Reflexions on plea bargaining equity: application to the French process

ANCELOT Lydie[1]

Abstract

Faced with criticisms of slowness and complexity addressed to the legal system, plea bargaining was set up in order to decongest courts gradually. Today, more than 90% of criminal cases are solved through plea bargaining in the United States. Beyond speed requirement, justice must also answer others objectives and particularly equity. For this instance, only one econometric analysis studies the equity of the American plea bargaining (Fazio, Stephen and Tata [2008]). In Europe, similar process as plea bargaining were recently applied (Italy, Germany, France). Since 2004, plea bargaining was introduced into the French penal system, causing, as in the United States, many debates. It was in particular compared to a two-speed legal system: one legal system for rich who have financial resources to pay their attorney and one other justice for poor. So, the financial constraint may operate as a gap on representation.

This paper aims to discuss, by an econometric analysis, the equity of French plea bargaining. We use personal data from three French court of instance and we carry out in this paper a Logit model in order to examine the criticism of inequity addressed to plea bargaining. We find that the court where the defendant is convicted has a significant role. Nevertheless, no difference on criminal sentences appears according to the type of attorneys (public attorneys or private attorneys) and according to the wealth of the defendant (benefit or not on legal aids).

[1] Beta, BETA-CNRS, Nancy-university, Faculty of law and economics, F-54000 Nancy, France.

1. Introduction

The research of the equity of Justice seems to be a priority which is essential concerning the legal system. However, during the implementation of the French plea bargaining (*Comparution Sur Reconnaissance Préalable de Culpabilité* (CRPC)), in 2004, the criticism of inequity was addressed to penal justice. To testify the lack of equity of this process, two mains criticisms were addressed: the discretionary power of prosecutor and the bad defense of the public defenders.

More precisely, on the one hand, the lawmaker chooses to leave freedom to the magistrates by inviting each court to decide sentences. But, the individualization on the sentence causes fear to see disparate sentences according to the courts. In addition, the compulsory attendance of attorney makes fear a two-speed justice. In fact, the main problem concerns the wealth of defendant and in addition the attorney's system of fees. This problem is viewed from two sides. On the one hand, the likening of the CRPC to a two-speed justice comes from fees, considered too weak by attorneys, when their client benefits on legal aids. Indeed, in this case, the remuneration perceived by an attorney is weaker than for a trial. Thus, the opponents to the CRPC fear that the attorneys solve quickly the cases, leading to the inequity of the sentence. On the other hand, the likening of the CRPC to a two-speed justice was denounced in particular by Papadopoulos [2005] for which only rich defendants choose trial.

The economic literature has discussed the criticism of individualization of the sentence and has showed that the effectiveness of plea bargaining could be improved if the discretionary power of the prosecutor is limited (Reinganum [1988], Roberts [2000], Mongrain and Roberts [2005]). Studies also highlighted the advantage of sentencing guidelines to limit the disparities of sentences. Reinganum [2000] shows that the sentencing guidelines to trial decrease the incentives of prosecutors to propose too different offers for similar cases in plea bargaining. Indeed, the US plea bargaining permits a control by the judge who says if the sentence is appropriated (ie penalty that fits the crime). Consequently, prosecutors are encouraged not to propose too different sentences for identical cases. In fact, if the sentences differ, there is a risk to see the agreement not concluded. This result is confirmed by Bar-Gill and Gazal [2006] and Bjerk [2007] which show that the prosecutor is sometimes encouraged to propose much reduced sentences in order to solve the most cases by plea bargaining. Thus, a defendant with cases very serious could be convicted to a sentence lighter than a defendant with fewer charges against him.

Another part of the economic theory of plea bargaining was interested to the influence of the wealth on the probability to conclude an arrangement and consequently in the likening of justice to a two-speed justice. Thus, Easterbrook [1983] determines the impact of the costs of the parts on the issue of the negotiation. He shows that the lower the wealth of the defendant is the higher is the probability to conclude an arrangement because the trial is slower and more expensive. A similar result is obtained by Kobayashi and Lott [1996] which show that a rich defendant is encouraged to go to the trial because he has financial resources to pay his attorney and secondly because the probability of being relaxed with the trial is not null. More recently, two theoretical studies (Ancelot and Delacote [2009a, 2009b]) examine the influence of the defendant's wealth and the system of fees of attorney on the amount of the sentence. They identify the type of attorney and the system of fees which lead to the highest reducing sentence. They show that not only the prosecutor provides a higher effort when he faces to an altruistic attorney but also that under some conditions an altruistic attorney would be willing to make accept a sentence higher than an egoistic attorney

The empirical studies on the equity of plea bargaining are few. The most interesting paper is Fazio, Stephen and Tata [2008] who examine, in an empirical study, the impact of the system of fees of attorney on the issue of arrangement. They show that the type of fees of attorney affects the decision to plea bargaining or trial and the time when an agreement is concluded. So, if the defendant is poor, the probability that the case is solved by plea bargaining and quickly is high. The experimental study of Garcia, Gazal and Tor [2009] show, that defendants reject the proposal for a negotiation of the prosecutor on the basis of ethical consideration. Thus, the offer appearing for the defendant too high in comparison with the gravity of case will be refused. When the sentence considered too weak by defendants compared to other sentence supported for similar cases by others defendants, the availability to accept the offer decreases.

So, the econometric study proposed in this paper is a reflexion on the horizontal and vertical equity of this process. For economists, horizontal equity follows the principle of equal treatment: with identical situation, the individuals must be treated in a similar way; while vertical equity means that differences in treatment of the individual must be applied if defendants are in different situations. In our analysis, we consider that horizontal equity corresponds to impose the same sentence against two defendants having, ceteris paribus, the same characteristics (individual and legal). Moreover, impose a different sentence with two defendants not having the same individual characteristics concerns vertical equity. In this

analysis, we consider four criteria of horizontal equity of the CRPC: the courts of defendant, the type of attorney, the defendant's wealth (the defendant benefits or not to legal aids) and the kind of this last. More precisely, in order to have horizontal equity, the sentence, ceteris paribus, must be identical if:

- the defendant is convicted in court 1, 2 or 3,
- the defendant is represented or not by a public attorney,
- the defendant benefits or not on the legal aids,
- the sentence imposed against defendant is identical, according to whether he is a man or a woman.

We also have five criteria which we attach to the vertical equity of the CRPC: to be recidivist, to have a police record, to have committed the offence with one (or several) joint author, the age of defendant, the type of offence, the number of offence and the presence of a victim. This paper is organized as follow. We start by exposing, the contents of the data base and the predictions concerning the expected effects of the various variables (section 2). Then, we present, the results of the tests associated with the effects of the criteria of horizontal and vertical equity. We examine the effect of variables on risk ratio initially, without taking into account crossings between the criteria then by examining the effects of crossings of variables (section 3). Lastly, we conclude and bring other elements.

2. Contents of the database

The database is a personal database than we have personally gathered. The data corresponds to cases solved by CRPC between January and December 2006 and approved by the judge in three French Courts of First Instance. After the deletion of the observations with several missing values, we have data relating to 1903 defendants. The sample counts data on the legal and personal characteristics of defendants.

Descriptive statistics

The variables available, their definition and the associated descriptive statistics, are exposed in table 1.

Table 1 : descriptive statistics on the criteria

Definition	Number of defendants	Percentage
Defendant is convicted in court 1	**512**	**27**
Defendant is convicted in court 2	**819**	**43**
Defendant is convicted in court 3	**572**	**30**
The defendant's attorney is public defender	**1364**	**72**
The defendant benefits on legal aids	**1248**	**66**
The defendant is a man	**1793**	**94**
The defendant is recidivist	**180**	**9**
The defendant has a police record	**998**	**52**
The defendant has committed offence with other(s) defendant(s)	**130**	**7**
The defendant has committed one offence	**985**	**52**
The defendant has committed two offences	**612**	**32**
The defendant has committed three offences	**237**	**12**
The defendant has committed four offences	**69**	**4**
The defendant has committed a traffic offence	**1390**	**73**
The defendant has committed a offence against people	**238**	**13**
The defendant has committed a offence against goods	**275**	**1**
The defendant is 18-30 years old	**823**	**43**
The defendant is 31-50 years old	**828**	**44**
The defendant is more than 50 years old	**252**	**13**
A victim has participated to offence	**493**	**26**

We can note that the majority of defendant is represented by a public defender (72%) and/or benefits on legal aids (66%). Among the two legal characteristics, we notice that a more half of defendant has a police record (52%), while only 9% are recidivists. We can also note that the majority of offences are traffic offences (73%) and after we have the offence against people and the offences against goods (respectively 13% and 14%). Among the individual characteristics of defendant, we notice that the distribution of ages is as follow: 44% for defendants to the age class 31-50 years, 43% for defendants to the age class 18-30 years and 13% of all defendants are more 50 years old.

The type of sentences inflicted against defendant in the sample is presented in the table 2 as follow:

Table 2 : type of sentences inflicted against defendant in the sample

Definition	precision	number	Percentage
fine		1194	63
Prison sentence		1134	60
Substitute sentence	disqualification from driving	724	38
	revocation of driving licence	299	16
	community service	283	15
Prison sentence, substitute sentence and fines		526	28
Fines and substitute sentence		304	16
Prison sentence and substitute sentence		252	13
Prison sentence and fines		211	11

The analysis of the various types of sentences imposed against defendant in the sample is shows that the fine and the prison sentence are mainly imposed (respectively 63% and 60%). Then, the revocation of driving licence is imposed in 38% of the cases. Defendant sample can be convicted to several sentences. We note that in 28% of the cases, those are convicted to the three types of possible sentences (prison sentence, alternative sentence and amends).

Predictions on the expected effects of the criteria of vertical equity

The table number 3 summaries our predictions.

Table 3 : expected effects of criteria

Criteria classification	Dénomination	Signe attendu de l'effet
Horizontal equity criteria	.	.
Court where the defendant is convicted	court 1	X
	court 2	*ref*
	court 3	X
Type of defendant's attorney	Public attorney	X
Defendant's wealth	The defendant benefits on legal aids	X
Defendant's kind	The defendant is a man	X
Vertical equity criteria	.	.
Criminal record (1)	The defendant is recidivist	+
Criminal record (2)	The defendant has a police record	+
Number of defendant is the case	There is one or several co-author	+
Number of offences committed	1	*ref*
	2	+
	3	+
	4	+
Type of offences committed	traffic offences	*ref*
	Offences against people	?
	Offences against goods	?
Control variables	.	.
Age of defendant	18 -30	?
	31-50 ans	*ref*
	+ 50 ans	?
Participation of victim	A victim participates on offence	?

The definition of the code is :
X : the impact is not significant at 5% level.
+ : the impact is positive and significant at 5% level.
- : the impact is negative and significant at 5% level.
? : the impact is undermine.
ref : this variable is the reference.

The assumptions that we formulate on the impact of vertical equity criteria are as follow:

- *to be recidivist or to commit the offence with another author*: these two variables aggravating circumstances (according to the French law) correspond to the vertical equity. In order to the French penal code, *ceteris paribus*, one defendant having committed an offence to which is added an aggravating circumstances must be convicted to a different sentence from

the sentence imposed against a defendant having committed an offence without aggravating circumstance.

- *to have a police record*: to have a police record is not in France an aggravating circumstance. The French Penal code does not say if the defendant must to be convicted to a different sentence if he has or not a police record, this decision is stay with the magistrate. We consider nevertheless that this variable concerns vertical equity.

- *the type of offence*: the French penal codes consider different sentences according to type of offence committed by defendant. The statistics on the judgements pronounced into 2006 show, for example, that the fines are mainly imposed against traffic offence. Alternatively, the prison sentence is imposed in 33,3% of cases against defendant having committed an offence against goods. So, we think that, *ceteris paribus*, the type of offence has an impact on the sentence.

- *the number of offences committed by defendant*: in our sample, some defendants can have committed several offences. For example, under classification "offence against goods", one defendant could have committed two distinct offences: a theft and receiving stolen goods. In this case, article 132-3 of the French Penal code gives two principles: (1) each sentence incurred for the various qualifications selected can be imposed (2) the judge can't cumulate the sentences of comparable type. For example, one defendant can't be convicted to two prison sentences. A precision must nevertheless be underline: according to article 132-7, the sentences of fine for offences can be cumulated between them. Ultimately, we think that the effect of the number of offences committed on the type of sentences imposed against the defendant, should different according to type of offence committed by the defendant.

We consider also two control variables:

- *the age of defendant*: one of the role of penal sentence is the deterrence. So, we think that the age may affect differently the sentence imposed against defendant. Indeed, in a perspective on deterrence, some courts may choose more severe sentences for the young defendants compared to the oldest defendants (or conversely).

- *the participation of a victim in the case*: if a victim participates of the offence, she can request damages from defendant. But, except the damages, nothing enables us to affirm that the sentence should be different if there is or not participation of a victim. In order to confirm this intuition, we examine the impact of that variable on the sentence.

3. Conviction to a prison sentence and equity of the CRPC

We examine the impact, on the risk ratio to be convicted to a prison sentence, of various variables relating to the equity.

In order to estimate the equity of CRPC and more precisely the impact of vertical and horizontal criteria of equity, we use a Logit model. For k explanatory variables and i = 1,…, n, the general specification of our model takes the following form :

$$\log\left(\frac{p_i}{1-p_i}\right) = \alpha + \beta_1 x_{i1} + \beta_2 x_{i2} + \ldots + \beta_k x_{ik}$$

where p_i is the probability that the defendant is convicted to prison sentence, α is the constant term, β_k is the estimate parameter, x_i is each explanatory variable of our model.

The following table summary the results.

Criteria classification	**Dénomination**	**sign of the effect obtained**	***Beta-estimate***	***Odds-ratio***	***p-values***	**Conclusion horizontal equity (EH) and vertical equity (EV)/ Horizontal inequity (IH) and vertical inequity (IV)**
Horizontal equity criteria	.	.	.	.	.	.
Court where the defendant is convicted	court 1	+	0,4949	1,640	0,0001	IH
	court 2	*ref*	*ref*	*ref*	*ref*	*ref*
	court 3	+	0,3832	1,467	0,0015	IH
Type of defendant's attorney	Public attorney	X	-0,0906	0,913	0,4714	EH
Defendant's wealth	The defendant benefits on legal aids	X	0,0194	1,020	0,8730	EH
Defendant's kind	The defendant is a man	X	0,1008	1,106	0,6438	EH
Vertical equity criteria	.	.	.	.	.	.
Criminal record (1)	The defendant is recidivist	+	0,6120	1,844	0,0011	EV
Criminal record (2)	The defendant has a police record	-	-0,4355	0,647	< 0,0001	EV
Number of defendant is the case	There is one or several co-author	X	-0,1977	0,821	0,3729	IV
Number of offences committed	1	*ref*	*ref*	*ref*	*ref*	ref
	2	+	0,2862	1,331	0,0119	EV
	3	+	0,7253	2,065	< 0,0001	EV
	4	+	0,8827	2,417	0,0027	EV
Type of offences committed	Traffic offences	*ref*	*ref*	*ref*	*ref*	*ref*
	Offences against people	-	-0,4843	0,653	0,0274	.
	Offences against goods	-	-0,4260	0,616	0,0109	.
	.					

Control variables		.	.	.	.	.
Age of defendant	18 -30	-	-0,4884	0,614	<0,0001	.
	31-50	*ref*	*ref*	*ref*	*ref*	.
	+ 50	X	0,0247	1,025	0,8781	.
Participation of victim	A victim participates on offence	X	0,2208	1,247	0,1833	.

The definition of the code is :
X : the impact is not significant at 5% level.
+ : the impact is positive and significant at 5% level.
- : the impact is negative and significant at 5% level.
? : the impact is undermine.
ref : this variable is the reference.
. : we can not conclude to equity or inequity on CRPC.

We expose our results by beginning with the examination from the "direct" effects of the criteria, i.e. by the analysis of the effects exerted by the horizontal and vertical indicators of equity without taking into account possible interactions between them. The effects of the interactions being able to exist between the various variables are then examined. In order to clarify analysis, we choose to mention the results of predicted probability[2].

3.1. Impact of the different variables of equity, studied separately

The courts of defendant: an element determining

According to our results, the court is, *ceteris paribus,* the only variable affecting the risk ratio to be convicted to a prison sentence (p = 0,0001). By taking as reference court 2, we find the conviction in court 1 or in court 3, rather than in court 2, increases the probability of being convicted to a prison sentence. For proof, *ceteris paribus*, the probability of being convicted to a prison sentence is 74% or 72% if defendant is convicted in court 1 or 3 while it is 64% if defendant is convicted in court 2.

No effect of defendant's attorney and legal aids

Contrary to several debates, no effect appears in our results concerning the impact of attorney. In fact, we find that the effect of this horizontal criterion is, *ceteris paribus,* not significant (p = 0,4714). We show also that the wealth of defendant has no role to the prison sentence. In fact, *ceteris paribus,* the *p-value* associated to legal aids is p = 0,8730.

Divergences between predictions and results concerning the impact of criminal records

In the sample, according to our intuitions, being recidivist increases the probability of being convicted to a prison sentence. But, contrary to our assumptions, to have a police record affects the risk ratio to be convicted to a prison sentence in opposite ways to us assumptions. In fact, the probability to be convicted to a prison sentence decreases if the defendant has a police record.

Effect of the type of offence

Contrary to our predictions, the type of offence affects the conviction to a prison sentence in opposite ways to the intuitions. More precisely, the results do not confirm our

[2] The summary of predicted probability is mentioned in appendix 1.

intuitions that perpetrate an offence against people (or an offence against goods) increase the probability to be convicted on a prison sentence. In fact, the type of offence affects the risk ratio to be convicted to a prison sentence ($p = 0,0215$) but commit an offence against goods (or an offence against people) rather than a traffic offence decreases the probability to be convicted to a prison sentence. As example, *ceteris paribus*, the probability of being convicted to a prison sentence is 40% if defendant commits an offence against people while this probability is 51% if defendant commits a traffic offence. In addition, the number of offences committed by defendant affects, *ceteris paribus*, the risk ratio to be convicted to a prison sentence ($p < 0,0001$). We notice according to the results that commit two, three or more than three offences rather than one offence affects the risk ratio to be convicted to a prison sentence. Moreover, in accordance with our assumptions, the probability to be convicted to a prison sentence increases when the number of offences committed by defendant increases. Indeed, *ceteris paribus*, the probability of being convicted to a prison sentence is 59%, 69% or 72% if defendant commits respectively two, three or more than three offences, while it is 52% if he commits one offence.

The effect of the defendant's age

The probability of being convicted to a prison sentence is weaker when the defendant is young. In fact, we find that when the defendant is aged 18-30 years old, the ratio of risk decreased on 38,6%.

3.2. Impact of the various criteria of equity with integration of crossings between them

When we pass the variables between them, the main result of the analysis is to underline differences in penal policies, in the conviction to a prison sentence, according to the court of defendant.

Impact to be recidivist according to the court

Among the effects exerted by the legal characteristics of defendant, we find that an effect determining exerted by the fact of being recidivist only if defendant is convicted in the court 1. On a one hand, to be convicted in the court 1, rather than in court 2, affects the risk ratio to be convicted to a prison sentence if defendant is recidivist ($p = 0,0008$). On other hand, to be recidivist, compared to be not recidivist, exerts an effect on this risk ratio if defendant is convicted in court 1 ($p = 0,0001$). For example, the probability that one

recidivist, is convicted to a prison sentence is, *ceteris paribus*, of 89% if defendant is convicted in court 1; while it is 66% if defendant is convicted in court 2. Moreover, the probability of conviction to a prison sentence than a defendant, not recidivist and convicting in court 1, is, *ceteris paribus*, of 68%. Contrary to the impact exerted by conviction in court 1, we can also underline that the effect to be recidivist does not affect (or is not affected) by the fact to be convicted in court 3. More precisely, *ceteris paribus*, be recidivist, does not exert an effect on the risk ratio to be convicted to a prison sentence if defendant is convicted in court 3 rather than in court 2 (p = 0,9793). In the same way, being recidivist, rather than not recidivist, does not affect the risk ratio to be convicted to a prison sentence if defendant is convicted in court 3 (p = 0,6656).

Impact of the type of offence committed according to the court

Ceteris paribus, the probability of being convicted to a prison sentence if defendant, having commit offence against people, is convicted in court 1 is 57% or 60% when he appears before the court 3; while it is 28% if he appears before the court 2. We also note that commit an offence against goods, rather than a traffic offence, affects the probability of being convicted to a prison sentence if defendant is convicted in court 3. For proof, the probability that one defendant, convicted in court 3, is convicted to a prison sentence is, *ceteris paribus*, of 39% if he commits an offence against goods, while it is 67% if he commits a traffic offence.

Impact of the age of defendant according to its courts

In the model without interaction, only the fact to be 18-30 years old exerts a role on the conviction to a prison sentence. In the model with interactions, this result is also found: *ceteris paribus* the risk ratio to be convicted to a prison sentence, for one defendant old from 18 to 30 years decreases by 44,6% (p = 0,0001) compared to one defendant old from 31 to 50 years. To be old from 18 to 30 years, rather than from 31 to 50 years, exerts an effect on the risk ratio to be convicted to a prison sentence according to the courts. Thus, if the defendant is old one from 18 to 30 years and is convicted in court 1, the probability that he is convicted to a prison sentence is, *ceteris paribus*, of 89% while it is 82% if it is old 31 to 50 years. This result is also found when defendant is convicted in court 3. Indeed, *ceteris paribus*, if defendant is convicted in court 3, the probability that it is convicted to a prison sentence is 55% if he is old 18 to 30 years while this one amounts to 67% if he is old 31 to 50 years. Lastly, we also emphasize that in the sample, the probability of being convicted to a prison

sentence decreases, if the defendant old one from 18 to 30 years, compared in front of court 3 rather than in front of court 2 (p = 0, 0318) but slightly.

Finally, we find that the age of defendant is significant when he's crossing with two other criteria: to be convicted in court 3 (rather than in court 2) or to commit an offence against people (rather than a traffic offence). Indeed, if the defendant is more than 50 years old and is convicted in court 3, rather than in court 2, the probability that it is convicted to a prison sentence, *ceteris paribus*, is 76% while this probability is 66% when he is convicted in court 2.

4. Conclusion and discussion

By focusing the analysis on the impact of the horizontal equity criteria on the risk ratio to be convicted to a prison sentence, we have showed that the courts are an element determining on the conviction to a prison sentence. Conversely, being represented by a public defender or benefit on legal aids does not affect the conviction to a prison sentence. The integration of interactions between the various criteria also allowed us to show that some of these criteria affect the risk ratio examined only if they are studied separately (to have a criminal record, to commit the offence with one or another author(s)). The effect of interactions between the court and other criteria enabled us to highlight differences in penal policies according to the court where defendant is convicted. Initially, being recidivist affects the probability of being convicted to a prison sentence only if defendant is convicted in courts 1. Then, the effect of the age is different according to the court. Indeed, the risk ratio to be convicted to a prison sentence differs if defendant belongs to the age class 18-30 years and if he's convicted in court 1. Conversely, if defendant is convicted in court 3, this risk ratio is affected if the defendant belongs to the class more than 50 years. Except the effect of the court, nothing enables us to highlight other elements of absence of horizontal equity in the sample (be represented by a public defender and/or benefit on legal aids).

Among the estimated effects of the vertical equity criteria, we find that the legal past (to be recidivist or have a police record), the age of defendant, the type of offence, the number of offences committed and commit the offence with one (or several) joint author(s) affect the risk ratio to be convicted to a prison sentence.

Appendix 1 : Explanation of the conviction to a prison sentence without cross the criteria of equity

Effecttrib1 (p = 0,0001)	
The defendant is convicted in court 1	P = 0,74
The defendant is convicted in court 2	P = 0,64
Effecttrib3 (p = 0,0015)	
The defendant is convicted in court 3	P = 0,72
The defendant is convicted in court 2	P = 0,64
Effectrecid (p = 0,0011)	
The defendant is recidivist	P = 0,88
The defendant is not recidivist	P = 0,86
Effectcasier (p < 0,0001)	
The defendant has a police record	P = 0,80
The defendant has not a police record	P = 0,86
Effectapersonnes (p = 0,00109)	
The defendant has committed a traffic offence	P = 0,51
The defendant has committed an offence against people	P = 0,40
Effectnbinfra2 (p = 0,0119) **Effectnbinfra3 (p < 0,0001)** **Effectnbinfra4 (p = 0,0027)**	
The defendant has committed one offence	P = 0,52
The defendant has committed two offences	P = 0,59
The defendant has committed three offences	P = 0,69
The defendant has committed four offences	P = 0,72

Guide reading: - For each effect, we mention on the first line, the effect, which *ceteris paribus*, appears significant in the sample. For example, effettrib1 means that, the effect to be convicted in court 1, rather than in court 2, affects, *ceteris paribus*, the risk ratio to be convicted to a prison sentence. The values mentioned in brackets correspond to the *p-value* associated on the effect of this criterion. - P = 0,74 is the probability of being convicted to a prison sentence, if, *ceteris paribus*, defendant is convicted in court 1.

<u>Appendix 2 :</u> Explanation of the conviction to a prison sentence with cross the criteria of equity

<u>Effetrib1SIrecid</u> (p = 0,0008)		*The defendant is convicted in court 1*	*The defendant is convicted in court 2*
	The defendant is recidivist	P = 0,89	P = 0,66
<u>effetrecidSItrib1</u> (p = 0,0001)		*The defendant is recidivist*	*The defendant isn't recidivist*
	The defendant is convicted in court 1	P = 0,89	P = 0,68
<u>Effettrib1SIapersonnes</u> (p < 0.0001)		*The defendant is convicted in court 1*	*The defendant is convicted in court 2*
	The defendant has committed an offence against people	P = 0,57	P = 0,28
<u>effettrib3SIapersonnes</u> (p = 0,0075)		*The defendant is convicted in court 3*	*The defendant is convicted in court 2*
	The defendant has committed an offence against people	P = 0,60	P = 0,28
<u>Effettrage1SItrib1</u> (p = 0,0061)		*The defendant is 18-30 years old*	*The defendant is 31-50 years old*
	The defendant is convicted in court 1	P = 0,89	P = 0,82
<u>effetabiensSItrib3</u> (p < 0.0001)		The defendant has committed an offence against goods	The defendant has committed a traffic offence
	The defendant is convicted in court 3	P = 0,39	P = 0,67
<u>effettrage1SItrib3</u> (p = 0,0063)		*The defendant is 18-30 years old*	*The defendant is 31-50 years old*
	The defendant is convicted in court 3	P = 0,55	P = 0,67
<u>Effettrib3SItrage1</u> (p = 0,0318)		*The defendant is convicted in court 3*	*The defendant is convicted in court 2*
	The defendant is 18-30 years old	P = 0,55	P = 0,52

Effettrib3SItrage3 (p = 0.0128)		*The defendant is convicted in court 3*	*The defendant is convicted in court 2*
	The defendant is more 50 years old	P = 0,76	P = 0,66
effetapersonnesSItrage3 (p = 0,0035)		The defendant has committed an offence against people	The defendant has committed a traffic offence
	The defendant is more 50 years old	P = 0,28	P = 0,62
effetapersonnesSItrage1 (p = 0,0064)		The defendant has committed an offence against people	The defendant has committed a traffic offence
	The defendant is 18-30 years old	P = 0,37	P = 0,52

Guide reading: - In the left-hand column, we report the effect which *ceteris paribus*, appears significant in the sample. For example, effettrib1SIrecid means that, when defendant is recidivist, the effect to be convicted in court 1, rather than in court 2, affects the risk ratio to be convicted to a prison sentence. The value mentioned between brackets corresponds to the *p-value* associated with the effect of this criterion.
- the probability mentioned corresponds to the probability of being convicted to a prison sentence if defendant answers, *ceteris paribus*, with the two criteria indicated in column and line. For example, *ceteris paribus*, P = 0,89 means that defendant, convicting in court 1, has a probability to be convicted to a prison sentence amounting to 89% if he is recidivist

References

ANCELOT L. et DELACOTE P. [2009a], « Prosecutor and lawyers in plea bargaining with complete information », *Economics Bulletin*, Vol. 29 no.3 pp. 1929-1936.

ANCELOT L. et DELACOTE P. [2009b], « Prosecutor and Lawyer in plea bargaining :screening or not screening », SSRN Working Paper, http://ssrn.com/abstract=1416110. pp. 1-16.

BAR-GILL O. et GAZAL O. [2006], « Plea Bargaining only for the Guilty », *The Journal of Law & Economics*, 49, pp. 353-364.

BJERK D. [2007], « Guilt Shall Not Escape or Innocence Suffer : The Limits of Plea Bargaining When Defendant Guilt is Uncertain », *American Law and Economics Review*, 9(2), pp. 305-329.

EASTERBROOK F. [1983], « Criminal Procedure as a Market System », 12, *Journal of Legal Studies*, pp. 289-332.

FAZIO G., STEPHEN F et TATA C. [2008], « Incentives, criminal defence attorneys and plea bargaining », *International Review of Law and Economics*, 28, pp. 212-219.

GARCIA S., GAZAL O., et TOR A. [2009], « Fairness and the willingness to accept plea bargain offers, *Journal of Empirical Legal Studies*.

KOBAYASHI B. et LOTT J. [1996], « In Defense of Criminal Defense Expenditures and Plea Bargaining », 16, *International Review of Law and Economics*, pp. 397-415.

MONGRAIN S. et ROBERTS J. [2005], « Plea bargaining with budgetary constraints », Working Paper, Department of Economics, University of Toronto.

REINGANUM J. [1988], « Plea Bargaining and Prosecutorial Discretion », *American Economic Review*, 78, pp. 713-728.

ROBERTS J. [2000], « Plea Bargaining with Budgetary Constraints and Deterrence », Working Paper, Department of Economics, University of Toronto.