosecutorial review of the decision not to charge.

In sum, the exchange between Easterbrook (1983) and Schulhofer (1988) reflects the two main positions in the plea-bargaining debate. On the one hand, discretion allows prosecutors to allocate resources better and thus helps them promote the criminal justice goals. On the other hand, if prosecutors' interests are not aligned with the public interest, such discretion could be counter-productive. Much of the economic literature of prosecutorial discretion and plea-bargaining has therefore concentrated on tools to control potential deviations of prosecutors from the public interest, as elaborated below.

Plea-bargaining and settlements in private law litigations

At first glance, plea-bargaining seems to share many similarities with settlements in private law. In both cases, the parties evaluate the expected result of the judicial process

[2007] *PLEA-BARGAINING AND PROSECUTION*

(probability of a successful prosecution/civil action and the expected court order if the action is successful) and the costs of the proceedings themselves. Each party then calculates the odds and costs and sets its willingness to pay or accept accordingly in the shadow of the trial. Usually, the trial costs and risk averseness lead the parties to settle, unless over optimism prevents such meeting of the minds. The result is thus beneficial for both parties and, absent externalities, is socially desired.

Yet plea-bargains differ substantially from other legal settlements in many important respects. First, the criminal prosecutors do not attempt to maximize expected profits from trial. Since trials do not result in monetary profit, there is no commensurability between severity of sentence and costs of the proceedings. If prosecutors try to maximize the sentences (an issue discussed below) they must do so subject to a fixed budget constraint, while parties to civil litigation usually try to maximize the payoffs of the process, taking into account both the costs and trial result. Secondly, prosecutors, as agents of society, do not necessarily have an interest in maximizing the sentence in each case since excessive sentences are costly to the public they represent. Thus, while plaintiffs in civil disputes usually try to maximize the court's award, prosecutors are often interested in less than the harshest sentence they can get. Thirdly, prosecutors are unique players since their decisions in one case are likely to affect many other cases. For example, after a failed plea-bargaining, prosecutors might invest more than otherwise justified in a trial, in order to deter future defendants in similar cases from going to trial; such considerations are only rarely relevant for parties in civil law dispute. Fourthly, while attorneys for plaintiffs are closely reviewed by their clients and the market for legal services, the public can hardly review each prosecuted case, and there is virtually no market for disciplining prosecutors. Hence, agency problems in criminal proceedings have distinctive characteristics.

Like prosecutors, defendants in criminal cases also differ from their civil case counterparts. For one, their direct trial costs are usually of limited importance. For sufficiently wealthy defendants, trial costs are usually a negligible factor in the face of

OREN GAZAL-AYAL AND LIMOR RIZA

potential incarceration. For indigent defendants, legal representation costs are usually born by the state. At the same time, the criminal process has very different but no less substantial costs for such defendants. Pretrial detention, bail, the tension and stigma of being charged are all highly costly to the defendant and thus their willingness to settle is influenced more by these factors than by the direct cost of legal services and trial. The reliance on publicly funded lawyers also results in a unique agency problem in criminal cases. The limits on the parties' ability to settle, especially due to judicial supervision of plea-bargains, are also unique to this type of settlements. All in all, plea-bargaining is distinct from civil law settlements in many respects, and thus requires separate treatment (Bibas, 2004).

4. Plea bargaining and wrongful convictions

The innocence problem

While the public's objections to plea-bargaining concentrate on the perceived lenient outcome (Cohen and Doob, 1989-1990; Herzog 2003), most legal scholars are more concerned with the innocence problem; that is, the risk that innocent defendants accept plea-bargain offers.

Those legal scholars who fear that innocent individuals may plead guilty often raise two arguments. First, it is argued that innocent defendants might plead guilty for fear of harsher consequences of a wrongful conviction at trial. Second, it is argued, that innocent defendants might agree to plead guilty even when it is not in their interest. This section concentrates on the first of these two concerns, leaving the issue of irrational decisions for later.

Alschuler (1968) shows how a rational innocent defendant might plead guilty. He refers to a certain rape defendant who accepted a charge-bargain for a simple battery, to avoid the risk of trial, even though the chances of conviction at trial were very low. This

[2007] *PLEA-BARGAINING AND PROSECUTION*

defendant preferred a certain conviction, which was likely to result in a probation sentence, to even a small risk of rape conviction that could be followed by years of imprisonment. This could surely be a rational choice, even for an innocent defendant. Still, it means that plea-bargaining could lead an innocent defendant to plead guilty.

Yet as Church (1979) demonstrates, plea-bargaining was not the source of grievance for this assumingly innocent defendant. The defendant agreed to plead guilty because he feared that he would inaccurately be convicted at trial, and decided that the plea-bargain could mitigate this risk. If plea-bargaining was banned, he would have had to face the risk of a much graver sentence after trial. More generally, innocent defendants might sometimes prefer plea bargaining to a trial, and thus plead guilty; however, as grave as that choice might be, banning plea bargaining in order to force these defendants to take the risky trial cannot protect them (Scott and Stuntz, 1992b). For the innocent, the problem is not the plea-bargain offer, but the imperfect trial which drives him to accept the offer.

Similarly, it has often been shown that the trial process itself is more costly to defendants than the post-trial punishment (Feeley, 1979). Especially in minor offences, defendants suffer more from the anxiety of awaiting adjudication; the cost of the bail bond and the loss of time than from the sentence itself after conviction. This is especially true for defendants in pretrial detention. Empirical studies confirm that detention increases defendants' willingness to plead guilty (Landes, 1974; Kellough and Wortley, 2002, p. 196; CJA, 2005, p. 7; CJA, 2007, p. 7)). Thus, in many cases, defendants can be better off accepting a plea-bargain even if they know that a trial will result in an acquittal. When the process is the punishment, as Feeley (1979) describes it, innocent defendants should be encouraged to bypass this process, and plea-bargaining can help them do so (Bowers, 2008).

This position has been heavily criticized by opponents of the plea-bargaining system. Alschuler (1981, p. 699) and Schulhofer (1992, p. 1986) argue that plea-bargaining with innocent defendants creates an externality that is disregarded by advocates of plea-

OREN GAZAL-AYAL AND LIMOR RIZA

bargaining. The moral force of the criminal conviction is undermined if innocent defendants can be regularly convicted, while inconveniencing an innocent person by requiring him to stand trial is not equally damaging to society. Alschuler (1981) also argues that society is better off with few wrongful trial convictions than with many wrongful plea-bargaining convictions, even if the latter result in much lower sentences and are thus preferred by the innocent defendants. In the end, the dispute is normative in nature. As long as wrongful convictions carry no special moral cost (except for the direct cost to the innocent defendant) a plea-bargain, like any other contract, is a transaction that benefits both prosecutors and wrongly charged defendants. But if wrongful convictions are morally costly per se, restrictions on plea-bargaining might be justified.

Plea-bargaining as a screening mechanism

Grossman and Katz (1983) added to Landes (1971) analysis by showing how plea-bargains can be beneficial to both prosecutors and defendants even absent any cost savings, simply because the parties might be risk averse. More importantly, they demonstrate how asymmetric information leads innocent defendants to opt for trials. Prosecutors try to adjust the offered sentence to the probability of conviction and the post-trial sentence. Similarly, defendants – wishing to minimize the expected sentence – adjust their willingness to settle to these two factors – probability of conviction and expected sentence. However, defendants know whether they are actually guilty or not. Since trials are designed to reveal the truth, an innocent defendant would correctly estimate that his chances at trial are better than the prosecutor's offer suggests. As a result, innocent defendants tend to reject offers while guilty defendants tend to accept them.⁹ Thus, plea bargaining is a mechanism which screens innocent defendants from guilty ones (see also, Kobayashi and Lott 1992, 1996).

⁹ The screening device is more effective if all defendants – guilty and innocent – are equally risk averse. Higher risk aversion of innocent defendants increases their willingness to plea-bargain and thus offsets the effect of private information.

[2007] *PLEA-BARGAINING AND PROSECUTION*

Reinganum (1988) examines two alternative prosecutorial discretion regimes: restricted discretion regime, where prosecutors must offer all defendants of similar offences a similar plea-bargain, and unrestricted regime, which allows prosecutors to adjust their offer freely. In her model both parties have asymmetric information: only the defendant knows whether he is guilty and only prosecutor knows how strong her case is, and both factors affect the probability of conviction. The prosecutor finds that where the arrest process fails to sufficiently distinguish between innocent and guilty defendants, unrestricted discretion is preferable. However, when prosecutors can rightly estimate that arrestees are frequently enough guilty, the restricted regime which offers the same plea-bargaining offer to similar defendants is preferable. In this regime, innocents tend to reject the offers made by prosecutors, while guilty defendants accept them.

Innocent defendants are more likely than guilty ones to reject plea-bargain offers for another reason. They might do so because in some cases prosecutors further investigate the case after rejection. Such investigation may reveal their innocence to the prosecutor, leading her to drop the charges (Baker and Mezzetti, 2001).

Behavioral studies indicate other factors creating a similar screening mechanism. Studies using experimental settings show that innocent defendants tend to be more optimistic about the chances of acquittal at trial even when there is no rational reason for such relative optimism (Gregory et al., 1978; Bordens, 1984).¹⁰ Adding to these findings, Tor et al. (2010) experimentally show that innocent defendants are more averse to guilty pleas even absent such relative optimism, because they deem such plea-bargains as unfair. As a result, innocent defendants tend to select trials much more often than guilty ones.

The reluctance of innocent defendants to plead guilty has substantial normative implications. Recall that several opponents of plea-bargaining, including Alschuler (1981)

¹⁰ It might be that the illusion of transparency, that is people's overestimation of others ability to discern their truthfulness or untruthfulness, can explain this relative optimism (Gilovich, Savitsky and Medvec 1998).

OREN GAZAL-AYAL AND LIMOR RIZA

and Schulhofer (1992), argue that plea-bargaining is normatively unacceptable since it induces innocent defendants to plead guilty. But if innocent defendants are much less likely to plead guilty than initially thought, this concern might be overstated. In fact, because of the screening mechanism, plea-bargaining probably reduces the proportion of wrongful convictions, since guilty defendants are easily convicted through plea-bargaining while innocent defendants select trials which sometimes result in acquittals. One can argue that this should lead scholars who emphasize the need to avoid wrongful convictions, to support plea-bargaining.

Interestingly, supporters of plea-bargaining, like Church (1979) and Easterbrook (1983), who commend the process for its ability to insure innocent defendants from the harsh consequences of trial conviction, should be more skeptical of their views, too. Since innocent defendants often reject plea-bargains, it is mainly the guilty ones that benefit from this type of insurance. Given that guilty defendants tend to accept generous plea discounts while innocent defendants are inclined to opt for trials, the expected sentence for a defendant is higher if he is innocent. For example, consider cases in which the chances of conviction at trial are fifty percent. Assume that prosecutors offer defendants in such cases plea-bargains for a quarter of the post-trial sentence. Assume further that innocent defendants, because they are averse to pleading guilty, reject the offers, and guilty defendants accept them. As a result, half of the innocent defendants are convicted and receive the full sentence (an average of half the full sentence per defendant) while all the guilty ones receive only one quarter of the full sentence. The expected sentence an innocent defendant faces is thus twice as long as the one imposed on a guilty one *ceteris paribus*, because the former is averse to a guilty plea. In fact, the trial penalty, that is the excess sentence imposed on defendants who select trials instead of pleading guilty, is often much higher than as in this example. Thus, innocent defendants probably face a much higher average sentence compared to equally-situated guilty defendants. Those who emphasize the

[2007] *PLEA-BARGAINING AND PROSECUTION*

importance of plea-bargaining for innocent defendants seem to disregard this aggravating effect (Tor et al., 2007).

There is another aspect to the innocence problem which lies in plea-bargaining's effect on prosecutorial screening decisions. With plea-bargaining, prosecutors know that they can settle virtually every case, even weak cases. All they need to do is to adjust the offered charges and sentence to the probability of trial conviction and the expected post-conviction sentence. Thus, they have much less interest in screening away weak cases. Yet some cases are weak because the defendant is innocent. The availability of plea-bargaining allows prosecutors to proceed with these cases, and hence to increase the risk of wrongful convictions.

One way to discourage the prosecution of weak cases is by limiting the level of concession prosecutors can give in return for a guilty plea (Gazal-Ayal, 2006). By imposing such a limitation, defendants in weak cases would refuse to settle. That way, prosecution of a weak case would typically result in a trial while strong cases would usually be settled. Since prosecutorial resource constraint does not allow them to try too many cases, they would refrain from bringing weak cases in the first place (Bar-Gill and Gazal-Ayal, 2006). While such a limitation can be effective, it seems that when charge-bargaining is available it is extremely hard for judges in an adversarial system to review the size of concession offered to the defendant.

5. Bounded rationality and agency costs

Prosecutors' agency costs

The early models of plea-bargaining and prosecutorial discretion, starting with Landes (1971) assume that prosecutors are perfect agents of society. If this were true, prosecutorial discretion could do nothing but good. For example, if society is strongly averse to wrongful

OREN GAZAL-AYAL AND LIMOR RIZA

conviction, prosecutors would share that aversion and only prosecute and settle cases where a defendant's guilt is sufficiently certain. Similarly, they would only settle when social benefits outweigh social costs. If restricted discretion were socially beneficial, prosecutors, as perfect agents of society, would restrict themselves. Hence, under this assumption, regulation of prosecutorial discretion is unnecessary. Yet prosecutors' interests do not always coincide with the social interests. Their interests depend on structural factors which differ across jurisdictions (Garoupa and Stephen, 2006).

In many American jurisdictions, chief prosecutors are publicly elected officials. As such, they are likely to be excessively concerned with more apparent aspects of their work. Conviction rate is such a factor (Stuntz, 2001, p. 534). The electorate probably also cares about the severity of the sentences and the charging policies. However, it is much more difficult for the electorate to examine these policies (Alschuler, 1968). Hence, such prosecutors are often interested in plea-bargains even if that requires them to offer excessive plea discounts. Prosecutors' risk aversion or the psychology of loss aversion might further encourage prosecutors to secure plea agreements through excessively lenient offers, which undermines the public interests in deterrence (Schulhofer, 1988). Additionally, in weak cases, where innocence is most likely, they are likely to offer a large plea discount to assure acceptance of the offer (Alschuler, 1968; Bowers 2008).¹¹ For a society that prefers convictions only when reasonable doubt is removed, these large discounts are an adverse consequence of plea-bargaining.¹²

¹¹ But see Boylan (2005) who shows that the future career success of chief federal prosecutors in the US is positively correlated to the total sentence imposed in their district. Boylan argues that the sentence lengths, as opposed to conviction rates, is the relevant performance metric. Note that these prosecutors are not elected officials.

¹² Bowers (2008) argues that innocent defendants are often people with past encounters with the law, since prosecutors and the police are biased against such suspects. These defendants are more likely to be detained, and thus to have an interest in a faster process. Additionally, these defendants care less about the stigma and more about the actual sentence. Hence plea-bargaining actually protects these innocent defendants from the possibility of harsh post trial convictions. However, this analysis disregards the effect of plea-bargaining on the initial charging decision and the decision not to drop charges. As we have shown, prosecutors will not

[2007] *PLEA-BARGAINING AND PROSECUTION*

The agency problem is not restricted to elected prosecutors. Non-elected prosecutors often wish to reduce their workload, and thus settle more cases, while others might take cases to trial to gain trial experience (Bibas, 2004). Boylan and Long (2005) argue that such personal incentives have a noticeable effect on assistant district attorneys in the federal system. They show empirically that federal prosecutors try more cases in districts where private sector salaries are high. In these districts, prosecutors are more interested in gathering trial experience, which can make them more attractive to private law firms. If prosecutors want trial experience and jury convictions, they might refrain from plea-bargaining in the strongest cases, although the cost of such bargaining is likely to be minimal, and prefer plea bargaining in the weak cases to avoid losses in trials (Bibas, 2004). All in all, these studies show that prosecutors' personal interest affects their plea bargaining policies.

While some thought has been given to the potential prosecutor-public interest disjunction, there is almost no economic study analyzing the prosecutor-police relationship. Most models assume unity between prosecutors and police, while in practice such relationships range from a hierarchal model of prosecutorial control to a model of coordination between two separate bodies (Richman, 2003; Jackson, 2004, p. 116). Similarly, the economic literature on the structural relationship between prosecutors and the executive is very limited. Van Aaken et al. (2004) and Voigt et al. (2005) hypothesize that when prosecutors enjoy more independence from the executive, they are more likely to effectively enforce the law on public figures. Yet little has been written about the effect of such structural independence on the enforcement in other cases or the efficacy of the criminal justice system, in general.

proceed to trial in such weak cases if excessive plea concessions are not allowed since this would commit much of their limited resources to costly trials and likely acquittals.

OREN GAZAL-AYAL AND LIMOR RIZA

Defendants and their lawyers

While prosecutors are professional repeat players, defendants are not. Psychological pitfalls might often lead defendants to wrong decisions in plea-bargaining. As we showed above, innocent defendants tend to overestimate their chances of acquittal at trial, leading them to reject beneficial plea-bargain offers. But this is just one example of a broader phenomenon. Bibas (2004) surveys a set of heuristics, biases and other psychological pitfalls that are likely to impair defendants' ability to bargain rationally in the shadow of the trial. If such biases are as substantial as argued (and empirical data here is greatly needed), plea-bargaining might be much less attractive than economics suggests. If the probability of trial conviction and the expected post-conviction sentence are only loosely correlated to defendant's willingness to accept plea-bargain offers, the distribution of sentences after plea-bargaining deviates substantially from the socially desired one (assuming trials distribute sentences in a desired fashion).

This problem might not be as severe in the majority of cases, where defendants are represented by counsels. Like prosecutors, defense attorneys are often repeat players and thus can counteract their clients' biases. Yet here again, several agency problems are of major concern. While some defendants are wealthy enough to hire highly reputed lawyers, most defendants cannot. They often have to make do with much less costly defense attorneys and urgently, with little means or time to inquire about their quality. These lawyers commonly charge defendants a relatively small fixed fee in advance. After payment, their main personal interest is to secure a quick disposition of the case. Thus, these lawyers, who usually have substantial control over defendants' positions, are often interested in encouraging their clients to quickly plead guilty, whether this serves their clients' interests or not (Blumberg, 1967; Alschuler, 1975).

This agency problem might be more acute when indigent defendants are represented by appointed lawyers. The fee-structure of state-funded lawyers can alter these lawyer's incentives, and there are several studies which show that it actually does (Gray et al., 1996;

[2007] *PLEA-BARGAINING AND PROSECUTION*

Moore, 1998, Fenn et al., 2007). It is hard to find a rule that assures efficient incentives to such lawyers (Garoupa and Stephen, 2006). Lawyers who receive a flat fee per-case might be mainly interested in a quick disposition of each case. These lawyers have even less interest in keeping their reputation with defendants; they are interested in pleasing the agency who nominated them, who is often equally interested in plea-bargains. For example, in some places, the judge nominates the defense attorney, and since judges are often interested in removing cases from the docket, there is a high risk that lawyers encourage guilty pleas even when it is not in their clients' best interest (Alschuler, 1975; Moore, 1998).¹³ Similar preference for plea-bargaining exists when per-hour fee is subject to a cap, which de-facto assures that lawyers would not be paid for the time they spend on a full trial (Stuntz, 1997, pp. 10-11). Empirical studies support this conclusion. When lawyers' fee was altered from a per-hour system to a flat fee system in Scotland, the rate of defendants who changed their plea to "guilty" after accessing legal aid increased substantially (Tata and Stephen, 2006).¹⁴ Some even argue that the extremely high rate of plea-bargaining is at odds with what we would expect from defendants who are averse to losses, and it can only be explained by defense lawyers' manipulation (Birke, 1999).

However, an hourly payment is not a panacea either. If paid by the hour, attorneys might push too often to trials or delay the plea-bargaining, regardless of the defendant's interests (Garoupa and Stephen, 2006). A more subtle way of assuring quality is the institutional one, using public defender's office employees. Where public defenders operate within a hierarchal office, quality can be preserved through monitoring of the head of the

¹³ Blumberg (1967 pp. 35-38) shows that most defendants pleaded guilty based on their counsel's advice. Schulhofer and Friedman (1993, pp. 112-122) argue that indigent defendants in a criminal procedure should be allowed to choose their representatives and receive vouchers from the state to finance their legal aid. This voucher system thus assures that lawyers need to safeguard their reputations and align their interests with the interest of their indigent clients. Dnes and Rickman (1998, pp. 260-262) also propose vouchers as a payment system for legal aid.

OREN GAZAL-AYAL AND LIMOR RIZA

office.¹⁵ Moreover, public defenders are paid a fixed salary, and thus their economic interest in quickly resolving many cases is mitigated (Alschuler, 1975). Yet even in such offices, the caseload often encourages public defenders to prefer guilty pleas, as several studies show (Alschuler, 1975, p. 1255; Schulhofer, 1992, 1989-1990; Bibas, 2004, p. 2477).

If the defendant's bounded rationality and agency problems are too substantial, plea-bargaining cannot be relied upon. Plea-bargaining has no mechanism to assure that the innocent defendants would be acquitted or that the guilty would be punished proportionally unless the parties bargain rationally in the shadow of a trial, which is constructed to achieve these goals (Bibas, 2004). Thus, calls for a ban on plea-bargaining often rest on these agency problems (Alschuler, 1981; Schulhofer, 1988). True, defendants might make mistakes and lawyers might misrepresent them in trials too. However, misrepresentation in an open trial might cost defense lawyers more disrepute than such behavior in the less observable plea-bargaining. Moreover, plea-bargaining allows the defense attorney to save substantial time resources when that is in their interest. By encouraging the defendant to plead guilty, defense attorneys can avoid most of the costs of the process. Cutting corners at trial is much less beneficial, and hence the incentives to do so are much smaller (Schulhofer, 1988). On the other hand, a trial is a much more complex process than plea-bargaining, and hence defendants' ability to monitor their lawyers is substantially reduced at trial (Scott and Stuntz, 1992a; Bibas, 2004). It is, thus, still highly debatable whether the defendant-attorney agency problem is more severe in trials or in plea bargaining.

¹⁴ Introducing the flat fee system sharply reduced the amount defense lawyers contacted with their clients and with their prior investigation of evidence. Moreover, plea bargaining patterns were changed; defendants pleaded guilty at a later stage (Tata and Stephen, 2006).

[2007] *PLEA-BARGAINING AND PROSECUTION*

6. Prosecutorial discretion's effects on criminal justice systems

As we have showed in the historical review, the pressure to adopt plea-bargaining and encourage the practice has resulted from the increase in criminal trial complexity. Trial complexity and high caseload also force prosecutors to screen away cases that otherwise would have been prosecuted. In many jurisdictions, both charging discretion and plea-bargaining are used to overcome the limited prosecutorial and trial resources. Yet Stuntz (1997) shows that in such a discretionary system, trial complexity does not only benefit suspects that now escape prosecution; it also hurts other defendants that would have otherwise escaped charges. More specifically, in a discretionary system, trial complexities harm weaker and poorer defendants while benefiting the strong and affluent ones. Since prosecutors already have more potential cases than they can prosecute, when some cases are more costly to prove, prosecutors simply choose other cases instead. When prosecutors are subject to resource constraints, the main effect of more regulation of trials is distributive, not quantitative. This distributive effect is not random. The defendants' right to confront the witnesses is much more valuable to those who have resources to prepare a decent cross-examination. The defendants' right to remain silent is much more useful to the minority who know that speaking to the police is usually damaging.¹⁶ The defendants' right to exclude illegally obtained evidence has a much greater effect where the defense lawyer can be paid to investigate the police misconduct. As a result, the complex trial regulation mainly benefits the strong, experienced and wealthier defendants. Subsequently, it pushes prosecutors to divert their limited resources to the prosecution of weaker, indigent less sophisticated defendants. Moreover, defendants in detention or indigent defendants who

¹⁵ The head of such an office might be interested in assuring high quality services because his office is monitored by the press, unlike the job of an individual defender.

¹⁶ According to a field study made in the US during the 1990's the vast majority of suspects – ranging from 78 percent to 96 percent – waive the right to remain silent (Leo, 1996, p. 281; Leo, 1998, p. 275).

OREN GAZAL-AYAL AND LIMOR RIZA

have to bear the high cost of making bail are not interested in prolonging the process, even if they can afford it. Their main interest is to shorten the process. Their willingness to plead guilty makes their cases even more attractive to prosecutors, and makes the costly prosecutions of wealthier defendants who can easily make bail much less attractive comparatively. Even when a wealthier or more sophisticated defendant is prosecuted, the high cost of the expected trial assures that he receives a much more generous plea-bargain offer than other defendants facing similar charges. As a result, prosecutorial discretion and plea-bargaining, combined with a highly regulated and costly trial, result in a much more discriminatory system than one with a simplified trial process with more limited charging and bargaining discretion.

Stuntz (2001) brings legislators' incentives into the picture. Legislators might be interested in satisfying a constituency which wants a more "tough on crime" approach. Thus, legislators consistently increase sentences and criminalize more activities by enacting broader criminal statutes. Sentencing guidelines and minimum sentences laws can restrict judges from undercutting such policies. If prosecutors have no charging and bargaining discretion, such a policy quickly results in overcrowded prisons, which the legislators will need to finance. But in systems which rely on prosecutorial discretion the effect of this policy is very different. In such a system, broader and harsher criminal statutes result mainly in more power to prosecutors to decide who should be sentenced and for how long. This policy simply vests prosecutors with more bargaining chips to extract guilty pleas and avoid expensive trials. Legislators know that prosecutors would not force every convicted defendant to serve the disproportional sentences required by law, but only the few that insist on a trial. They know that trivial misconducts, which are criminalized, would not result in prosecution unless the prosecutor suspects that the defendant committed a more severe crime but faces difficulties in proving it. Hence, expanding substantive criminal law is a tool to empower prosecutors in plea bargaining and overcome the costly criminal trial. Substantive criminal law is no longer designed to assure that trials result in the socially

[2007] *PLEA-BARGAINING AND PROSECUTION*

desired outcome; it is designed to allow prosecutors to reach such an outcome in plea-bargaining. In such a system, the "shadow of trial" which is the only tool to discipline prosecutors in plea-bargaining, loses its meaning (Stuntz, 2004).

Bjerk (2005) shows empirically how prosecutors use the tools provided by legislators. In many American jurisdictions, legislators enacted "three strike laws", that is, laws which require judges to impose a minimum incarceration sentence for third time felons. Prosecutors have several ways to bypass these laws. One of them is to reduce the felony charges in cases qualified to the minimum sentence to misdemeanors. Bjerk (2005) finds that after the enactment of such three strike laws, third time felons were seventy percent more likely to have their charges reduced to misdemeanor, while no such change could be observed with regard to other felons. Walsh (2004) examines another method of circumvention of a three strikes rule, which is to drop previous "strikes", and shows that prosecutors mainly use this tool when they believe that the circumstances do not justify such a harsh treatment. These results show that often prosecutors are not interested in the most severe sentence they can impose on defendants. If a prosecutor is interested in a sentence of one or two years of imprisonment but a trial conviction would result in ten years, the prosecutor can easily extract a guilty plea even from defendants who have a reasonable chance of proving their innocence and even from defendants who believe that the offered sentence is much higher than socially desired. Such excessive trial sentences thus result in very few trials. Absent trials, there are almost no effective checks on prosecutorial discretion.

This raises the obvious concern of prosecutorial mistakes and misconduct, when their interest is not fully aligned with the public interest. For example, prosecutors might invest too little in verifying that a defendant is guilty, when they can easily extract a guilty plea without this further investigation, in the shadow of the broad and harsh criminal law. The excessive scope of criminal law also allows pretextual prosecution, meaning, bringing charges that usually do not result in prosecution because the prosecutor believes that these

OREN GAZAL-AYAL AND LIMOR RIZA

defendants deserve punishment for something else, which cannot be proven (Richman and Stuntz, 2005). While these tools can be used to promote deterrence and other goals of the criminal law, absent a public process and an appeal procedure, prosecutors are often free from criticism which could help to monitor their use, and overcome the prosecutor's agency problem.

Such prosecutorial power raises an additional concern. Though prosecutors can use plea-bargaining and charging discretion to prevent an unwarranted increase in prison population, there is nothing that forces them to do so. Misner (1996) concentrates on this external cost of the prosecutorial discretion and proposes allocation of specific prison space to the prosecutors; this would force prosecutors to take into account the costs of prisons when they decide to prosecute. Several jurisdictions, most notably Minnesota, solved the problem of increasing crowdedness of prisons differently, by requiring the sentencing commission to take into account the prisons' capacity in deciding about the presumptive sentence.¹⁷

7. Judicial participation in plea-bargaining

The analysis thus far rests on the assumption that bargaining is conducted between the defendant and the prosecutor, while the judge, if involved at all, only reviews the agreement reached. In practice though, in many systems, including several American states, the judge takes an active part in the negotiation, often a pivotal one (Alschuler 1976;

¹⁷ According to the Minnesota Sentencing Guidelines, prison capacity should be taken into consideration before sentencing. The requirement to consider prison overcrowding is brought as the third principle of the guidelines presented at its outset. These guidelines state that “[b]ecause the capacities of state and local correctional facilities are finite, use of incarcerative sanctions should be limited to those convicted of more serious offenses or those who have longer criminal histories. To ensure such usage of finite resources,

[2007] *PLEA-BARGAINING AND PROSECUTION*

Turner, 2006). For example, in England and Wales, defendants can charge-bargain with prosecutors but sentence-bargaining is only conducted with the judge, who can inform the defendant of the sentence he should expect if he pleads guilty (Sanders and Young, 2007, ch. 8). Judges often participate in plea-bargaining in many other jurisdictions including Germany and Israel.

The economic literature has generally overlooked this phenomenon (Garoupa and Stephen, 2006). Plea-bargaining was treated as an agreement between defendants and prosecutors only. Yet bargaining with a judge is something quite different. Prosecutors can only determine the post plea sentence where judges also control the post trial sentence. When prosecutors are interested in avoiding a trial they can only encourage defendants to plead guilty by offering them a settlement which is better than the expected result of the trial; when a judge is interested in a guilty plea he can also alter the result of the expected trial. If judges had no interest in guilty pleas, that might not raise concerns; however, judges are probably very interested in guilty pleas since guilty pleas reduce their workload. Defendants might rightfully fear displeasing the judge in the bargaining process. Here, again, one cannot rely on the shadow of the trial to regulate the result of plea-bargaining.

That does not mean that judicial involvement in plea-bargaining has no value. Prosecutorial plea offers often cannot assure the defendant a specific sentence, because most systems give judges the final say regarding the sentence. Judicial participation can reduce the risks for defendants by assuring that the offered post-plea sentence will be respected and by supplying authorized information about the expected post-trial sentence. Additionally, judicial participation can reduce over-optimism and self-serving bias of parties which might hinder successful bargaining (Loewenstein et al, 1993, Babcock et al.,

sanctions used in sentencing convicted felons should be the least restrictive necessary to achieve the purposes of the sentence.” (Minnesota Sentencing Guidelines, 2007).

OREN GAZAL-AYAL AND LIMOR RIZA

1995).¹⁸ Judges thus can serve as de-facto mediators, and, as other mediators, can help the parties to overcome their cognitive biases (Mnookin, 1993). Several jurisdictions such as Connecticut and Israel allow judges to participate in plea-bargaining only if they do not preside over the case if plea-bargaining fails, thus allowing the parties to benefit from mediation while preventing the judges from coercing guilty pleas.

8. Plea-bargaining and prosecutorial discretion in civil law countries

Unlike plea bargaining in adversarial systems, the economic research of the parallel procedures in civil law countries is scarce.¹⁹ The differences between the two types of systems make much of the plea bargaining literature irrelevant to civil law systems. For example, in Italy parties are allowed to apply for a consensual punishment which does not exceed a sentence of five years (Langer, 2004, p. 49-50). This process is often called *patteggiamento* or bargaining, and seems to be similar to a sentence bargaining in common law countries. In the Italian system, judges are allowed to overturn prosecutorial refusal to offer a sentence discount and defendants do not even have to admit their guilt in order to get such a bargain (Langer, 2004, p. 51). These features should have encouraged the parties to make use of the process.

Yet the process is generally regarded as a failure. Full trials still occur in 85 percent of the cases in Italy, in sharp contrast with the about 10 percent trial rate in common law

¹⁸ Over-optimism refers to the general tendency of people to believe that positive events will happen to them but not negative events. Self-serving bias refers to people's tendency to interpret information in light favorably to them (Jolls et al., 1998).

¹⁹ One reference to plea bargaining in civil law countries can be found in Adelstein and Miceli (2001) who argue that the difference in criminal justice values in the two type of systems makes plea bargaining a welfare increasing process in common law countries but not in civil law ones.

[2007] *PLEA-BARGAINING AND PROSECUTION*

countries. The Italian system still suffers from excessive caseload and delays. One possible explanation for the failure of plea bargaining to clear up the market is the compulsory prosecution rule. In common law countries, if too many defendants choose to go to trial, prosecutors can offer larger plea concession and drop more cases. On the other hand, in Italy, the legality principle does not allow prosecutors to drop cases, and the law does not allow charge bargaining or more than one third reduction in sentence bargaining. Since too few defendants agree to this limited concession, the cases still pile up. Defendants thus know that prosecutors cannot bring their case to trial promptly and hence prefer to reject the offer. As the number of defendants who reject such offers increase, the delays increase too, and the benefits from bargaining are further reduced. It thus might be that plea bargaining is much less attractive to defendants in systems with compulsory prosecution. This is just one example of the difficulty in implementing models developed in common law countries for the analysis of plea bargaining in civil law jurisdictions. A more thorough economic analysis and empirical research should be tailored for the study of plea bargaining in civil law system.

OREN GAZAL-AYAL AND LIMOR RIZA

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