DOES PRIORITIZING IMPROVE CRIMINAL JUDGEMENT EFFICIENCY?
AN EXAMPLE FROM ITALY

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Abstract
This paper deals with efficiency of criminal judgement in a context of limited resources. It moves from an Italian government bill, which went through Parliament in 2008. The bill allows courts managers to reallocate resources temporally, thus setting priorities in courts schedules. The logic underlying the bill is that reaching the final verdict in a reasonable length of time is more important in the treatment of serious crimes than in the treatment of light or petty crimes. However, a simple overlapping-generations scheme shows that such a reallocation is generally inefficient if criminal offices have different levels of productivity. Although this analysis starts from an Italian case, its results are applicable to all judicial systems allowing the selection of priorities in criminal courts.

Keywords: criminal trial, courts efficiency, prosecutors efficiency, cost-benefit analysis

JEL Classification numbers: K10, K14

1 INTRODUCTION
The paper is set within the economics of criminal procedure\(^1\), which is the legal process by which a criminal defendant’s guilt or innocence is ascertained. Although the general question faced in that literature\(^2\) is one of minimizing both the cost of legal errors and the cost of the administrative proceedings, here the emphasis is only on the second type of cost. Hence, legal errors, consisting in the conviction of an innocent defendant or in the acquittal of a guilty defendant, are assumed away. We also exclude plea-bargaining\(^3\) from our analysis, since our only focus is on the efficiency of the judgement in the criminal procedure. Plea-bargaining is not a judgement, but rather an agreement between prosecutor and defendant. We simply assume that any judgement ends with the conviction of the true wrongdoer. What is considered here is the interplay between preferences and technology, i.e. the different social perception of the conviction of a serious wrongdoer as opposed to the conviction of a petty one, on the one hand; the

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\(^1\) From Posner (1985).
\(^2\) In this perspective see Posner (2003), Lewisch (2000) and Ehrlich (1998).
\(^3\) As analyzed, for example, by Adelstein and Miceli (2001).
different amount of work courts dealing with serious wrongdoers as opposed to the courts dealing with the petty ones are supposed to carry out, on the other. There is no initial screening among the trials, so that establishing priorities is merely an administrative task of the court.

Thus, the paper only studies the cost of the organization of these decisions: it is designed to evaluate, given preferences and technology, the effects of fixing priorities instead of running all the trials in a parallel fashion. Our point is that reallocating resources among different criminal trials, with the purpose of reaching the verdict for serious criminals as much quickly as possible, may not increase general welfare. We show that this realignment only increases efficiency when the offices dealing with serious and less serious crimes are equally productive. The argument will be illustrated by means of an overlapping generation scheme applied to the working of an office of justice.

The structure of the paper as follows. Section 2 briefly reviews the various approaches to criminal procedure adopted in various countries and, in particular, in Italy. Section 3 models the reallocation of judicial resources within a single generation and with a single-offence office. Section 4 extends the setup considering two courts of justice and two types of offences. Section 5 concludes.

2. THE CRIMINAL PROCEDURE AND THE ITALIAN ACT
Prosecuting and sentencing are the responsibility of different offices. The prosecutor has the responsibility for the prosecution of crimes, whereas judges (or courts) decide. During judge hearings, the prosecutor faces lawyers who represent the defence on an equal basis as the prosecutor. The prosecutor represents the State, and is expected to investigate the commission of a crime and to uphold the accusation before the judge. The judge, unlike the prosecutor or the defence lawyer, acts as an independent entity.

As a general matter, prosecuting is more costly than judging: investigating into the case and collecting the evidence are rather expensive activities. It is not surprising therefore that one of the most heavily debated questions in judicial organization is whether prosecution should be mandatory. In this respect, different countries adopt different solutions. In Germany, prosecutors are not obliged to file accusation for minor offenses (so called prosecutorial discretion), but the judge can force prosecutors. In Spain, it is possible by popular action to force prosecutors to start a case. In the Netherlands, priorities in the crimes to deal with are fixed by law. In France, the Government gives written instructions to the prosecutors on the ways to conduct investigations and the types of crime to prosecute. In the United States and in Japan, the prosecutor has discretion as whether to file a formal accusation so that she can

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4 Fundamentally, two public players take part in a criminal trial: the Prosecutor and the Judge (or the Court). When we evaluate the consequences of an act upon one of them, we will also assume that the other one is absolutely efficient, so to isolate the object of our interest.

5 On the consequences of the dependence of the Prosecutor from the State, in particular on the effects resulting from his discretionary on the economics of criminal procedure, see Easterbrook (1983) and Schulhefer (1998).
practically ensure a form of clemency.

At a most general level, jurisdictions can adopt either of two different approaches to prosecution: they can prosecute all crimes or just a selection of the crimes committed. In the former case, we have a mandatory prosecution: anytime public prosecutors receive information on crimes committed, they are expected to act on them. If a theft is committed before a murder, prosecutors firstly have to deal with theft and only later with murder. The main disadvantage of this approach is that many crimes remain unpunished if human or material resources are insufficient to bring all cases to an end. The main advantage lies in the fact that any kind of crime, no matter its importance, will be prosecuted. In the case of public selection of crimes, the legislators, the government or the prosecutors decide in advance which crimes they intend to pursue, either in an exclusive way or by fixing some priorities. The advantage of this system is that more serious crimes will take precedence over less serious ones. The disadvantage consists in the possibility that a number of light crimes may remain unpunished.

The Italian system is an extreme version of the category of mandatory prosecution. Indeed, it is the only system that inflexibly follows such an approach, with the result that it provides the ideal setting for the analysis of the effects of fixing priorities in courts schedules. However, recently, the Italian Parliament has introduced a different route assuming that judicial services can be improved by simply reallocating resources through time and among trials. The law 125/2008 allows the chiefs of courts to fix priorities which deciding trials to carry out first. Based on the presumption that waiting for a trial to be concluded is less burdensome for less serious than for more-serious crimes, Parliament suggested that some priorities for trials be applied giving lower priority to less serious crimes.

This act does not make any attempt to change the rules governing prosecution, which remain compulsory. Indeed, it attempts to introduce priorities once the case is brought before the judge. Thus, although it does not eliminate mandatory prosecution, it tries to put trials of more-serious offences on a faster track than those of less-serious ones. What comes out of these changes is a system less rigid than the previous one, but still very different from those existing in other countries. In particular, it is not equivalent to decriminalization. Those cases whose treatment is postponed continue to remain crimes and will have to be handled once the more important trials are finished. If mandatory prosecution were removed from the Italian system, the problem of making sure that

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6 Article 112 of the Italian Constitution dictates mandatory prosecution.

7 Article 2-bis and 2-ter of the law 125/2008 deal with the question of rearranging court schedules. Article 2-bis gives priority to specific types of trials: in the setting of the Courts’ roll and in the actual processing of trials absolute priority should be granted to a) trials concerning specific and clearly listed offences; b) trials implying sentences no shorter than four years; c) trials where the defendants are under arrest; d) trials concerning repeated offences. In all such circumstances the social cost of waiting too long for the trial to be brought to an end is considered quite high. Article 2-ter is designed to implement the provision in article 2-bis: court managers are allowed to postpone those trials which do not fall in the previous categories, which concern offences committed no later that may 2nd 2006 and which do not entail sentences longer than three years or penalties larger that € 10000. In doing so, they should take into account the actual seriousness of the offence, the costs involved in delaying the evidence collection, and the interest of the victim. In no case may trials be postponed for more than 18 months. The numeration of articles refers to final coordination between Government bill and Parliament act.
verdicts for serious crimes are concluded in a sensible length of time would be solved in a different way. It follows that the analysis and the discussion presented below are applicable to all systems which fail to discriminate effectively (any time during the procedure) between socially alarming cases and not so alarming ones.

3 AN EXERCISE IN INTERGENERATIONAL ACCOUNTING

Although not any defendant is taken to trial, we assume here that all cases are brought before a judge, which is the condition under which our argument applies. If, through plea-bargaining or other instruments, not all cases were brought before a judge, the problem of fixing priorities would turn out to be not so pressing since serious cases would be surely put on a faster track. Here, since all cases are brought before a judge, the question of the beneficial effects of a temporal reallocation of cases duly arises. In other words, fixing priorities becomes a sensible question, as no effective discrimination is carried out in the early stages of the criminal procedure. Therefore the question addressed here is: given limited resources, is there any sense in taking to trial one class of defendants before another one, regardless of the time the crime was committed and the entire criminal procedure started? In addressing the question, the resource constraint will take the form of a constant backlog of trials, handed over from the previous generation, which await adjudication.

To develop the argument, an extremely simple overlapping-generations scheme will be used. In this section, we assume that there is only one court where trials for the only existing type of offences are conducted. Each generation lives for two periods, is affected by crime in the first period and cares only about trials (either immediate or occurring in the second period) pertaining to these crimes. Each generation expects the judicial system to carry out a definite number of trials. At any given time, there is also an older generation which expects that all the trials (occurred when they were young) are completed. The office is provided with exactly the right amount of resources to carry out the trials concerning the new generation. For simplicity, there are neither negative externalities of crimes affecting the other overlapping generation nor positive externalities from the corresponding trials. Such trials can be carried out according to various intertemporal allocations: all during the first period of life; all during the second; or part during the first and the remaining ones during the second. Courts are restricted to complete trials within the lifespan of the each involved generation. It follows that an intergenerational scheme is required to deal with the demand of two generations at any given time.

For a generation $g$, let

- $a_{g,t}$ represent the number of trials carried out in the first period and
- $a_{g,t+1}$ the number of trials carried out in the second period.

Let also $R$ be the amount of judicial resources assigned to each generation. Such resources will be used to carry out all the trials for each generation. Assume also that
reallocating resources between the periods does not change the sum of resources available, that is

\[ R = a_{g,t} + a_{g,t+1} \]  

(1)

Hence, there is no incentive to save. That is, carrying out the trials during the second period of each generation’s life will not require any more or any less resources than it is required during the first period.

In actual fact, during any period of time the available resources are used to carry out trials for both generations. What is not used for the young generation is used to carry out the trials of the older generation. In this model, we assume that generations are treated equally. So, the resource constraint for each generation is equivalent to the resource constraint for each period. Therefore

\[ R = a_{g,t} + a_{g-1,t} \]  

(2)

where \( a_{g-1,t} \) represents the trials which interest the older generation. During any period, the available resources will be used to carry out the first group of trials for the young generation and the remaining group of trials for the older generation. This means that, in each period, the same amount of trials are carried out, with the combination of trials (i.e. the relative proportions of old and new trials) staying constant through time. If an equilibrium is reached, it will be replicated through time.

This simple scheme implies that, provided resources are available to meet the demands of each generation, all intertemporal reallocations of trials are possible. However, a cost must be borne by one or both generations to carry out the transition after the reallocation. If an act of legislation required the trials regarding the young generation to be dealt with in the first period, the remaining trials of the older generation would have to be written off. Alternatively, the old generation may be fully satisfied, but the young generation has to put up with a deferral of a number of trials. A combination of the two is also possible. Hence, the problem for the legislator (or policy maker) in such circumstances is how to distribute such a cost. Thus, even in such a simple case with one court and one type of crimes, any induced intertemporal reallocation of trials entails a cost.

This argument also implies that, whenever the resource constraint is binding, as the demands of the existing generations cannot be entirely met as resources assigned according to the needs of the young generation, a meaningful allocation problem arises and costs must be evaluated against benefits. But there is an easy way out of the problem as long as another court of justice is brought to bear. If resources can be moved not only among generations but also among courts, new opportunities arise. In the following, such opportunities will be evaluated with the purpose of finding out whether fixing priorities is necessarily beneficial.
4 MORE ACCOUNTING: TWO COURTS

Assume that two types of criminal offences exist and that two courts are set up to deal with those offences. Court $A$ deals with serious offences and court $B$ with petty ones. Let us assume that each court is endowed with the necessary resources to carry out all the trials of the young generation.

Let $R_a$ be the amount of resources committed to court $A$ and $R_b$ be the amount of resources committed to court $B$.

Therefore, we have

$$R_a = a_{g,t} + a_{g-1,t}$$  \hspace{1cm} (3)

and

$$R_b = b_{g,t} + b_{g-1,t}$$  \hspace{1cm} (4)

As in the one-court case, the resource constraint for each period is equivalent to the resource constraint for each generation. Now, if $a_{g,t}$ is increased because of the greater impatience of each generation and $R_a$ is not increased, $a_{g-1,t}$ must be reduced, that is the older generation will not see some of the trials being completed. As mentioned earlier, the reallocation cannot be completed without a cost. However, if something different takes place in the other court and $b_{g,t}$ is reduced, $R_b$ can be reduced as well since the older generation does not require any more resources. Thus, when the reallocation starts off, the following is true in the first period: more resources are required in court $A$ and less in court $B$. It follows that court $A$ receives resources from court $B$ to meet the demands of the older and the new generations alike. It must remain true, however, that the demands of all generations in both courts are met by the end of each generation life.

4.1 EFFICIENCY

What remains to be investigated is why each generation should be prepared to accept that most of the trials for less serious offences are carried out in its second period of life. In fact, there is no reason why this should be the case. In the following, the new resource allocation resulting from granting serious crimes trials a higher priority will be compared to a situation when no priority is granted to any type of trial. In running the comparison, it can be assumed that the total social cost stays constant since overall resources are neither increased nor decreased when reallocation takes place. Thus, the analysis will focus on the benefits part.

4.1.1 Courts are Equally Productive

Consider first the case where the resources employed in the two courts have the same productivity. That is, one unit of resources produces exactly the same amount of serious
(a type) or minor (b type) verdicts. More specifically, assume that the production functions for the two courts are

\[ a = R_a \quad \text{and} \quad b = R_b \]  

(5)  

(6)  

where \( R_a \) and \( R_b \) are the resources the two offices have at their disposal. So, the highest quantities of \( a \) and \( b \) trials that each generation can conduct are respectively

\[ R_a = a_{g,t} + a_{g,t+1} \quad \text{and} \]  

(7)  

\[ R_b = b_{g,t} + b_{g,t+1} \]  

(8)  

The life-cycle utility function of the representative member is assumed to be additively separable for the two types of verdicts. Or,

\[ U(a) = u(a_{g,t}) + \delta_a u(a_{g,t+1}) \quad \text{and} \]  

(9)  

\[ U(b) = u(b_{g,t}) + \delta_b u(b_{g,t+1}). \]  

(10)  

where \( \delta_a \) and \( \delta_b \) are the discount factors for the second-period trials of each generation. It is reasonably assumed that \( \delta_a \leq \delta_b \) meaning that generations are (weakly) more impatient for verdicts concerning socially alarming crimes. For simplicity, each generation overall utility is assumed to be a weighted sum of the previous utilities, that is

\[ U(a, b) = u(a_{g,t}) + \delta_a u(a_{g,t+1}) + \eta [u(b_{g,t}) + \delta_b u(b_{g,t+1})], \]  

(11)  

where the subjective parameter \( \eta \) in \([0,1]\) reflects the way people evaluate the results of the light crime verdict compared to the other. If \( \eta = 1 \), \( a \) and \( b \) trials are equally important.

For the assumption of equal treatment across generations, that is \( u(a_{g,t+1}) = u(a_{g-1,t}) \), we can write

\[ U(a, b) = u(a_{g,t}) + \delta_a u(a_{g,t+1}) + \eta [u(b_{g,t}) + \delta_b u(b_{g-1,t})], \]  

(12)  

so that only utilities at time \( t \), simultaneously for the young and the old generation, are considered.

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8 There is not a problem of market equilibrium or excess demand. The implicit assumption is that the authority determines the amount of resources to be devoted to justice according to the quantity required by the society. It means that the aggregate demand is always weakly larger than the resources invested.
Again, for the sake of simplicity, assume linear utility functions\(^9\) (with concave utilities, without knowing the specific functional form, the benefits comparison would become too hard to handle). The last sum of utilities simply becomes

\[
U(a, b) = a_{g,1} + \delta a_{g-1,1} + \eta[b_{g,1} + \delta b_{g-1,1}].
\] (13)

In the sub-case examined here, postponing \(b_{g,1}\) trials (so that more \(a_{g,1}\) trials can be finished) raises overall utility. Consider first the transition period. For the production functions considered, \(b_{g,1}\) trials can be converted into \(a_{g,1}\) trials. Since nothing changes for the old generation (they would not agree with reducing in \(t\) the resources for their second period trials, otherwise these would not be concluded in their lifetime), we have that in the transition, giving a higher priority to \(a\)-type trials is a good choice whenever \(\eta \geq 0\). The numerical example 1 shows what may happen in the transition period assuming hypothetical values for the exogenous variables and the parameters. It is quite clear that there is no loss of utility.

**Numerical example 1: \(U(a, b)\) in the transition period**

\[
(R_a = 100, R_b = 60 and \delta_a = \delta_b = 1)
\]

<table>
<thead>
<tr>
<th>in (t)</th>
<th>(a_{g,1})</th>
<th>(a_{g-1,1})</th>
<th>(b_{g,1})</th>
<th>(b_{g-1,1})</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>+</td>
<td>+</td>
<td>+30</td>
<td>+30</td>
</tr>
<tr>
<td>transition</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>80</td>
<td>+</td>
<td>+</td>
<td>+0</td>
<td>+30</td>
</tr>
</tbody>
</table>

From the \(t+1\) period on, by suspending all current \(b\)-type trials, the structure of each period utilities becomes

\[
a_{g+1,1,t+1} + \delta a_{g+1,t+1} + \eta[0 + \delta b_{g+1,t+1}],
\] (14)

that equals

\[
a_{g+1} + b_{g+1} + \delta(a_{g+1,t} - b_{g+1}) + \eta[0 + \delta b_{g+1,t} + b_{g+1}]
\] (15)

The generation \(g\), when old, is satisfied when just \(a_{g+1,t+1} = a_{g+1,t} - b_{g+1}\) trials are completed. \((a_{g+1,t} - b_{g+1})\) are the \(a\)-type trials in \(t+1\). This is because in its first period \(a\)-type trials were raised to \(a_{g+1} + b_{g+1}\). As regards \(b\)-type trials, generation \(g\), instead, must obtain \(b_{g+1}\) in its second period; otherwise these trials would not be completed. It is important to note that postponing trials of minor cases will alter permanently the structure of consumption in all future periods and for all generations. So, the generation \(g+1\) will also carry out \(a_{g+1,1,t+1} = a_{g+1} + b_{g+1}\) trials and no \(b\)-type trials in the first period. After the transition, as the numerical example 2 shows, the resources employed in the

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\(^9\) The assumption of linearity seems quite reasonable when the consumption good is simply thought as justice; in any case the theoretical results would remain unchanged using concave utility functions.
two courts, $R_a$ and $R_b$, take again their initial values. Note that from the period $t+1$, it is again $R_a = a_{g,t} + a_{g,t+1}$ and $R_b = b_{g,t} + b_{g,t+1}$.

### Numerical example 2: $U(a, b)$ from the $t + 1$ period on

($R_a = 100$, $R_b = 60$ and $\delta_a = \delta_b = 1$)

<table>
<thead>
<tr>
<th>in $t$</th>
<th>$a_{g,t}$</th>
<th>$a_{g,t+1}$</th>
<th>$b_{g,t}$</th>
<th>$b_{g,t+1}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>+</td>
<td>+</td>
<td>$\eta 30$</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>transition</th>
<th>$a_{g,t}$</th>
<th>$a_{g,t+1}$</th>
<th>$b_{g,t}$</th>
<th>$b_{g,t+1}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>+</td>
<td>50</td>
<td>+</td>
<td>$\eta 30$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>in $t+1$</th>
<th>$a_{g,t+1}$</th>
<th>$a_{g,t+1}$</th>
<th>$b_{g,t+1}$</th>
<th>$b_{g,t+1}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>80</td>
<td>+</td>
<td>20</td>
<td>+</td>
<td>$\eta 60$</td>
</tr>
</tbody>
</table>

It is quite clear that, even after the transition, rearranging trials raises overall utility. Indeed, consider the following inequality

$$a_{g,t} + b_{g,t} + \delta_a(a_{g,t+1} - b_{g,t}) + \eta[0 + \delta_b(b_{g,t+1} + b_{g,t})] \geq a_{g,t} + \delta_a(a_{g,t+1} + \eta[b_{g,t} + \delta_b b_{g,t+1}]),$$

(16)

where the right-hand side reflects the structure of trials in $t+1$ if no change occurred and the left-hand side equals condition (15). Note that, even for $\eta = 1$, (16) always holds as it reduces to $-\delta_a b_{g,t} + \delta_b b_{g,t} \geq 0$ that is necessarily true since $\delta_a \leq \delta_b$. Since the structure of trials is modified permanently, if the utility is raised for one generation, so it will be for all other future generations. Therefore, moving from an intertemporal allocation where $a$ and $b$ type trials are evenly distributed across time to another one where $a$ type trials are almost entirely confined to the first period and $b$ type trials entirely confined to the second period is beneficial to the society.

#### 4.1.2 Court B is More Productive

Now assume that the resources employed in the two courts have different productivity in terms of the number of trials completed. This time, a single unit of resources produces one verdict in the light-offence court and $n$ verdicts, with $n$ in $[0,1)$, in the serious-offence courts. Therefore $n$ is an objective parameter representing the relative productivity of a court compared to the other. In this case, the production functions are

$$a = nR_a \quad \text{and} \quad b = R_b.$$  

(17)  

(18)

Clearly, unlike the previous case with identical production functions, we also have that $a = nb$: deferring $b_{g,t}$ $b$-type trials leads to $nb_{g,t}$ $a$-type trials. This time, with different productivities, postponing $b$-type trials is no longer always beneficial.

Consider the transition period first. Postponing increases utility iff
\[ a_{g,t} + nb_{g,t} + \delta a_{g-1,t} + \eta (0 + \delta b_{g-1,t}) \geq a_{g,t} + \delta a_{g-1,t} + \eta [b_{g,t} + \delta b_{g-1,t}] \] 

(19)

This expression is true only for
\[ n \geq \eta. \] 

(20)

It means that, if trials are equally important, that is if \( \eta = 1 \), (19) is never satisfied.

From the \( t + 1 \) period on, we have that
\[ a_{g+1,t+1} + \delta a_{g,t+1} + \eta (0 + \delta b_{g,t+1}) = a_{g,t} + nb_{g,t} + \delta a_{g-1,t} + \eta (0 + \delta (b_{g,t} + b_{g-1,t})). \]

(21)

It follows that postponing \( b \) trials is advantageous iff
\[ a_{g,t} + nb_{g,t} + \delta a_{g-1,t} + \eta (0 + \delta b_{g-1,t} + b_{g,t}) \geq a_{g,t} + \delta a_{g-1,t} + \eta [b_{g,t} + \delta b_{g-1,t}]. \]

(22)

As in the subsection 4.1.1, all trials pertaining to each generation must be completed before the end of the old-age period. It must be true therefore that \( b_{g,t+1} = b_{g-1,t} + b_{g,t} \).

Again, the structure of consumption will be altered permanently.

The previous inequality reduces to
\[ \frac{n}{\eta} = \frac{1 - \delta_s}{1 - \delta_e}, \] 

(22)

where the right hand side is always lower than 1.

The intuition behind (22) is straightforward. For the new allocation of resources to be superior to the original one, the objective productivity of a serious-offence court, \( n \), should not be too low compared to the subjective preference of people towards \( b \) verdicts, \( \eta \). Since the two parameters lie between 0 and 1, the lower the productivity of \( a \)-type courts, the better not to reallocate resources and postpone \( b \) trials. Furthermore, the more similar the preferences for the two types of verdicts, i.e. the higher the parameter \( \eta \), the better not to postpone \( b \) trials. Note that if the discount factors are the same for the two types of justice (that is \( \delta_s = \delta_e \)) and all types of trials are subjectively equally important (that is \( \eta = 1 \)), we have that, in the sub-case examined here, postponing \( b \) trials is never beneficial\(^{10} \). Unless the stringent conditions indicated hold, enforcing the new priorities is hardly advisable.

\(^{10} \) Courts decisions on the type of trials to be carried out could affect the future composition of crimes in the society. It means that, by postponing \( b \) trials, the future share of this type of offences could rise. The population, behaving rationally, may decide to commit more of the less prosecuted crimes. Again the share of \( a \) trials should decrease. In any case, extending the model would require the introduction of sociological parameters. This would make the analysis more realistic and practical, but also more susceptible to subjective conclusions.
Remark: statute of Limitations

Another important parameter that this cost-benefit analysis should consider is the statute of limitations (time limits to the criminal proceedings). Postponing $b$ trials will raise the probability that the light-crime actions will be invalidated by prescription. Accordingly, trials of type $a$ will prescribe less often. Since light trials are in general more numerous but less valuable than serious ones, in the extended model there would be again a specific threshold characterizing the equilibrium. If we assume that the two types of trials have the same probability of being subject to the statute of limitations, $p_a = p_b$, the inequality (22) remains unaffected. If we, instead, assume that the two types of trials have different probabilities of prescription, we derive a different rule. For example, if we assume that $p_a < p_b$ as to imagine the case where more-serious crimes have a lower probability of being interrupted (in Italy, murders have non statute of limitation), we have that (21) can written as

$$a_{g,t} + nb_{g,t} + \delta_d(a_{g-1,t} - nb_{g,t})(1-p_a)+\eta[0 + \delta_d(b_{g-1,t} + b_{g,t})(1-p_b)]$$

This reduces to

$$n \geq \frac{1-\delta_d(1-p_a)}{1-\delta_d(1-p_b)}$$

As $(1-p_a) > (1-p_b)$, it follows that it is more difficult to reach an efficient solution by postponing $b$ trials.

5 CONCLUDING REMARKS

The paper, starting from the Italian Act n.125/2008, provides a general and simple framework for evaluating the effects of prioritizing in criminal procedure. Introducing priority means enforcing a different allocation of resources in courts, on the assumption that society prefers trials for serious offences to be concluded as quickly as possible, while delays for trials of less-serious offences are more tolerable. We have argued that specific conditions must be met for such a reallocation to be beneficial. The argument hinges on the productivity of resources in serious-offences offices as compared to that of minor-offences ones. If moving resources from an office to another means that a lower number of trials gets done because of lower productivity, then it is possible that the proposed reallocation turns out to be detrimental to each generation. Although this paper was inspired by the Italian legislation, the results should also apply to countries where priorities in criminal trials are enforced.
REFERENCES


