A Certain Uncertainty; Assessment of Court Decisions in Tackling Corruption in Indonesia

Pradiptyo, Rimawan

Faculty of Economics and Business, Universitas Gadjah Mada, Indonesia

30 August 2011

A Certain Uncertainty; Assessment of Court Decisions in Tackling Corruption in Indonesia[1]

Rimawan Pradiptyo[2]
Department of Economics, Faculty of Economics and Business
Universitas Gadja h Mada, Indonesia

Abstract

This paper aims to assess court decisions for erradicating corruption in Indonesia. The data are based on Indonesia Supreme court decisions from year 2001 to year 2009. The data set comprises of 549 cases involving 831 defendants. After the end of Suharto's regime, the Anti Corruption Bill was ratified in 1999 and was refined in 2001. As Indonesia follows civil law system, legal certainty has been manifested by stating the level of punishment clearly for each type of offences in the Bill. Despite a clear guidance on the intensity of punishments for each corruption types, judges' decisions on the intensity of punishments sentenced across defendants are far from consistent. Using logistic regressions, we found that the probability of judges in sentencing defendants with financial punishments (i.e. fines, compensation and the seizure of evidence) does not depend on the level of economic losses inflicted by the defendants. On the contrary, the judges' decisions tend to be more lenient toward defendants with particular occupations but harsher toward the others. The intensity of punishments has been sentenced idiosyncratically and has weakened the deterrence effect of the punishments. In estimating the social cost of corruption, prosecutors have estimated only the explicit cost of corruption, therefore the impact of corruption to Indonesia economy is under underestimated. Brand and Price (2000) defined that the social costs of crime includes the costs in anticipation of crime, the costs as a result of crime and the costs in reaction of crime. The total explicit cost of corruption from 2001 to 2009 was Rp 73.1 trillion (about US $8.49 billion), however the total financial punishment imposed by the supreme court was Rp 5.33 trillion (about US$619.77 million). The data show that corruption is mostly committed by people with medium-high income and they usually have good careers.

Keywords: Corruption, Legal Certainty, Financial Punishment, Social Costs of Crime, Explicit Cost of Corruption, Deterrence Effect.

JEL Classification: C70, K42

[1] I would like to thank Paripurna P Sugarda, Hifdzil Alim, Edy OS Hiarej and Arti Adji Kompas for thoughtful and constructive discussions. I am indebted to Harri Gemilang, SH Seri Damayanti, Surya Dharma Putra, Sony Saputra, and Abraham Wirotomo for excellent assistance in collecting and inputing data. Constructive feedback from participants conferences in Perth, Australia, Toronto, Canada and Yogyakarta, Indonesia are gratefully acknowledged. All remaining errors are my responsibility.
[2]Corresponding contact details: E-mails: Rimawan@Gadjahmada.edu, Rimawan@feb.ugm.ac.id

1. Introduction

In the deterrence theory literature, the debate primarily focuses on whether increasing the severity of punishment is effective in deterring individuals in committing an offence. It is assumed that any potential offender is rational and committing an offence is a rational choice. Individuals are going to commit an offence if the expected benefits of the activity exceed the expected costs of offending. Consequently, in order to deter individual from committing an offence, the authority may increase the expected costs of offending bourned by potential offenders.

A group of economists tend to use decision theory in order to analyse on why individuals commit an offence and on how to deter individuals from committing such activity. It is argued that the severity of punishment does matter in deterring individuals from committing an offence. This approach is pionerred by Becker, 1968 and excellent literature surveys in this area have been conducted by various authors including Garoupa (1997), Eide (2000, 2004), Bowles (2000) and Polinsky and Shavell (2000, 2007).

The other group of economists tend to use game theory in analysing phenomena in criminal justice. Tsebelis (1989, 1991, 1993) pionereed in using this approach and argued that any attempt to increase the severity of punishment reduced the probability of criminal justice authority in enforcing the law but it did not affect the probability of individuals from offending. This counter intuitive result triggered a long debate involving several authors including Bianco (1990), Ordeshook (1990), Weissing and Ostrom (1991), Hirshleifer and Rasmusen (1992) and Andreozzi (2004). Pradiptyo (2007) refined the inspection game proposed by Tsebelis (1989) and showed that there is not so much discrepancy in the solution between decision theory and game theoretical approaches. Pradiptyo (2007) showed that any attempt to increase the severity of punishment is going to reduce the likelihood of offending if certain conditions hold. In addition, he proved that crime prevention initiatives are more effective in reducing the likelihood of offending in comparison to increasing the severity of punishment.

Attempts to increase the expected costs of offending can be conducted in several ways. The criminal justice authority may endeavour either to increase the probability of detection, or alternatively, they may increase the severity of punishment. Indeed both possible scenarios are costly. In order to achieve the optimum level of deterrence, however, the criminal justice authority has two possible scenarios either by setting low probability of detection combined

with high intensity of punishment or by setting high probability of detection together with low intensity of punishment.

A similar approach as mentioned above can be used in eradicating corruption. Any potential corruptor is rational and accordingly they conducted costs-benefits analysis prior to commit corruption. As applicable to other type of offences, the intensity of corruption can be divided into several groups for instance small, medium and large scales of corruption. The classification of the groups depends on the intensity of misallocation of resources owing to corruption in Indonesia. There are various types of punishment for corruptors, ranging from imprisonment, fines, compensation order and the seizure of the illegitimate assets. In several countries, corruptors may receive capital punishment. In ideal world, the higher the intensity of corruption, the higher the probability of corruptors to receive harsher punishments.

One aspect in the deterrence theory that has not been received sufficient attention is the role of consistency of court decisions. The consistency of court decisions builds reputation of the criminal justice system and to some extent is going to affect the deterrence effect for any act imposed. The consistency of court decisions with the type and intensity of punishments may be sensitive to the penal system that has been embraced across countries.

This chapter aims to assess court decisions for the case of corruption in Indonesia. The study uses 549 cases, involving 831 defendants, which have been sentenced by the Supreme court of the Republic Indonesia in 2001-2009. All cases have been published in the official website of the supreme court in in the following URL: http://putusan .mahkamahagung.go.id.

2. Corruption Erradication Programmes in Indonesia

Various attempts have been made by the Government of Indonesia (GoI) to tackle corruption. Back in 1950s, during President Soekarno's era, the GoI had launched a programme to tackle corruption. Similarly, under President Suharto's era in 1970s until mid 1990s, the GoI also launched several programmes to eradicate corruption. Nevertheless the effectiveness of the programmes was questioned as both presidents tend to embrace absolute power, which tend to be corrupt.

After President Suharto stepped down in 1998, Indonesia had been undergoing reformations in various aspects including politic, economy and law. The main focus of the reformations was

to abolish corruption, collusions and nepotism, - the very problems flourished under the Suharto's regime.

Several measures have been taken in order to combat corruption. In 1999, the anti corruption act was ratified and it refined in year 2001 (see the summary in Appendix A). In 2002 corruption eradication committee (KPK) was formed and the institution has been fully functioned since 2004. In 2003, the money-laundering act was ratified and along with this act was the formation of Financial Transaction Report Analysis Centre (PPATK), which serves as a financial investigative unit in Indonesia. The PPATK has been fully functioned since 2005. Recently, in October 2010 the amendments of the money laundering act was ratified which provide basis of more active link between PPATK and other criminal justice agencies, including KPK, in attempts to combat corruption and money laundering (see figure 1).

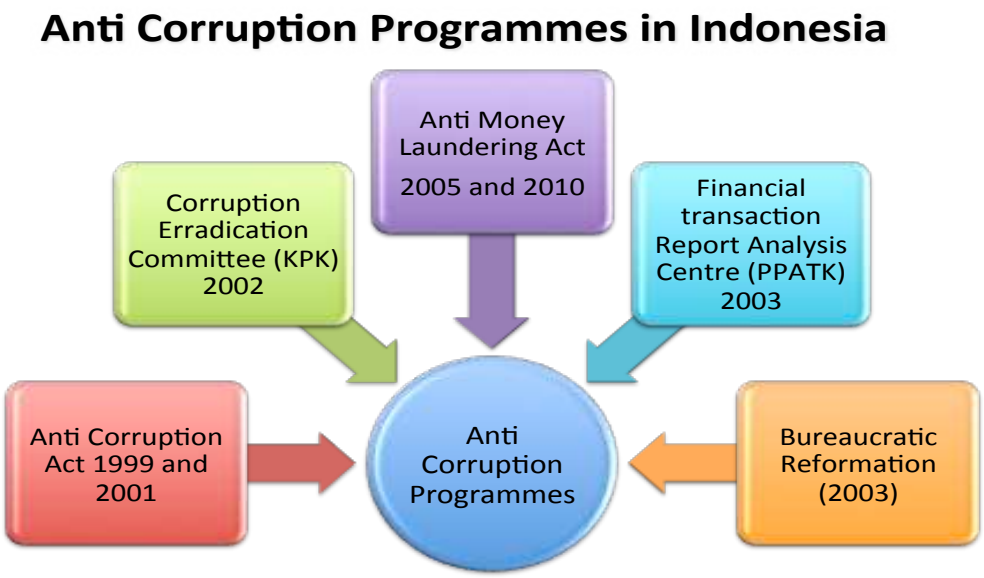

Figure 1: Various programmes in combating corruption in Indonesia

A preventive measure to reduce corruption by civil servants is the initiation of bureaucratic reformation programmes since 2003. The programme has been initiated for the first time within the Ministry of Finance. The programme provides substantial improvement on civil servant salary but at the same time the transparency of civil servant performance has been promoted. Currently, most government departments have embraced bureaucratic reformation.

Indonesia follows civil law, which has been influenced by the Dutch since colonial era. Criminal Code of Indonesia (KUHP) has been used in Indonesia. Although Indonesia has declared its independent since 1945, but its penal code is still based on the Dutch Criminal Code in 1811 (Wetboek van Strafrecht). Ironically, the Dutch no longer implement the code as they has embraced a new code since 1979.

Corruption is an extra ordinary crime and there was a need to create a special measure to tackle corruption by creating anti corruption act. The anti corruption act has been ractified in 1999, although it was refined in2001. In essence, both laws are similar and the only difference is that the intensity of punishment of the latter do not refer to Criminal Code of Indonesia (KUHP) which is based on the Dutch Criminal Code in 1811 (Wetboek van Strafrecht) any longer[3].

The KPK is an independent body financed by the the government and the main task of the KPK is to eradicate and to prevent corruption in Indonesia. It seems KPK tasks may overlap with police and prosecutors, however, KPK deals only with large scale corruption cases (i.e, the value of the corruption is at least Rp1 billion (US$ 116,279). Below the threshold, corruption cases is going to be dealt by police and district prosecutors.

3. The Complexity of Corruption in Indonesia

A survey by Hong Kong-based Political & Economic Risk Consultancy Ltd in 2010 placed Indonesia as the most corrupt country in Asia-Pacific region. It turns out that problems of corruption in Indonesia is more acute then other countries in the region such as Cambodia, the Philipines, India, Thailand and Vietnam. Furthermore, the Corruption Perception Index in 2010 by the Transparency International placed Indonesia as the 110th country out of 178 countries in the world.

Question may be raised on how serious it is the problem of corruption in Indonesia. Figure 2 shows the model of complexity of corruption in Indonesia. The corruption may start from stage 1 whereby an individual committed an offence (either conventional offence or even a corruption). At this stage, potential offenders interact with police by playing an inspection game. The potential offenders have two alternative strategies, offence and not offence,

[3]For instance, the maximum fines according to Criminal Code of Indonesia for certain offences may only be in the range of several hundreds rupiah, which is almost neglible in term of value. In the Anti Corruption Act 20/2001, the fines has been adjusted to year 2000 values, and the maximum fines is Rp 1 billion or approximately US $ 100,000.

whereas the policemen have also two strategies, inspect and not inspect. It should be noted that in this model, it is assumed that the game is played by representative agent.

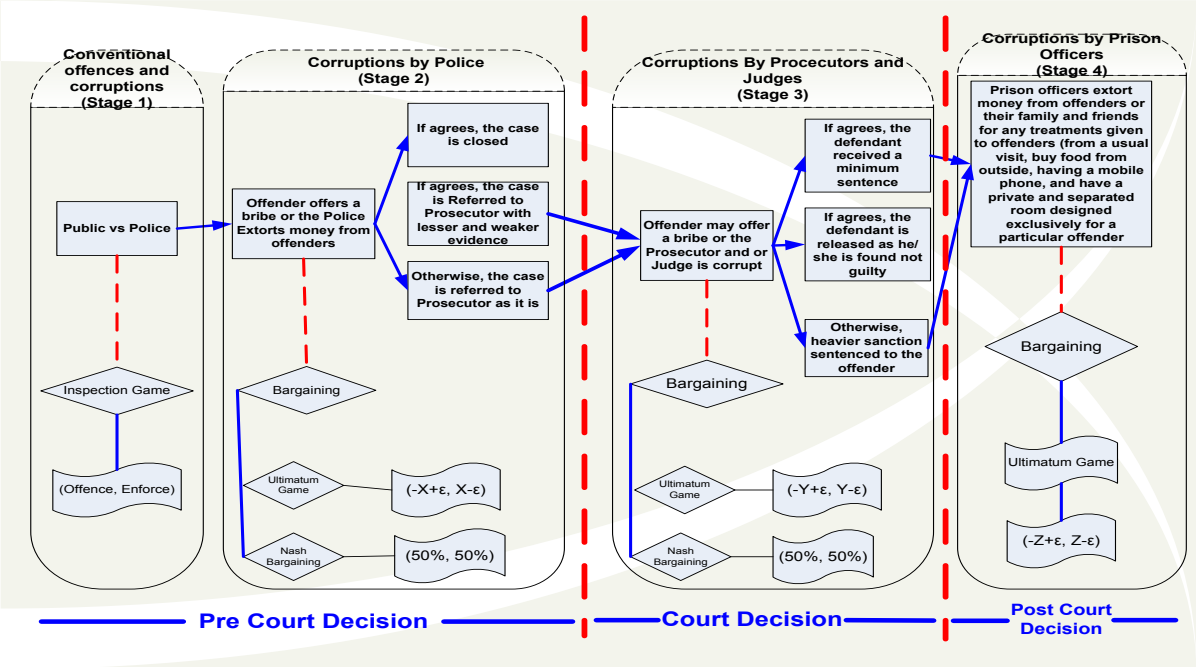

Figure 2: Modelling the complexity of corruption in Indonesia

Suppose in Stage 1 an individual commits a corruption while the police inspects, then the individual is caught. Given the individual is caught, the game moves to the Stage 2. In this stage, the police should process the case and then refer the case to district prosecutors. Prior to processing of the case, the offender may offer a bribe to the police or alternatively a corrupt policeman may extort money from the defendant. At this stage, both parties may involve in a bargaining process. Stage 2 modelled corruption by police officers. Bowles and Garoupa (2005) provided extensive and excellent analysis of modelling police corruption.

There are various possible outcomes from the bargaining. If the bargaining is agreed, there is an opportunity that the policeman stop the process of investigation and decide for not to record the case. Another alternative outcome if the bargaining is agreed is that the police may continue to process the case and refer the case to prosecutors but with lower gravity of offending and weaker evidence. This case may occur when the case is considered as high profile whereby the press has reported in the media. Nevertheless, if the policeman is a righteous person, any attempt to offer a bribe by the offenders may adversely affect to the offenders. In the referral to the prosecutors, the policeman may include information that the

offenders attempted to offer a bribe to him/her. If this scenario occurs, the offenders will be prosecuted more severely as they are going to be prosecuted with harder punishments.

Stage 3 provides a model of corruption involving prosecutors and judges. At this stage, the defendants may offer a bribe to prosecutors and or judges. Alternatively, the prosecutors or judges may extort money from defendants. The fact that Indonesia follows civil law provide plenty room of manoeuvre for prosecutors and judges to extort money from defendants. There are various acts in Indonesia, and since Indonesia follow civil law, it is compulsory that each act states clearly the intensity of punishment to those who violate the law. In the banking act in 2004 for instance, the maximum fines for offenders worth Rp100 billion rupiah. On the other hand, the anti corruption act stated that the maximum fines worth only Rp1 billion rupiah. Obviously the different in the intensity of punishment between some acts create opportunity to prosecutors and judges to extort money from defendants in exchange to charges with less intensive punishments.

Similar to the process at stage 2, there is a bargaining process in stage 3 to determine the amount of money bribed or extorted and the possible outcomes in the court. If the bargaining is agreed, the defendant may be charged with not guilty or even if the defendant is found guilty he/she may receive much less intensive punishment. Nevertheless, bribing is uncertain business as the defendant may not know the types of prosecutors or judges. If the prosecutors and the judges are righteous individuals, then offering bribe to them may result in more intensive punishment for the defendants.

It should be noted that corruption in courts in Indonesia are not limited only at district courts, but it may occur in high courts and even in the supreme courts. There are several cases of corruption involving supreme judges in the supreme courts. It should be noted also that under Indonesia's penal law system, the decision whether defendants are guilty or not and also the intensity of punishment is determined by the judges. There is no jury in Indonesia judicial system. Consequently, the desire to offer a bribe to judges is paramount as the judges have tremendous right to determine whether the defendants are guilty or not and they also hold the right to determine the type and the intensity of punishment.

In the final stage, corruption may be committed by officers in prisons. The type of corruption committed in prison ranging from asking money to the family of offenders during the scheduled visits up to allowing offenders to spend several nights to stay at home with their

family. There are two famous cases of corruption in prison in Indonesia. First is the case of Artalita who managed to bribe prison officers to allow her to have her own five star very spacious private room within the prison area. Furthermore, he has another spacious room for organising monthly meeting with her staff to run her multi billion businesses. Secondly is the case of Gayus Tambunan, who managed to bribe prison officers to allow him to go on holiday in Hongkong with his wife and to watch international tennis match in Bali.

The complexity of corruption in Indonesia is paramount if consideration is taken for the existence of *markus* or case broker in every single level of criminal justice authority in Indonesia. *Markus* is stand for *makelar kasus* (makelar is from the Dutch word *makelaar* which mean broker, and *kasus* means case, thus *markus* is a case broker). The *markuses* exist in every single part of criminal justice authority in Indonesia. The *markus* may not necessarily be a criminal justice officer, but it can be anybody as long as the person has a good connection with officers in criminal justice system. As a broker, the *markus* works by intermediating between defendants and officers in criminal justice system. Indeed, the existence of the *markus* occurs due to the uncertainty in bribery and extortion whether the offer would be accepted the other party. The *markus* serves as the intermediary between both parties to smooth the process and to reduce error types I and II in offering bribery or asking for extortion. The problem of the *markus* is paramount such that the GoI has formed a special task force for cracking the Markus within the criminal justice authority.

3. Judicial System in Indonesia

Under Indonesia criminal justice system, all criminal cases should be trialled before District courts. Each District court is situated in a Kabupaten (district) and there are 502 districts in Indonesia. Judges' decisions in a district court may be appealed either by defendants or prosecutors if they dissatisfied with the decisions. In the event that the defendant does the appeal, which occurs in most corruption cases, then the case is referred to the high court, which situated in the capital of each province. In the case for which the defendant does not satisfy with judges' decisions in the High court, a further appeal can be made to the supreme court. On the contrary, if the prosecutor does not satisfy with judges' decisions in the District court, the case may be appeald directly to the supreme court.

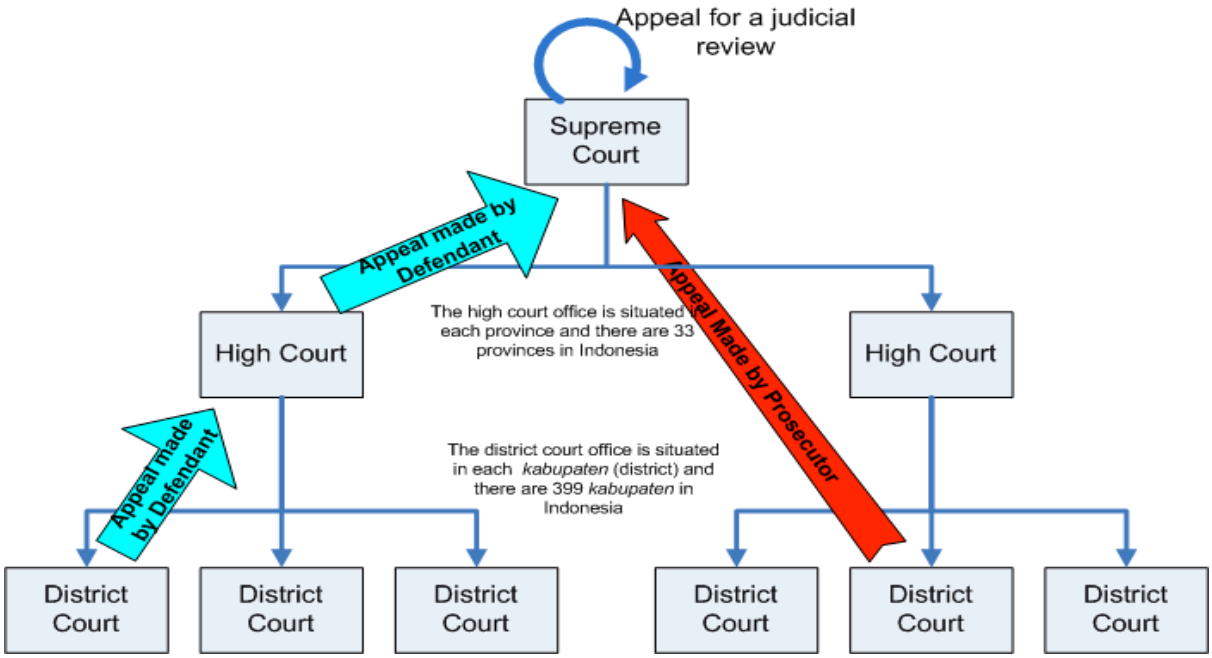

Figure 1: Appeal Process in Indonesia Criminal Justice System

After the case was sentenced by the supreme court, there is still an opportunity for conducting further appeal called a judicial re-examination by the supreme court. The judicial re-examination can only be pursued if there is new evidence, which has not been put before trial previously. It should be noted that the cost of court in Indonesia is economical. The judicial system in Indonesia rules that the there are three possible values of the court costs, namely Rp2500 to Rp10,000 (US$0.29 – 1.16), irrespective of how long the trials have been conducted.

Owing to the structure above, it is highly likely that a defendant make an appeal until reaching the supreme court. Almost all corruption cases that have been dealt by district courts were appealed up until to the Supreme court. This occurs partly due to the fact that most defendants who were prosecuted for corruption cases tend to be more educated in comparison to defendants for other conventional offences (e.g. theft, robbery, criminal damage, etc)[4]. From game theoretical analysis, it is rational for defendants to appeal their case until the supreme court as the system allows of doing so and the court cost, apart from hiring lawyer, is economical.

[4] I am grateful to Eddy Hiarej for providing expert opinion regarding this point.

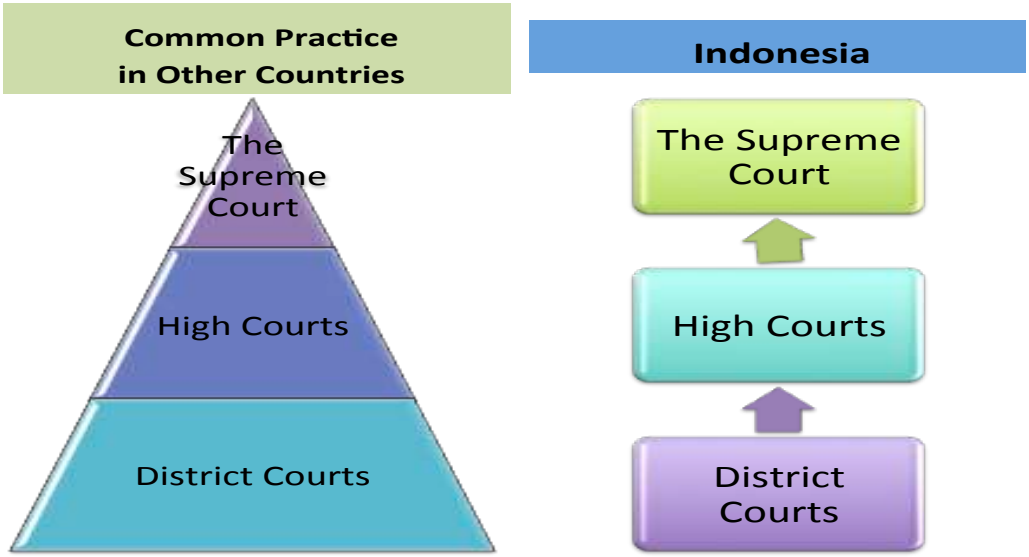

Figure 2: Comparison of the Distribution of Cases Across Level of Courts

The cases appealed in Indonesia judicial system looks like a tube or a pipe, whereby there is no different between the number of cases dealth by the district courts and the number of cases dealth by the supreme court. This occurs since almost all corruption cases which were trialed in the district court have been appealed. Once an appeal has been made by either a defendant or a prosecutor, then the case is certaintly end up in the supreme court. Obviously this structure is different from the distribution of cases dealth by different level of courts in countries which follow common law. In those countries, some cases in either magistrate court or crown court may not be able to be appealed in high courts. Similarly, some cases in high courts may not necessarily be able to be appealed in the supreme courts. Consequently the structure of the distribution of cases in each level of court in those countries looks like a triangle.

The data used in this study were based on the Supreme court's decisions in the period 2001-2009. Indeed the use of decisions by the supreme courts create unobserved heterogeneity and the source of the unobserved heterogeneity are as follows:

1. Some appeals went through high courts, but some went directly to the supreme court (being accommodated in the model);
2. The number of cases terminated in high courts is unknown (unsolved);
3. The number of cases terminated in district courts is unknown (unsolved);
4. The number of cases reported to Police is unknown (unsolved).

The last source of unobserved heterogeneity may be unsolveable and this occurs in various empircal studies in economic analysis of crime. Nevertheless, information and judgement from practitioners and experts in the area of corruption show that, especially in corruption cases, almost certaintly the decision in the district court followed by an appeal either by defendants or prosecutors[5].

Another consequence to the structure of case distribution across courts is tremendous pressure on the task of the supreme judges. Currently, there are 46 supreme judges in Indonesia. This number is much higher above the number of the supreme judges in the USA, which only have 9 supreme judges. In term of populations, the USA is the third largest population in the world, whereas Indonesia is in the fourth place. Nevertheless, due to different law systems that have been embraced by both countries, the number of the supreme judges is totally different.

Table 1: Number of Cases and Sentences Made by Judges in Indonesia Judicial System 2006

Courts	Number of Cases	Number of Cases Sentenced	%	Number of Judges	Average Cases per Judge	Average Sentenced cases per Judge
Supreme court	24,826	10,714	43.16%	46	540	233
High court						
a. Common Court	8,202	6,352	77.44%	334	25	19
b. Religious Court	1,952	1,592	81.56%	239	8	7
c. State Administration Court	621	523	84.22%	30	21	17
d. Military Court	425	303	71.29%	9	47	34
District court						
a. Common Court	2,636,689	2,601,551	98.67%	2,787	946	933
b. Religious Court	206,780	171,573	82.97%	2,203	94	78
c. State Administration Court	1,203	840	69.83%	180	7	5
d. Military Court	4,628	3,838	82.93%	73	63	53

Source: The Supreme court Annual Report 2006.

Table 1 shows the extend of the burden faced by judges across various level of courts in Indonesia. The number of cases appealed to the supreme court is higher than those of the high courts. The ratio of the cases appealed to the supreme court as opposed to the high courts is about 3 to 1. Unfortunately only 46 judges in the supreme court in Indonesia, as opposed to 334 judges in the high courts, therefore it is not suprising that the average case per judge is

[5] I am grateful to Eddy OS Hiarej and Hifdzil Alim for suggesting this point.

much higher in the supreme court (540 cases) relative to that of the high court (25 cases). The judges in the high court managed to complete 77.44% of cases appealed, whereas the supreme court judges only managed to complete 43.16% of cases appealed to the supreme court. Obviously this creates the backlock of the cases tackled by the supreme court and should be dealt in the following year.

The Cost of Corruption

Each criminal offence creates burdens or social costs to the society. There are various ways to estimate the social costs of crime (see Brand and Price, 2000, Dubourg et al, 2005, among others). Brand and Price (2000) proposed the social costs of crime consist of three main elements, which are the costs in anticipation of crime, the costs inflicted to victims and the costs in reaction of crime. Corruption is an extra ordinary crime, however, corruption may not necessarily affect to particular victims. To some extend, corruption may be considered as a victimless crime if we compare it with other types of offences, which involve some physical impacts to victims such as robbery, the violence against the person, sexual offences, etc.

Corruption creates misallocation of resources and to some extend they may reduce the welfare of many individuals in the society. Using a similar framework as proposed by Brand and Price's (2000), the social cost of corruption may be estimated using four elements as follows:

1. the costs in anticipation of corruption,
2. the explicit cost of corruption,
3. the implicit costs of corruption,
4. the costs in reaction to corruption.

In measuring the misallocation of resources owing to corruption, the explicit and the implicit costs of corruption may not be separated. The explicit cost of corruption measures the amount of public money that was misallocated to personal purpose. The implicit costs of corruption measure the opportunity costs of misallocating the resources, namely the loss in economic multiplier due to the misallocation of public money to personal purpose.

According to the anti corruption act, any conduct by individual or corporation which either against the law and or abuse the power which may inflicted losses to economy or national budget is considered as a corruption. The definition of corruption in the anti corruption act is limited to misallocation of public money. Indeed, the coverage of offences in Indonesia anti

corruption act is narrower in comparison to that of the UN convention against corruption in 2003, whereby Indonesia is one of countries, which ratified it. The anti corruption act does not cover corruption by private sector, moreover it does not taken into consideration that money politic is part of corruption. The latter is quite ironic since in Indonesia Criminal Code (KUHP) it is stated clearly that money politic is a criminal offence, unfortunately this type of offence has not been acknowledge as part of corruption in the anti corruption act.

The main indicator of corruption in Indonesia is that whether or not such activity may inflict losses to economy or the national budget. Ideally the estimation of losses in economy and national budget uses Economics approach by estimating both the explicit and the implicit costs of corruption. The common practice in Indonesia judicial system is that the estimation of losses in economy or national budget due to corruption is limited to the explicit cost of corruption. The estimation of the losses has been conducted by prosecutors, who obviously well versed in the area of law but they have limited knowledge in Economics. From the perspective of Economics, the use of explicit costs as a measure to prosecute an individual for committing a corruption contains high probability of making error types I and II in court sentences.

The estimation of explicit and implicit costs cannot be separated in every economic activity. In many cases, the explicit costs of a decision are overwhelmed by its implicit costs or implicit benefits. For instance, in order to compensate an increase in fuel prices, the Indonesian government provides transfer payment to households with low income for the first six months. If the explicit costs are the only measure used to analyse the initiative, than there is no merits of this initiative as it costs dearly to the taxpayers. Nevertheless, if the opportunity costs have been taken into consideration, then the benefits of the initiative may dominate it cost as the economic multiplier would be taken into consideration in analysing the initiative.

Brand and Price (2000) estimated the social cost of crime by taken into consideration offence multiplier for each offence. It is true that for almost all offences, the underlying number of offences is unknown. As a result, the recorded offences reported by Police may be seen as a tip of an iceberg, as the number of unrecorded offences is unknown. The number of unrecorded offences can be estimated by estimating the value of offence multiplier. The offence multiplier is estimated by comparing the number of subjects in a particular survey who were victimised and they report to the police and those who did not report. This multiplier can be used to

estimate the number of unrecorded offences. The underlying number of offences, then, is the summation of the number of recorded offences and the estimated number of unrecorded offences.

Thus far there is no comprehensive survey on crime and victimisation in Indonesia, consequently the offence multiplier on corruption cannot be estimated. Owing to the lack of the information, the estimation of the cost of corruption does not take into consideration the number of unrecorded offences as used in Brand and Price (2000). It can be argued that the social cost of corruption in this paper is underestimated, as it does not taken into consideration the offence multiplier and also the opportunity costs of misallocation of resources due to corruption.

The estimation of the cost of corruption in this chapter refers to the explicit cost of corruption as estimated by prosecutors and stated explicitly in the documents of Indonesia Supreme court decisions. Based on constant price 2008, the explicit cost of corruption in Indonesia from 2001 to 2009 was Rp 73.10 trillion (US$ 8.49 billion based on average exchange rate in August 2011 which is Rp8600: US$1). This is slightly higher then the value of fiscal expansion (Rp72 trillion or $8.37 billion) allocated by the Indonesian government in order to reduce the impact of global crisis in 2009. The cost of corruption in the period of 2001-2009 was about 7.3% of Indonesian annual budget in 2009 or about 6.08% of the annual budget in 2011.

Table 2 shows that most corruptions in Indonesia have been committed by male (93%). This occurs due to the fact that most important positions in public sector are still dominated by male. Of 544 offenders who were found guilty by the supreme court, only 36 individuals are female (6.67%). The proportion of money that female corruptors took only 0.03% as opposed to 99.92% which was corrupted by their male counterparts.

In term of age, the majority of corruptions were committed by individuals in their productive age (below 60 year old). Of 544 corruptors, 479 individuals (88.70%) were below 60 year old, while only 60 corruptors (11.11%) were 60 year old or older. This feature is different from the characteristics of offenders for conventional crimes, such as burglary, theft, robbery, etc. Bowles and Pradiptyo (2005) used British Offender Index data and found that offenders for conventional crime are aged sensitive. They may started to have a criminal carrier as early as 8 or 9 years old, however they tend to stop offending when they reach age of 40. In contrast,

when individuals reached the age of 40 year old, this is considered as the beginning for individual to have carrier as a corruptor since they started to have a good position at that age.

Table 2: The Explicit Social Costs of Corruption in Indonesia 2001-2008 Based on Gender, Location and Occupation

				Explicit Costs of Corruption (2008 Price)		
		Number of Offenders	%	Total	%	Average
	Male	504	93.33%	Rp 73.05 trillion (US$8.49 billion)	99.92%	Rp144.93 billion (US$ 16.85 million)
	Female	36	6.67%	Rp19.98 billion (US$2.32 million)	0.03%	Rp555.22 million (US$ 64,560)
Gender	NA	4		Rp35.00 billion (US$4.07 million)	0.05%	Rp8.75 billion (US$1.02 million)
	Below 60	479	88.70%	Rp38.72 trillion (US$4.50 billion)	52.97%	Rp80.84 billion (US$9.40 million)
	60+	60	11.11%	Rp34.34 trillion (US$3.99 billion)	46.98%	Rp572.37 billion (US$66.55 million)
Age	NA	5	0.93%	Rp35.00 billion (US$4.07 million)	0.05%	Rp8.75 billion (US$1.02 million)
	Jawa	241	44.63%	Rp37.36 trilion (US$4.34 billion)	51.11%	Rp155.03 billion (US$ 18.03 million)
	Greater Jakarta (Jabodetabek)*	78	32.37%	Rp36.86 Trilion (US$4.15 billion)	98.67%	Rp472.64 billion (US$54.96 million)
	Outside Jawa	299	55.37%	Rp35.70 trilion (US$4.15 billion)	48.89%	Rp119.41 billion (US$13.89 million)
Location	NA	4		Rp35.00 billion (US$4.07 million)	0.05%	Rp8.75 billion (US$1.02 million)
	Civil Servant	223	41.30%	Rp470.15 billion (US$ 54.67 million	0.64%	Rp2.11 billion (US$245,226)
	State-owned Enterprise Employee	68	12.59%	Rp29.33 trilion (US$3.41 billion)	40.12%	Rp431.31 billion (US$50,152)
	Legislative	130	24.07%	Rp216.65 billion (US$25.19 million)	0.30%	Rp1.66 billion (US$193,837)
	Private Sector	117	21.67%	Rp37.75 trilion (US$4.39 billion)	51.64%	Rp322.63 billion (US$37.51 million)
Occupation	NA	6	1.11%	Rp5.34 trilion (US$620.47 billion)	7.30%	Rp889.33 billion (US$103,41 million)
Total		544		Rp73.10 trillion (US$8.50 billion)	100.00%	Rp135.370 billion (US$15.741 million)

Source: Indonesia Supreme Court Decisions, 2001-2009.

The proportion of senior corruptors was just 11.11%, however the total explicit cost they inflicted to Indonesia economy was Rp34.34 trillion (US$3.99 billion) or about 46.98% of the total explicit cost of corruption. Since the senior corruptors were only 60 individuals, the

average explicit cost of corruption inflicted by senior offenders (aged 60 year old or above) is more then seven folds to that of committed by offenders at productive aged.

In term of geographical distribution, of 544 offenders, 241 offenders (44.63%) committed corruption in the island of Jawa. The explicit cost of corruption in Jawa was accounted for Rp37.36 trillion (US$4.34 billion), of which Rp Rp36.86 trillion (US$4.15 billion) or 98.67% occurred in Greater Jakarta (Jabodetabek, stand for Jakarta-Bogor-Depok-Tangerang and Bekasi). The average explicit cost of corruption in Jakarta was Rp472.64 billion (US$54.96 million) or more than three folds to that of corruption in Jawa or about four folds to that of corruption in outside Jawa.

The highest proportion of explicit cost of corruption was attributable by offenders from private sectors 51.64% or about Rp37.75 trillion (US$4.39 billion). Indeed the definition of corruption in Indonesia is limited to the misallocation of public money. The involvement of the private sector in corruption in Indonesia is primarily related to provision of goods and services in public sector. The highest average explicit cost of corruption, however, was attributable by state-own enterprise employees. It is recoded that only 68 state-own enterprise employees who were found guilty of committing corruption, however the average explicit cost of corruption they inflicted to economy was Rp431.31 billion (US$50.15 million). Most cases of corruption involving State-owned (and also local-government owned) enterprises' employees are related to procurement, embezzlement and their conducts during and post economic crisis in 1998, which were considered against the national interests.

Civil servants involved in more than a half of corruption cases in Indonesia, whereas members of the parliament (both in local and national levels) involved in almost a quarter of corruption cases in Indonesia. In contrast to State-owned companies employee, the average value of corruption of civil servants and senators were only Rp2.11 billion ($245,226) and Rp1.66 billion ($193,837), respectively.

As mentioned earlier, the estimation of social costs using explicit costs implies that the value of the social costs of corruption has been underestimated. Given that the explicit cost of corruption in Indonesia is relatively high, in the absence of any attempt to recover the misallocation of resources, obviously the cost of corruption would be bourne by the taxpayers. Unfortunately little attempt has been made by Indonesia's criminal justice system to recover the misallocation of resources created by corruptors.

It should be noted that there are various types of financial punishments in Indonesia's justice system, namely: fines, compensation, and seizure of evidence (monetary and non monetary), court costs and other sentence. We defined total financial punishment which comprises of fines, compensation order and the monetary seizure of asset or evidence. Non monetary seizure of asset or evidence is not included in the variable as we face with complexity of converting it to monetary value. The court cost is negligible as its values ranges between Rp 2500 to Rp 10,000 ($0.29 to $1.16), and other sentence is also negligible.

Table 3: Comparison between Explicit Cost of Corruption, and Financial Punishments across Courts

	Number of Offenders	Total (2008 price)	Proportion to the Explicit Social Costs	Average (2008 price)
Explicit Cost of Corruption*	544	Rp73.10 trillion (US$8.50 billion)	100%	Rp135.37 billion (US$15.74 million)
Financial Punishment Prosecuted **	543	Rp32.40 trillion (US$ 3.77 billion	59.37%	Rp59.67 billion ($6.94 million)
Financial Punishment Sentenced by Judges in District courts**	468	Rp2.39 trillion ($ 277.79 Million)	3.27%	Rp5.11 billion (US$594,186)
Financial Punishment Sentenced by Judges in the Supreme court **	544	Rp5.33 trillion ($ 619.77 million)	7.29%	Rp9.80 billion ($ 1.14 million)

Source: Supreme court Decisions 2001-2009, estimated.

Table 3 shows the discrepancy between the explicit cost of corruption and the total financial punishment sentenced by judges in Indonesia's judicial system. Prior to the trial in a district court, prosecutors estimated the value of the explicit cost of corruption. In the trial, then, the prosecutions to offenders were made by the prosecutors. The value of explicit cost of corruption during 2001-2009 was Rp73.10 trillion (US$ 8.49 billion), however, surprisingly the defendants were prosecuted only Rp32.40 trillion (US$ 3.77 billion) or 59.37% of the total explicit cost of corruption.

In essence, this phenomenon can be analysed as a bargaining problem. If the bargaining can be described as a modelling of splitting a pie, than the underlying size of the pie is the total explicit cost of corruption. Nevertheless, the data show that most district prosecutors did not realise that the underlying value of the pie is the explicit social costs of crime, which are Rp73.10 trillion ($8.50

billion) in total or Rp135.37 billion ($15.74 million) in average value. Instead of prosecuting defendants according to the explicit costs of corruption, they tend to prosecute only about 60% of the total explicit cost of corruption. Unfortunately, there is no further information on how this mechanism had been done by the prosecutors.

From the perspective of economists, this phenomenon is puzzling, if it cannot be said as irrational. As bargaining problem is a problem of 'splitting a pie', then it would be rational to prosecute defendant with at least equal to the values of the explicit costs of corruption in order to incorporate the opportunity costs of the misallocation of resources. This notion is based on assumption that there would be some kind of 'negotiation'processes during the trials and judges may not necessarily fulfil the total amount of financial punishment prosecuted. This process can be analysed by comparing the value of total financial punishment prosecuted and total financial punishment sentenced by judges in the District courts.

In the high courts, of 544 defendants who were found guilty by the district courts, only 468 defendants (86.03%) were also found guilty by the high courts. The total financial punishment sentenced by the high court has shrunk to Rp2.39 trillion ($ 277.79 million) or only 3.27% of the total explicit cost of corruption. In the final stage, when the cases were appealed to the supreme court, the total number of defendants who were found guilty by the supreme court was 544 individuals. The total financial punishment sentenced by the supreme court has increased to Rp5.33 trillion ($ 619.77 million) or about 7.29% of the total explicit cost of corruption.

Table 4 shows the discrepancies between the explicit cost of corruption, the total financial punishment prosecuted, the total financial punishment sentenced by district courts and the total financial punishment sentenced by the supreme court. The overall ratio between the explicit costs of corruption with the total financial punishment prosecuted is 5 to 3. It is surprising the defendants only be prosecuted 60% of the total explicit cost that the defendants inflicted to the society. As the trials can be seen as a bargaining problem, meaning that most likely judges sentenced the defendant much lesser than the prosecution, it would be rational for the prosecutors to prosecute defendants with financial punishment much higher than the explicit costs that they were inflicted. The reason to support this argument is the fact that the cost of corruption covers only the explicit cost and does not take into account the opportunity costs incurred due to the misallocation of resources owing to the corruption. On the contrary

to the prescription given by bargaining theory (Nash, 1951, Rubinstein, 1982, among others), in Indonesia there has been a strong tendency to prosecute defendants with financial punishment that is much lower than the explicit cost of corruption.

Table 4: Ratios between explicit cost of corruption and the financial punishment sentenced in district courts and the supreme court

		Total Explicit Costs (2008 Prices)	Financial Punishment Prosecuted (B)	Financial Punishment Sentenced by Judges in District courts (C)	Financial Punishment Sentenced by Judges in the Supreme court (D)	(B/A)	(C/A)	(D/A)
Gender	Male	Rp73.05 trillion ($8.494 billion)	32.40 trillion ($3.77 billion)	Rp2.38 trillion ($276.74 million)	Rp5.31 trillion ($617.44 million)	44.35%	3.26%	7.27%
	Female	Rp19.99 billion ($2.32 million)	12.33 billion ($1.43 million)	3.22 billion ($374,419)	Rp10.63 billion ($1.24 million)	61.68%	16.11%	53.18%
Age	Below 60	Rp38.72 trillon ($4.50 billion)	3.84 trillion ($447 million)	Rp2.13 trillion ($247.67 million)	Rp2.73 trillion ($301.42 million)	9.92%	5.50%	7.05%
	60 or Above	Rp34.34 trillion ($3.99 billion)	Rp28.56 trillion ($3.32 billion)	Rp259.22 billion ($30.14 million)	Rp2.59 trillion ($301.16 milion)	83.17%	0.75%	7.54%
Location	Jawa	Rp37.36 trillion ($4.34 billion)	Rp32.01 trillion ($3.72 billion)	Rp2.39 trillion ($277.91 Million)	Rp4.99 trillion ($580.23 million)	85.68%	6.40%	13.36%
	Greater Jakarta	Rp36.87 trillion ($4.29 billion)	Rp31.56 trillion ($3.67 billion)	Rp1.95 trillion ($226.74 million)	Rp4.81 trillion ($559.30 million)	85.60%	5.29%	13.05%
	Outside Jawa	Rp35.70 trillion ($4.15 billion)	Rp401.70 billion ($46.71 million)	Rp85.34 billion ($9.92 million)	Rp328.63 billion ($38.21 million)	1.13%	0.24%	0.92%
Occupation	Civil Servant	Rp470.15 billion ($54.67 million)	Rp219.38 billion ($25.51 million)	Rp120.94 billion ($14.06 million)	Rp135.76 billion ($15.79 million)	46.66%	25.72%	28.88%
	State-owned Enterprise Employee	Rp29.33 trillion ($3.41 billion)	Rp29.16 trillion ($3.39 billion)	Rp150.08 billion ($17.45 million)	Rp2.48 trillion ($288.37 million)	99.42%	5.12%	8.46%
	Legislative	Rp216.65 billion ($25.19 million)	Rp102.10 billion ($11.87 million)	Rp58.67 billion ($6.82 million)	Rp55.12 billion ($6.41 million)	47.13%	27.08%	25.44%
	Private Sector	Rp37.75 trillion ($4.39 billion)	Rp2.92 trillion ($340 billion)	Rp2.06 trillion ($239.53 million)	Rp2.65 trillion ($308.14 million)	7.74%	5.46%	7.02%

Source: The Supreme court Decisions 2001-2009, estimated.

Information in the column ratio B/A represent the proportion of the total financial punishment prosecuted and the total explicit cost of corruption across gender, age, geographical distributions and occupations. Both values were estimated by the same individuals, namely the prosecutors, however, surprisingly both values are significantly different. The majority of corruption in Indonesia have been committed by male, however there is a tendency that female corruptors (61.68%) were prosecuted with higher financial punishment as opposed to their male counterparts (44,35%). Corruptors in their productive age tend to be prosecuted with lesser financial punishment (only 9.92%) then offenders aged 60 year old or above (83.17%). Offenders who committed corruption in Jawa (86.68%), tend to be prosecuted much

more heavily in comparison to those who conducted corruption in outside Jawa (1.13%). In term of occupation, offenders who previously worked as state-own enterprise employees were prosecuted much heavier (99.42%) in comparison to corruptors who previously worked in the other occupations. On the contrary, corruptors who previously worked in private sector were prosecuted the most leniently in comparison to those of from the other occupations.

The column ratio C/A measures the proportion of financial punishment sentenced by the district courts and the total explicit cost of corruption. The column ratio D/A, furthermore, measures the proportion of financial punishment sentenced by the supreme court and the total explicit cost of corruption.

The estimations in the column ratio C/A are much lesser than those of in column ratio B/A. This implies that the financial punishment sentenced by judges in the district courts are much lesser than both the explicit cost of corruption and the financial punishment prosecuted by the prosecutors. In most cases, the ratios of C/A across gender, age, geographical distributions and occupations were less then 10%, unless for female corruptors (16.11%), and offenders who previously worked as civil servant (25.72%) and member of the parliament (27.08%).

The ratios of D/A across gender, age, geographical distribution and occupations tend to be higher rather than those of in the column ratio C/A. This implies that the decisions by the supreme court provides positive corrections toward the sentenced made by the district courts. The male offenders tend to receive lesser financial punishment (7.27%) by the supreme court as opposed to their female counterparts (53.18%). Both offenders who were in their productive age and more senior offenders received almost similar financial punishment by the supreme court, namely about 7% of the total explicit cost of corruption. A substantial gap in the ratios of D/A was found for offenders who committed corruption in Jawa and outside Jawa. Those who committed corruption in Jawa has the ratio of D/A 13.36%, whereas their counterparts in outside Jawa only received financial punishment by the supreme court 0.92% of the explicit cost of corruption. The features of the ratios D/A has similar feature those of the ratios of C/A across different occupations.

Table 5: The Average Explicit Cost and the Average Financial Punishment Across Gender, Age, Geographical Distribution and Occupations

		Number of Offenders	Average Explicit Costs (2008 Prices)	Average Financial Punishment Prosecuted	Average Financial Punishment Sentenced by Judges in District courts	Average Financial Punishment Sentenced by Judges in the Supreme court
Gender	Male	504	Rp145.63 billion ($16.93 million)	Rp64.29 billion ($7.48 million)	Rp4.72 billion ($549,091)	Rp10.54 billion ($1.23 million)
	Female	36	Rp555.28 million ($64,567)	Rp342.5 million ($39,826)	Rp89.44 million ($10,401)	Rp295.28 million ($34,335)
Age	Below 60	479	Rp80.84 billion ($9.40 million)	Rp8.02 billion ($932.17 million)	Rp4.45 billion ($517,066)	Rp5.70 billion ($662,718)
	60 or Above	60	Rp572.33 billion ($66.55 million)	Rp476.00 billion ($55.35 million)	Rp4.32 billion ($502.36 million)	Rp43.17 billion ($5.02 million)
Location	Jawa	241	Rp155.02 billion ($18.03 million)	Rp132.82 billion ($15.44 million)	Rp9.92 billion ($1.15 million)	Rp20.71 billion ($2.41 million)
	Greater Jakarta	78	Rp472.69 billion ($54.96 million)	Rp404.62 billion ($47.05 million)	Rp25.00 billion ($2.91 million)	Rp61.67 billion ($7.17 million)
	Outside Jawa	299	Rp119.40 billion ($13.88 million)	Rp1.34 billion ($156,218)	Rp285.42 million ($33,188)	Rp1.10 billion ($127,802)
Occupation	Civil Servant	223	Rp2.101 billion ($245,151)	Rp983.77 million ($114,391)	Rp542.33 million ($63,062)	Rp608.79 million ($70,789)
	State-owned Enterprise Employee	68	Rp431.32 billion ($50.15 million)	Rp428.82 billion ($49.86 million)	Rp2.21 billion ($.256,635)	Rp36.47 billion ($4.24 million)
	Legislative	130	Rp1.67 billion ($193,784)	Rp785.38 million ($91,324)	Rp451.31 million ($52,478)	Rp424 million ($49,302)
	Private Sector	117	Rp322.65 billion ($37.52 million)	Rp24.96 billion ($2.90 million)	Rp17.61 billion ($2.05 million)	Rp22.65 billion ($2.63 million)

Source: The Supreme court Decisions 2001-2009, estimated.

The Supreme Court Decisions

There are various ways to assess court decisions. In this study, a logistic regression is used to various criminogenic factors which may influence decisions made by judges. A logistic regression uses a dependent variable in the form of binary alternatives (e.g., to be fined or not, to be imprisonement or not etc) which will be on the left hand side of the equation, and various independent variables or explanatory variables on the right hand side of the equation. The criterion used to judge whether the covariates that are included are a significant part of the explanation is whether the value in the Sig column is less than 0.05 (for 5% significance level) and less than 0.01 (for 1% significance level).

The Likelihood of Conviction

The following econometric model is used to assess the decisions made by the Supreme courts to determine whether a defendant was found guilty as charged by the supreme court judges as follows:

$$SC\_guilty_i = a + b_1 \log\_Age_i + b_2 Gender_i + b_3 D\_Jawa_i + b_4 D\_SOE_i + b_5 D\_MP_i + b_6 D\_Private_i + b_7 \log\_\text{ExplicitCost}_i + b_8 DC\_guilty_i + b_9 D\_SOE_i * log\_ExpCost_i + b_{10} D\_MP_i * log\_ExpCost_i + b_{11} D\_MP_i * log\_ExpCost_i$$

Whereby:

SC_{guilty} : The Supreme court decisions, 1 = guilty, 0 = otherwise

Age : Age of offenders when they were sentenced by District courts.

Gender : 1 for male and 0 for female

D_Jawa : Dummy variable for location, 1 = the island of Jawa, 0 = outside Jawa

D_SOE : Dummy variable for occupation, 1 = State-owned Enterprises Employees, 0 = otherwise

D_MP : Dummy variable for occupation, 1 = members of the parliaments both in local and national levels, 0 = otherwise

D_Private : Dummy variable for occupation, 1 = private sector, 0 = otherwise

Log_ExplicitCost : log(explicit costs of corruption at nominal price)

DC_guilty : Dummy variable whether district courts found the defendants guilty as charged; 1 = guilty, 0 : otherwise

D_{SOE}*log_ExpCost: Interaction between dummy variable whether defendant was a State Own Enterprise Employee and log(explicit cost of corruption inflicted by the defendant)

$D_{Senator}$*log_ExpCost: Interaction between dummy variable whether defendant was a senator and log(explicit cost of corruption inflicted by the defendant)

$D_{Private}$*log_ExpCost: Interaction between dummy variable whether defendant was a civil servant and log(explicit costs of corruption inflicted by the defendant)

The equations above are based on assumption that the likelihood of conviction may be associated with various static and dynamic criminogenic factors. Gender and the distric courts decisions are considered as static criminogenic factors, whereas age and occupations are

classified as dynamic criminogenic factors. Under the Indonesia criminal penal system, the trials are conducted in the area where the offence has been committed. Although Jawa is one of 17,508 islands in Indonesia, however the island of Jawa is the centre of economic and political activities in Indonesia. The area of the island of Jawa is about 7% of the total area in Indonesia, however of the 240 million population in Indonesia, about 60% of them (about 114 million people) live in Jawa. It may not be surprising if the development in Jawa is more advanced than the other islands in Indonesia. Based on this reason, a dummy variable has been generated in order to investigate whether there are differences in decisions between courts in Jawa and outside Jawa.

Results from descriptive statistic showed that the level of corruption varies across occupations (see table 1-5 above). This notion is accommodated in the model by generating three dummies variables aim to capture the role occuption in relation to the supreme court decisions. In the model, the civil servant has been used as the reference group for a set of dummy variables which represent occupation.

The logistic regression models have been developed based on assumption that the likelihood of receiving types of punishment may associated with dynamic and criminogenic factors. Furthermore, it is expected that the types of punishment may correspond with the nominal value of the explicit cost of corruption. The use of nominal values for the explicit cost of corruption is based on assumption that both prosecutors and judges do not consider the real value of the explicit cost of corruption. Instead, they considered the explicit cost of corruption according to the current price as opposed to the constant price. The last three independent variables in the model are the interaction variables between dummy variables for occupations and the explicit cost of corruption.

.

Table 6: Logistic Regression Analyses of the Supreme Court's Sentences

Dependent Variable: SC_Guilty_YN Sample: 1 831; Included observations: 811; Excluded observations: 20			
	Coeff.	S.E	Prob.
C	1.445	2.15	0.501
DC_Guilty_YN	3.282	1.124	0.004***
Gender	0.118	0.368	0.748
Log(Age)	-0.922	0.511	0.071*
D_Jawa	0.44	0.219	0.045**
D_Greater Jakarta	-0.316	0.39	0.418
D_SOE_empl.	-5.016	3.883	0.196
D_MP	4.29	2.486	0.084*
D_Private	2.639	1.703	0.121
D_Appeal_HC	-0.62	1.125	0.582
D_JudRev	1.663	0.404	0.000***
Log_ExplicitCost	0.047	0.059	0.425
Log_ExpCost*D_BUMN	0.314	0.192	0.102
Log_ExpCost*D_MP	-0.24	0.126	0.057*
Log_ExpCost*D_Private	-0.116	0.086	0.175
Mean dependent var			0.663
S.E. of regression			0.377
Sum squared resid			113.3
Log likelihood			-359.9
Restr. log likelihood			-518
LR statistic (11 df)			316.2
Probability(LR stat)			0
McFadden R-squared			0.305

Source: The Supreme court Decisions 2001-2009, to be estimated.

Table 6 shows that there is a tendency that judges in the supreme court support the decisions made by judges in the district courts. This finding may be contradicted with the tendency that both defendants and prosecutors tend to appeal to any decisions made by judges in district courts if the decisions are not in their favour. In addition, defendants who committed corruption and were trialed in Jawa, tend to have a lower probability to be found guilty by the supreme judges, even though statistically the result if weakly significant. This finding is interesting since the average explicit cost of corruption inflicted by offenders in Jawa (Rp155.03 billion or US$18.03 million) was higher than that of offenders outside Jawa (Rp119.41 billion or US$13.89 million). Nevertheless, if defendants in Jawa are found guilty, then the average financial punishment sentenced by the supreme court was $2.41 million or

about 18.86 time folds higher than their counterparts in outside Jawa. The result also suggests that the detection rate of corruption in outside Jawa tend to be higher than in Jawa, however prosecutors in outside Jawa tend to be more lenient toward the defendants.

Imprisonment and Probation

The logistic regression models for judges in the Supreme court to sentence defendants with imprisonment and probation are as follows:

$$SC\_Imprisonment_i = a + b_1 \log\_Age_i + b_2 Gender_i + b_3 D\_Jawa_i + b_4 D\_SOE_i + b_5 D\_MP_i + b_6 D\_Private_i + b_7 \log\_ExplicitCost_i + b_8 DC\_Imprisonment_i + b_9 D_{Private} * \log\_ExplicitCost_i + b_{10} D_{SOE\,i} * \log\_ExplicitCost_i + b_{11} D\_MP_i * \log\_ExplicitCost_i$$

$$SC\_Probation_i = a + b_1 \log\_Age_i + b_2 Gender_i + b_3 D\_Jawa_i + b_4 D\_SOE_i + b_5 D\_MP_i + b_6 D\_Private_i + b_7 \log\_ExplicitCost_i + b_8 DC\_Probation_i + b_9 D_{Private} * \log\_ExplicitCost_i + b_{10} D_{SOE\,i} * \log\_ExplicitCost_i + b_{11} D\_MP_i * \log\_ExplicitCost_i$$

Whereby:
SC_Imprisonment = the Supreme court sentenced offenders with imprisonment, 1 = Yes, 0 = No
SC_Probation= the Supreme court sentenced offenders with probation, 1 = Yes, 0 = No

The result in Table 7 suggests that the likelihood of sentencing defendants with imprisonment does not correspond with the explicit cost of corruption. There is no proof, whether the higher the explicit cost of corruption inflicted to the economy increase the likelihood of offenders to receive imprisonment. In addition, the higher the explicit costs of corruption inflicted by MPs, are more likely to be sentenced with imprisonment in comparison with their civil servant counterparts, even though the impact is relatively weak.

The anti corruption act 20/2001 stated clearly that in some offences imprisonment and fines should be imposed together to offenders. The more serious an offence is considered, more severe the types and intensity of punishment [see Appendix A]. Imprisonment is an indicator that the type of offences committed by offenders may be quite serious. Similarly, the value of financial punishment prosecuted can be used as an indicator how serious the offence is, however, the results show that the decisions to sentence defendants with imprisonment do not taken into consideration the scale of damaged due to corruption.

Table 7: Logistic Regressions of the Likelihood of Imprisonment

Dependent Variable: SC_Imprisonment_YN Sample(adjusted): 4 831; Included observations: 472; Excluded observations: 356				Dependent Variable: SC_Probation_YN Sample(adjusted): 2 830; Included observations: 463; Excluded observations: 366			
	Coeff.	S.E	Prob.		Coeff.	S.E	Prob.
C	-2.975	4.166	0.475	C	0.215	5.022	0.966
DC_Imprisonment_YN	1.661	1.643	0.312	DC_Probation_YN	-0.033	0.812	0.967
Gender	-0.198	0.846	0.816	Gender	0.577	1.067	0.589
Log(Age)	0.887	0.97	0.36	Log(Age)	0.148	1.134	0.896
D_Jawa	-0.385	0.428	0.368	D_Jawa	0.181	0.464	0.697
D_Greater Jakarta	1.177	1.179	0.318	D_Greater Jakarta	-0.521	0.869	0.549
D_SOE_empl.	3.959	8.93	0.658	D_SOE_empl.	2.612	8.445	0.757
D_MP	-10.829	6.311	0.086*	D_MP	-22.12	8.097	0.006***
D_Private	-2.34	4.263	0.583	D_Private	-10.238	4.467	0.022**
D_Appeal_HC	1.804	1.64	0.271	D_Appeal_HC	1.349	1.047	0.198
D_JudRev	1.668	0.845	0.049**	D_JudRev	-0.839	0.806	0.298
Log_ExplicitCost	-0.045	0.133	0.734	Log_ExplicitCost	-0.271	0.125	0.030**
Log_ExpCost*D_BUMN	-0.121	0.422	0.775	Log_ExpCost*D_BUMN	-0.132	0.442	0.765
Log_ExpCost*D_MP	0.56	0.333	0.093*	Log_ExpCost*D_MP	1.036	0.379	0.006***
Log_ExpCost*D_Private	0.135	0.224	0.547	Log_ExpCost*D_Private	0.518	0.223	0.020***
Mean dependent var			0.888	Mean dependent var			0.06
S.E. of regression			0.248	S.E. of regression			0.233
Sum squared resid			28.087	Sum squared resid			24.4
Log likelihood			-107.3	Log likelihood			-93.9
Restr. log likelihood			-165.8	Restr. log likelihood			-105.7
LR statistic (11 df)			117	LR statistic (11 df)			23.5
Probability(LR stat)			0	Probability(LR stat)			0.052
McFadden R-squared			0.353	McFadden R-squared			0.111

Source: The Supreme court Decisions 2001-2009, to be estimated

A more conter intuitive result occurs for the decision to sentence defendants with probation. The result in Table 7 shows that the higher the explicit cost of corruption the lesser the likelihood of the defendants to be sentenced with probation. The result does not support hypothesis that the more serious corruptors tend to be sentenced with imprisonment as opposed to probation. There is a strong tendency that offenders with occupations as member of the parliament and in private sectors received lower sentenced to probation in comparison to their civil servant counterparts. Nevertheless, both member of the parliament and private sector who commit more serious gravity of corruption are less likely to be sentenced with probation as opposed to their civil servant counterparts.

In many countries in Europe, imprisonment is sentenced to defendants only if the types of offending are considered quite serious, namely the offence gravity[6] committed by the offenders is relatively high. The intensity of offences is estimated by how serious the impact of the offence to victims and even the society. In the UK for instance, corruption is classified as one of serious offences, therefore most likely individuals who were proven guilty of conducting corruption will be sentenced by imprisonment.

In Indonesia, corruption is considered also as extra ordinary crime. As the social costs of corruption are high, then ideally judges can use the value of financial punishment prosecuted as a proxy to estimate how serious the case is. It is surprising, however, that judges in the supreme court do not taken into consideration the value of financial punishment prosecuted as a means to determine whether or not the offenders should be sentenced with imprisonment or probation.

In the case for which the likelihood of receiving imprisonment does not corresponse to the economic burden inflicted by offenders to the society, then judges' decisions, at least, do not taken into consideration the concept of fairness proposed by Rabin (1993). Rabin (1993) argued that fairness should be seen as reciprocal relationship rather than altruistic behaviour. Implementing Rabin's (1993) concept of fairness to sentencing, ideally, offenders who inflicted high social costs to society should be punished heavier, and imprisonment is a type of punishment which considered tough.

The result shows that defendants who worked as a member of the parliament were more likely to be sentenced with probation in comparison with other defendants with different occupations. Similarly, the social cost of corruption inflicted by senator (the interaction variable between senator and the social cost) was more likely to be used as an indicator to determine probation order. It should be noted that these findings are valid only at significant level 10%.

Fines and the Subsidiary of Fines

As Indonesia follows civil law, not only does the anticorruption act regulate any conduct that can be considered as a corruption but also it states clearly the types and the intensity of punishment for each offence. The reason behind this is the aim to maintain the legal certainty,

[6] In the UK, the seriousness of an offence is classified by offence gravity which index is ranging from 1 (the lightest) to 8 (the most serious offence, such as homicide, etc).

which mainly intepreted by informing stating clearly the type of offences, the type of punishments and their intensity in an act. The question is that whether judges follow the rules that were stated in the act.

A further exercise has been conducted to estimate factors which affect to the likelihood of a defendant to be sentenced with fines and the subsidiary of fines by the Supreme court, and the logistic regressions are as follow:

$$SC\_Fines_i = a + b_1 \log\_Age_i + b_2 Gender_i + b_3 D\_Jawa_i + b_4 D\_SOE_i + b_5 D\_MP_i + b_6 D\_Private_i + b_7 \log\_\text{ExplicitCost}_\text{i} + b_8 DC\_Fines_i + b_9 D_{Private} * \log\_\text{ExplicitCost}_\text{i} + b_{10} D_{SOE_i} * \log\_\text{ExplicitCost}_\text{i} + b_{11} D\_MP_i * \log\_\text{ExplicitCost}_\text{i}$$

$$SC\_Subs\_Fines_i = a + b_1 \log\_Age_i + b_2 Gender_i + b_3 D\_Jawa_i + b_4 D\_SOE_i + b_5 D\_MP_i + b_6 D\_Private_i + b_7 \log\_\text{ExplicitCost}_\text{i} + b_8 DC\_Subs\_Fines_i + b_9 \log\_Fines_i + b_{10} D_{Private} * \log\_\text{ExplicitCost}_\text{i} + b_{11} D_{SOE_i} * \log\_\text{ExplicitCost}_\text{i} + b_{12} D\_MP_i * \log\_\text{ExplicitCost}_\text{i}$$

Whereby:
SC_Fines = the Supreme court sentenced offenders with fines, 1 = Yes, 0 = Otherwise
SC_Subs_fines= the Supreme court sentenced offenders with subsidiary of the fines, 1 = Yes, 0 = Otherwise

The modelling of fines is similar to models in the previous sections. In the modelling of logistic regression for subsidiary of fines, the value of the fines has been included in explanatory variables. The notion of subsidiary punishment is based on assumption that the main punishment has little deterrence effect. Transforming the intensity of the main punishment to become the period of imprisonment is the way to improve the credibility of the deterrence effect of the main punishment. Consequently, it is expected that the higher the value of fines, the more likely the subsidiary of fines will be sentenced to offenders.

Table 8 shows that defendants were more likely to be sentenced by the supreme judges with fines and or the subsidiary of fines if previously they were fines and or subsidiary of fines in district courts. The value of explicit cost of corruption committed does affect the supreme judges to sentence offenders with fines, even though the impact is weak. In contrast, the value of explicit cost of corruption affects significantly to the likelihood of offenders to be sentenced with subsidiary of fines.

Table 8: Logistic Regression of the Likelihood of Fines and Subsidiary of Fines

Dependent Variable: SC_Fines_YN Sample(adjusted): 4 831; Included observations: 516; Excluded observations: 312				Dependent Variable: SC_Fines_Subs_YN Sample(adjusted): 4 831; Included observations: 515; Excluded observations: 313			
	Coeff.	S.E	Prob.		Coeff.	S.E	Prob.
C	-8.103	3.564	0.023	C	-8.597	3.618	0.018
DC_Fines_YN	4.195	0.511	0.00***	DC_Fines_Subs_YN	4.106	0.483	0.00***
Gender	0.347	0.626	0.58	Gender	0.108	0.647	0.867
Log(Age)	0.786	0.777	0.312	Log(Age)	0.82	0.785	0.296
D_Jawa	0.672	0.348	0.054*	D_Jawa	0.671	0.351	0.056*
D_Greater Jakarta	-0.479	0.706	0.497	D_Greater Jakarta	-0.588	0.71	0.407
D_SOE_empl.	4.297	5.801	0.459	D_SOE_empl.	4.238	5.838	0.468
D_MP	1.738	4.203	0.679	D_MP	2.356	4.245	0.579
D_Private	2.41	3.272	0.462	D_Private	3.186	3.334	0.339
D_Appeal_HC	-1.12	0.58	0.054*	D_Appeal_HC	-0.962	0.553	0.082*
D_JudRev	0.225	0.461	0.626	D_JudRev	0.376	0.471	0.425
Log_ExplicitCost	0.198	0.103	0.055*	Log_ExplicitCost	0.229	0.105	0.030**
Log_ExpCost*D_BUMN	-0.158	0.285	0.579	Log_ExplicitCost*D_BUMN	-0.162	0.287	0.572
Log_ExpCost*D_MP	-0.117	0.218	0.589	Log_ExplicitCost*D_MP	-0.154	0.22	0.483
Log_ExpCost*D_Private	-0.114	0.17	0.503	Log_ExplicitCost*D_Private	-0.152	0.173	0.379
Mean dependent var			0.771	Mean dependent var			0.771
S.E. of regression			0.31	S.E. of regression			0.306
Sum squared resid			48.032	Sum squared resid			46.884
Log likelihood			-165.5	Log likelihood			-162.4
Restr. log likelihood			-277.4	Restr. log likelihood			-277.2
LR statistic (11 df)			223.8	LR statistic (11 df)			229.5
Probability(LR stat)			0	Probability(LR stat)			0
McFadden R-squared			0.403	McFadden R-squared			0.414

Source: The Supreme court Decisions 2001-2009, to be estimated

In contrast to Becker (1968), Pradiptyo (2007) argued that as opposed to other disposals, fines was not the best punishment. This is related to the low rate of payment, meanwhile fines have a deterrence effect only when they are paid by offenders. In the U.K., the rate of fine payment is about 55% in England and Wales (DCA, 2004). If this disposition rate were translated into imprisonment, the result would be as if 45% of prisoners escaped (Bowles and Pradiptyo, 2004).

Empirical studies show that the costs to collect fines are substantial and may increase as the value of fines increases. According to Chapman et al. (2002), the costs of collecting fines in the U.K. is almost one-third of the value of the fines. This applies when the average value of the fine is £200, which is much lower than the average social costs of crime. In addition, variations in

the costs to collect fines in the U.K. are high, ranging from 11 pence to 44 pence per pound collected (DCA, 2004).

In order to make fines more credible, many authorities have to adopt a strategy of transforming the values of fines in relation to a term of imprisonment period---as a result, a failure to pay the fines will be compensated by serving time in prison. In the U.S., for instance, 25% of convicts sentenced by state courts in the year 2000 received fines as additional penalties (U.S. DOJ, 2003). In Israel during 1997-2000, fines were used in combination with other penalties in 34.7% of the cases (Einat, 2004). The use of complementary sanctions shows that fines in themselves are not sufficient as a credible sentence. Furthermore, the costs of policing and enforcing fines may not necessarily be lower than other types of sentences, and the higher the fine, the higher the costs of enforcing and policing it. Any attempt to increase the value of fines may increase the number of defaults. In turn, this gives rise to an increase in the number of inmates in prison which may affect to prison overcrowded. As a result, fines may not be a good solution when tackling overcrowded prisons.

Table 8 shows that none of independent variables was significant in affecting the likelihood of judges to sentence offenders with subsidiary of fines. In order to make fines credible, imprisonment should be a complementary punishment with fines. Nevertheless, the finding shows that the decision to sentence with subsidiary of fines do not taken into consideration the value of the fines itself. This result shows that the credibility of fines as a deterrence tool to prevent potential offenders to involve in corruption in Indonesia is questionable.

It should be noted that the subsidiary punishment for fines is asset recovery or imprisonment. Based on the anticorruption act 2001, for every fine worth Rp 50 million ($5000) is equivalent to 12 months imprisonment or approximately Rp4.2 million ($420) per month. Nevertheless this formula is never been followed by judges in all courts when they decided the subsidiary sentence for fines. In one case, an offender was sentenced to pay fines Rp 100 million and the subsidiary sentences are asset recovery or imprisonment for 2 months. In another case, an offender was fines with an identical amount, however, he/she received subsidiary sentences asset recovery or imprisonment for 6 months. Ideally the offenders should be sentenced with subsidiary punishment two years imprisonment, however there is no evidence to support that judges follow this rule closely.

European countries tend to use fines more intensively than other developed countries such as the U.S. and Israel. In 1986, for instance, 81% of adult offenders in Germany were ordered to pay fines (Tonry, 1997). In addition, fine payment covers 91% of court dispositions in Finland in 1979. In the U.S., however, fines have been used more often as an additional penalty, combined with a primary penalty of either imprisonment or community service, rather than as a sole sanction. In year 2000, of 28,810 convicts in the 75 largest counties, only 1% received a fine as a sole sanction (U.S. DOJ, 2003). Similarly, Einat (2004) reported that in Israel during 1997-2000 fines were used as a sole sanction for only 11% of cases on average.

The ineffectiveness of a small fine was reported by Gneezy and Rustichini (2004), based on findings from their experiment. The results show that imposing a small fine fails to reduce the unwanted behaviour. On the contrary, it increases the tendency to repeat the behaviour for which fines were imposed. They argue that a fine will reduce the unwanted behaviour only if it is imposed on a large scale. While this argument seems appealing, in the area of criminal justice there is an upper limit on the fines imposed, which is the wealth of offenders.

Compensation Order and the Subsidiary of Compensation Order

Further assessment has been conducted for the Supreme court judges to sentence defendants to pay compensation for offences they committed and the subsidiary punishments of compensation. The logistic regressions to assess both notions are as follow:

$$SC\_Compensation_i = a + b_1 \log\_Age_i + b_2 Gender_i + b_3 D\_Jawa_i + b_4 D\_SOE_i + b_5 D\_MP_i + b_6 D\_Private_i + b_7 \log\_\text{ExplicitCost}_i + b_8 DC\_Compensation_i + b_9 D_{Private} * \log\_\text{ExplicitCost}_i + b_{10} D_{SOE_i} * \log\_\text{ExplicitCost}_i + b_{11} D\_MP_i * \log\_\text{ExplicitCost}_i$$

$$SC\_Subs\_Compensation_i = a + b_1 \log\_Age_i + b_2 Gender_i + b_3 D\_Jawa_i + b_4 D\_SOE_i + b_5 D\_MP_i + b_6 D\_Civil_i + b_7 \log\_\text{ExplicitCost}_i + b_8 DC\_Compensation_i + b_9 \log\_Compensation_i + + b_{10} D_{Private} * \log\_\text{ExplicitCost}_i + b_{11} D_{SOE_i} * \log\_\text{ExplicitCost}_i + b_{12} D\_MP_i * \log\_\text{ExplicitCost}_i +$$

Whereby:
SC_Compensation = the Supreme court sentenced offenders to pay compensation, 1 = Yes, 0 = Otherwise.
SC_Subs_compensation= the Supreme court sentenced offenders with subsidiary toward compensation, 1 = Yes, 0 = Otherwise.

Table 9 shows the likelihood of defendants to be sentenced with compensation order by the supreme court tends to decrease relative to the other type of occupations if the defendants are members of the parliament. Similarly, the higher the explicit cost inflicted by members of the

parliament, the lesser the likelihood to receive compensation order. With respect to the compensation order, the supreme judges tend to have opposite views with their counterparts in district courts. The other explanatory variables are not statistically significant. This means that when the supreme judges made their decisions whether or not to sentence compensation order, they did not taken into consideration defendants' age, gender, occupation and also the value of financial punishment prosecuted.

According to Anti Corruption Act 20/2001, there is no particular term which regulates the compensation. Nevertheless, according to Indonesia Criminal Code (KUHP) apart from fines, judges have been permitted to sentenced offenders with other types of financial punishments including: compensation, seizure of evidence (asset), court costs and other offence. Some prosecutors tend to prosecute defendant to pay the compensation as much as the explicit costs that they inflicted to the society. Nevertheless, none of judges in both district and supreme courts sentenced defendants to pay compensation as much as the explicit costs that they inflicted.

Similar to the fines, the compensation order has a deterrence effect if it is paid. The credibility of compensation order may be achieved if imprisonment was used as a complementary punishment in the case for which offenders cannot afford to pay the compensation order.

The result shows that judges' decisions to sentence offenders with subsidiary of compensation order was nothing to do with the value of the social cost and also the value of compensation order imposed to offenders. Instead, several factors which significantly affect the likelihood of sentencing offenders with subsidiary of compensation order were: a) age; b) Jawa; c) State-owned enterprise employee; and d) the interaction between State-owned enterprise and the social cost of corruption.

Table 9: Logistic Regression of the likelihood of compensation

Dependent Variable: SC_Compensation_YN Sample(adjusted): 4 831; Included observations: 517; Excluded observations: 311+A99				Dependent Variable: SC_Subs_Compensation Sample(adjusted): 4 831; Included observations: 517; Excluded observations: 311			
	Coeff.	S.E	Prob.		Coeff.	S.E	Prob.
C	-2.934	3.225	0.363	C	-2.88	2.276	0.206
DC_Compensation_YN	4.101	0.362	0.000***	SC_Subs_Compensation_YN	0.004	0.009	0.662
Gender	0.525	0.572	0.359	Gender	0.586	0.431	0.175
Log(Age)	0.318	0.734	0.665	Log(Age)	-0.076	0.504	0.88
D_Jawa	0.756	0.32	0.018**	D_Jawa	0.244	0.22	0.267
D_Greater Jakarta	-1.272	0.509	0.012**	D_Greater Jakarta	-0.523	0.367	0.155
D_SOE_empl.	6.184	4.574	0.176	D_SOE_empl.	2.505	2.529	0.322
D_MP	7.834	3.642	0.032**	D_MP	4.333	2.937	0.14
D_Private	0.311	2.789	0.911	D_Private	1.053	1.961	0.591
D_Appeal_HC	-0.922	0.452	0.042**	D_Appeal_HC	1.589	0.367	0.00***
D_JudRev	0.291	0.421	0.49	D_JudRev	0.359	0.299	0.229
Log_ExplicitCost	-0.023	0.091	0.8	Log_ExplicitCost	0.029	0.067	0.665
Log_ExpCost*D_BUMN	-0.273	0.219	0.211	Log_ExpCost*D_BUMN	-0.106	0.123	0.39
Log_ExpCost*D_MP	-0.393	0.185	0.034**	Log_ExpCost*D_MP	-0.152	0.15	0.311
Log_ExpCost*D_Private	0.011	0.142	0.937	Log_ExpCost*D_Private	-0.038	0.1	0.702
Mean dependent var			0.609	Mean dependent var			0.472
S.E. of regression			0.339	S.E. of regression			0.473
Sum squared resid			57.571	Sum squared resid			112.4
Log likelihood			-193.4	Log likelihood			-322.9
Restr. log likelihood			-345.9	Restr. log likelihood			-357.5
LR statistic (11 df)			305	LR statistic (11 df)			69.3
Probability(LR stat)			0	Probability(LR stat)			0
McFadden R-squared			0.441	McFadden R-squared			0.097

Source: The Supreme court Decisions 2001-2009, to be estimated

It should be noted that ot all compensation orders were accompanied by subsidiary compensation in the form of either asset recovery or imprisonment. Even if a compensation order were accompanied with asset recovery or imprisonment to improve the deterrence effect of the compensation, it turns out that the actual subsidiary orders tend to be more lenient relative to the idealised subsidiary orders.

Conclusion

The findings of this study show that most likely judges in all level of courts do not follow the guidance on the intensity of punishment closely, as stated in the anti corruption act 20/2001. The lack of consistency in determining the intensity of punishments in sentencing has weakend the deterrence effect of the punishments.

The prosecution can be analysed as a bargaining problem. On the contrary to the theory, the size of pie shrinking rapidly by the time the cases have been prosecuted. On the average, the value of financial punishment only covers 60% of the total explicit social cost of corruption. The explicit cost of corruption were Rp 73.1 trillion (about US $8.49 billion), however the total financial punishment imposed by the supreme court were Rp 5.31 trillion (about US$ 617.44 million). Obviously, this discrepancy cannot be redeemed by the criminal justice system and in the end the taxpayers have to pay the burden inflicted by the corruptors.

The logistic regression analyses show that for all types of punishment, the likelihood of sentences do not correspond with the social cost of corruption inflicted by the offenders. Instead, there are strong tendencies that judges tend to be more lenient toward offenders with certain occupations. The sentences have been conducted idiosyncratically and they are far from being consistent with the guidance of sentences as stated in the Anti Corruption Act 20/2001. The implication of this findings is that the deterrence effect of the Anti Corruption Act 20/2001 and the role of KPK in erradicating corruption may be jeopardised. Even if the existence of KPK may improve the detection rate of corruption cases, however as judges tend to sentence offenders idiosyncratically, offenders who inflict high cost of corruption may receive light sentences. Obviously this weakend the deterrence effect of the punishment, and potentially jeopardise corruption erradication movements.

The explicit cost of corruption is only a small fraction from the social cost of corruption, as Brand and Price (2000) defined that the social cost of crime includes the costs in anticipation of crime, the costs as a result of crime and the costs in reaction of crime. The data show that corruption are mostly committed by people with medium-high income and they usually have good careers, we suggest that a private solution could be implemented in punishing the offenders. This implies that the total financial punishment should be sufficient to compensate the social cost of corruption.

Bibliography

Andreozzi, L. 2004. "Rewarding Policemen Increases Crime. Another Surprising Result from the Inspection Game," *Public Choice*, 121:69-82.

Becker, G.S. 1968. "Crime and Punishment: An Economic Approach," *Journal of Political Economy*, 70: 1-13.

Bianco WT, PC Ordeshook and G Tsebelis (1990). Crime and Punishment: Are One- Shot, Two-Person Games Enough? *American Political Science Review*, 84: 569-586.

Bowles, R.. 2000. "Corruption,". in B. Boudewijn and G. De Greest, eds. Encyclopedia of Law and Economics, Vol. 5, The Economics of Crime and Litigation 460-491. Edward Elgar.

Bowles, R and N. Garoupa. 1997. "Casual Police Corruption and the Economics of Crime." Int'l Review of Law and Economics, 17: 75-87.

Bowles, R. and R. Pradiptyo. 2004. "An Economic Approach to Offending, Sentencing and Criminal Justice Interventions -- Report to Esmee Fairbairn Foundation," presented to Esmee Fairbairn Foundation, London.

Brand, S., and R. Price. 2000. "The Economic and Social Costs of Crime," Home Office Research Series Paper 217. London: Home Office.

Chapman, B., A. Mackie and J. Raine. 2002. "Fine Enforcement in Magistrates' Courts," Home Office Development and Practice Report 1, London, Home Office.

Department for Constitutional Affairs (DCA). 2004. Magistrates' Courts Business Returns--Annual Report 2002-2003. London: Department for Constitutional Affairs.

Dubourg, R., J. Hamed, and J. Thorns. 2005. "The Economic and Social Costs of Crime Against Individuals and Households 2003/04," Home Office Online Report 30/05. London: Home Office.

Ehrlich, I. 2004. "Recent Development in Economics of Crime," *German Working Papers in Law and Economics*, paper 8.

Eide E. 2000. “Economics of Criminal Behaviour”, in Boudewijn B and De Greest G (2000). *Encyclopedia of Law and Economics*, Vol. 5, The Economics of Crime and Litigation, p 345-389, Edward Elgar.

Einat, T. 2004. "Criminal Fine Enforcement in Israel; Administration, Policy, Evaluation and Recommendations," *Punishment & Society*, 6: 175-194.

Garoupa, N. 1997. "The Theory of Optimal Law Enforcement." *Journal of Economic Surveys* 11 : 267-295.

Garoupa, N., and D. Klerman. 2002. "Optimal Law Enforcement with a Rent-Seeking Government," *American Law & Economics Review* 4:116-140.

Garoupa, N., and D. Klerman. 2004. "Corruption and the Optimal Use of Nonmonetary Sanctions," *International Review of Law & Economics*, 24: 219-225.

Gneezy, U., and A. Rustichini. 2004. "Incentives, Punishment and Behavior", in Camerer, Loewenstein and Rabin, eds. *Advances in Behavioral Economics*. Princeton Univ. Press.

Hirshleifer J and E Rasmusen (1992). Are Equilibrium Strategies Unaffected by Incentives? *Journal of Theoretical Politics*, 4:353-367.

Jolls C, C R Sunstein, and R Thaler (1998). A Behavioural Approach to Law and Economics. *Standford Law Review*, 50:1471-1550.

Karoly L A, M R Kilburn, J H Bigelow, J P Caulkins, J S Cannon, and J R Chiesa (2001). Executive Summary: Assessing Costs and Benefits of Early Childhood Inter- vention Programs; Overview and Application to the Starting Early Starting Smart Program. Rand Foundation.

Levitt, S.D., and T.J. Miles. 2007 forthcoming. "Empirical Study of Criminal Punishment," in A.M. Polinsky and S. Shavell, eds. *Handbook of Law and Economics 1*, North Holland.

Maddala, G.S. (2001) *Introduction to Econometrics*; 3rd eds, John Wiley and Son, LTD, Chichester.

Polinsky, A.M., and S. Shavell. 2000. "Economic Theory of Public Enforcement of Law," *Journal of Economic Literature* 38 : 45-76.
Polinsky, A.M., and S. Shavell. 2001. "Corruption and Optimal Law Enforcement." *Journal of Public Economics* 81: 1-24.
Polinsky, A.M., and S. Shavell. 2007 forthcoming. "The Theory of Public Enforcement of Law," in A.M. Polinsky and S. Shavell, eds. *Handbook of Law and Economics* 1, North Holland.
Rasmusen, E. 1996. "Stigma and Self-Fulfilling Expectations of Criminality," *Journal of Law and Economics*, 39: 519-544.
Rabin, M. 1993. Incorporating Fairness into Game Theory and Economics, *American Economic Review*, 83:1281-1308.
Tonry, M. 1997. "Intermediate Sanctions in Sentencing Guidelines," Issues and Practices in Criminal Justice. National Institute of Justice, U.S. Dept. of Justice, http://www.ncjrs.gov/pdffiles/165043.pdf.
Tsebelis G (1993). Penalty and Crime: Further Theoretical Considerations and Em- pirical Evidence. *Journal of Theoretical Politics*, 5:349-374.
Tsebelis G (1992). Are Sanctions Effective? A Game-Theoretic Analysis. *Journal of Conflic Resolution*, 34: 3-28.
Tsebelis G (1991). The Effects of Fines on Regulated Industries: Game Theory vs. Decision Theory. *Journal of Theoretical Politics*, 3: 81-101.
Tsebelis G (1990). Penalty Has No Impact on Crime? A Game Theoretical Analysis. *Rationality and Society*, 2: 255-286.
Tsebelis G (1989). The Abuse of Probability in Political Analysis: The Robinson Crusoe Fallacy. *The American Political Science Review*, 83:77-91.
U.S. Department of Justice (DOJ). 2003. "Felony Defendants in Large Urban Counties 2000." Washington DC: U.S. Department of Justice.
Weissing F and E Ostrom (1991). Crime and Punishment: Further Reflections on the Counter Intuitive Results of Mixed Equilibria Games. *Journal of Theoretical Politics*, 3: 343-350.

Appendices

Appendix A: Summary of Anti Corruption Act 20/2001

Section / Part	Offence Types	Minimum			Maximum			Top
		Prison (year)	and / or	Fines (million)	Prison (year)	and / or	Fines (million)	
Sec. 5 Part 1a,b	Offering a bribe to Civil Servants or Bureaucrats	1	Or	50	5	Or	250	
Sec. 5 Part 2	Civil Servants or Bureaucrats receive bribery as mentioned in parts 1A & 1B above.	1	Or	50	5	Or	250	
Sec. 6 Part 1a, b	Offering a bribe to any court staff and expert witnesses to alter their decision in the favour of the individual who offer a bribe.	3	And	150	15	And	750	
Sec .6 part 2	Any court staff and expert witnesses who received a bribe as mentioned in part 1a and 1b above.	3	And	150	15	And	750	
Sec . 7 Part 1a	Embezzlement of procurement of government goods and services provision	2	And or	100	7	And or	350	
Sec . 8	Fraud and Forgery committed by Bureaucrats for their own benefits.	3	And	150	15	And	750	
Sec . 9	Fraud and forgery committed by Bureaucrats in attempts to destroy and damage administrative evidence which may be used for prosecution.	1	And	50	5	And	250	
Sec. 10a	Damaging and loosing any kind of administrative evidence which can be used for prosecution.	2	And	100	7	And	350	
Sec. 11	Civil Servants or Bureaucrats received present or promise due to their position in the government, and the present may hinder them to work professionally.	1	And or	50	5	and or	250	
Sec. 12a,b,c ,d	Receiving gratification or discount for procurement by Bureaucrats, court staff, expert witnesses who is believed is going to affect to their decisions.	4	And	200	20	And	1000	Live
Sec. 12e,f,g, h, i	Extortion committed by bureaucrats, court staff.	4	And	200	20	And	1000	Live
Sec 12B Part 1& 2	Any gratification which is suspected as a form of bribery to bureaucrats.	4	and	200	20	And	1000	Live