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APPLICATION OF RULE OF LAW BY JURISDICTION SYSTEM ON ILLEGAL LOGGING CASE IN INDONESIA 2002-2008[1]

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ABSTRACT

The aim of this research is to analyze behavior of Supreme Court's judge on detention period sentence for illegal logging defendants in Indonesia from year 2002 through 2008. The first analysis is censored normal regression method using detention period indictment by prosecutor, detention period sentence by district court, defendant's gender, appeal effort, defendant's age, and defendant's job variables. Those variables are used to analyze how each variable affect on Supreme Court's verdict on detention period sentence for illegal logging defendants in Indonesia. Second analysis is descriptive statistic involves three levels of jurisdiction's considerations (prosecutor, district court, and Supreme Court) on determining detention period sentence for illegal logging defendants in Indonesia and suitability those three levels of jurisdiction to law. Research's result shows that detention period indictment by prosecutor, detention period sentence by district court, and defendant's age significantly affect on Supreme Court's verdict on detention period sentence for illegal logging defendants in Indonesia. But, on the other hand there is unsuitable verdict made by those three levels of jurisdiction to law.

Keywords*: court's verdict, illegal logging, censored normal regression*

INTRODUCTION

As one of renewable resource, forests have ecological and economical function. Ecologically, forests control species composition's variation because of its ability to influence ecosystem including food and nutrition supply. While from economic point of view, forest is one of resource of economic commodities. In order to accomplish that function, human intervention is needed, and forest management is required. Some important things on forest management are harvest cycle of timbers and how to conserve forest in order to fulfill its function, and also including management of residual wastes from foresting activities.

Indonesia is one of largest forest area in the world, recorded at 8th position for largest forest area in the world totally around 88,495,000 ha, around 48.8% of Indonesia's total land area (FAO, 2005). Indonesia's forest area is under Russia, Brazil, Canada, USA, China, Australia, and R.D Congo. Unfortunately, Indonesia's forest area is continuing to decrease in last two decades. FAO reported that there were around 116,567,000 ha of forest area by 1990, which decreased to around to 97,852,000 ha by 2000, and to 88,495,000 ha by 2005. That was due to forest exploitation (deforestation) and forest degra-

[1] This article has been awarded as the 1st best paper of JIEB's Best Paper Awards 2010.

[2] I am grateful to Rimawan Pradiptyo for his excellent guidance.

Table 1. Rate of Deforestation in Indonesia 2000-2005

Year	Deforestation (ha/year)							
	Sumatra	Kalimantan	Sulawesi	Java	Maluku	Papua	Bali & Nusa Tenggara	Indonesia
2000-2001	259.500	212.000	154.000	118.300	20.000	147.200	107.200	1.018.200
2001-2002	202.600	129.700	150.400	142.100	41.400	160.500	99.600	926.300
2002-2003	339.000	480.400	385.800	343.400	132.400	140.800	84.300	1.908.100
2003-2004	208.700	173.300	41.500	71.700	10.600	100.800	28.100	634.700
2004-2005	335.700	234.700	134.600	37.300	10.500	169.100	40.600	962.500
Total	1.345.500	1.230.100	866.300	712.800	214.900	718.400	359.800	5.447.800
Average	269.100	246.020	173.260	142.560	42.980	143.680	71.960	1.089.560

Source: Indonesia forestry statistic, Department of Forestry, 2007

dation caused by natural factors[3] (Lanly, 2003). From the report, decreasing rate of Indonesia's forest area during 1990-2000 was around 1,872,000 ha/year (-1.7%/year) and 1,871,000 ha/year in 2000-2005 (-2%/year). Totally, around 28,072,000 ha of forest area had been lost during 1990-2005.

In addition to natural factors, forest lost in Indonesia is an outcome of forest exploitation by human activities, such as land clearing for housing area (Barbier, 1993), farm converting (Hasanuddin, 1996; FAO, 1990; and World Bank, 1990), supporting economic growth (Ascher, 1993, Angelsen, 1995, and Dove; 1996), and for country's politic influence (Ascher, 1993; Dauvergne, 1994; Angelsen, 1995; Rose, 1996; Dove, 1996). Published data by Ministry of Forestry Republic of Indonesia[4] shows that deforestation in Indonesia 2000-2005 took place in many regions as listed in Table 1.

Economic development of a country could be one factor causing deforestation. Gillis (1988) and Ahmad (1995) conclude that expansion in wood industry is a trade-off with economic and environment loss. Indonesian government has released law of forestry since Agrarian Act 5/1960 about basic regulations of agrarian by determining right of land, water, and air usage in Indonesia. But this law does not explain in detail about rules in forestry sector yet. In 1967, the government released Forestry Act 5/1967 on forestry regulation and continues to amend along the changing of government in Indonesia.

Currently, local government has big authority on management of forestry sector by establishing Forestry Act 41/1999 about forestry. In this case, local government can authorize license for private sector to exploit forest. But, the regulation is still being abused by both private sector and government themselves. Setiono and Husein (2005) conclude that there is moral hazard practices on license authorization of forest exploitation[5]. It creates illegal logging activity and may lead to financial loss to the country. Department of Forestry has committed to increase forest security by recruiting new forest ranger and gives special training to them as mandated by Forestry Act 41/1b999 every year. Unfortunately, the forest rangers often become dishonest on tackling of illegal logging case by providing security to illegal loggers for self profit (Ama and Santoso, 2005)[6].

Many offenders that are brought to the court are only workers, farmers, drivers, and

[3] Lanly stated that ecosystem may be on unhealthy condition because of climate change, burning out, and etc.

[4] Indonesia forestry statistic 2007.

[5] Setiono and Husein (2005) concluded that corruption activity in forestry may be formed as bribery in license issue and illegal retribution.

[6] Ama and Santosa (2005) showed case study "Operasi Hutan Lestari II" and jurisdiction process in Sorong, Papua.

traders. In fact, based on publication by Indonesia Supreme Court, there were 130 offenders during period 2002-2008, and many of them were only employers. Aim of this research is trying to reveal improper practice on tackling of illegal logging that violates the law and attains moral hazard on jurisdiction system. All cases have been published in the official website of the Supreme Court in the following URL: http://www.putusan.mahkamahagung.go.id and the study uses 261 defendants data in 2002-2008.

THEORETICAL FRAMEWORK

Crime on Economics Perspective

Study of economic crimes is pioneered by Becker (1968) that conducted research on crime and punishment on economics perspective. Becker (1968) concluded that crime is an economic activity but contradictive with law and can be classified as illegal activity. It makes losses to others so that a method to overcome that illegal activity is needed. Becker (1968) suggested detection and punishment to overcome illegal activity based on offender's behavior, where offenders interest is on net benefit (expected benefit > expected cost). Then, the theory is developed by Tsebelis (1989), who concluded that punishment level would affect on offender's tendency to commit crimes with game theory analysis. This theory was also refuted and then Pradiptyo (2007) concluded that crime prevention[7] would be more effective to reduce offender's tendency to commit crimes than increasing level of punishment.

Crime and the handling create burdens to society (social cost and economic cost) from economic perspective. Poputra (2009) showed that tax evasion decreases country's income and injustice. Becker (1968) stated there are two ways to overcome crime, by improving detection and punishment. But, Becker's methods create cost guaranteed by government from tax and social cost of offenders for uncompensated potential income (Pradiptyo, 2009). Becker's method, in which the law enforcer is the most important factor on tackling criminal, is still used in Indonesia. Meliala (Tempo, 2008) argued if the law enforcers have ethics, qualified resource and proper authority, crimes will be reduced and increasing tendency for law enforcement among society. Otherwise, it may increase law violations that lead to chaotic condition in the society. Handoko (2009), on his research, stated that law in criminal justice is a reference for sanctioning those who violates the law with penalties.

Effectiveness of punishment could be serious problem. Bolks and Dina (2000) stated punishment duration is equivalent to cost and expected deterrence effect possible could not be reached[8]. Pradiptyo (2007) showed that crime mitigation is more effective rather than increasing punishment level, in spite of offender's probability to do crime decreases by increasing punishment level.

Law Application on Illegal Logging Case

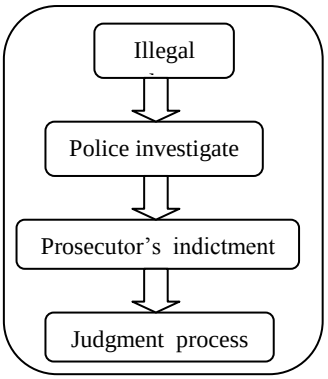
Illegal logging practice in Indonesia was influenced by law and jurisdiction system themselves. There are three regulations on forestry[9]. First, Forestry Act 5/1967 generally rules about forest ownership by country and classified forest into four forms. After 32 years, government had released forestry law, Forestry Act 41/1999 about government's authority on forestry and license authorization to private sector to manage forest. This law also regulates forest protection, including conservation and forestry crimes. On 2004,

[7] Government intervention to develop society had potential of crime activity, example preschool program for children.

[8] That cost could be negative net-benefit for government got from social problem when prisoner was in jail. It makes prisoner did not get learning not to repeat criminal activity.

[9] Beside those laws, there are enactment rules, like Tap MPR No. XI Year 2001, Perpu RI No. 1 year 2004, and PP No. 45 Year 2004.

this law had been revised into Perpu 1/2004 and revised again into Forestry Act 19/2004 due to legal uncertainty on mining in forest area. Law continues to be amended along with government changing, but illegal logging case handling scheme are explained below:



Source: Adinugroho (2005)
Figure 1. Handling of Forestry Crime in Indonesia

Generally, handling of illegal loggers in Indonesia shows three parts of criminal justice that determine whether offenders were found guilty or not. First is by police investigation where police could arrest and seize timbers if agent cannot show the license (known as SKSHH). Then, police would bring agent to jurisdiction level and get their indictment by prosecutor. This indictment can be reference for court to determine whether defendants were guilty or not. Jurisdiction process could be more than once because there are three levels of jurisdiction system (district court, high court, and Supreme Court) and re-observation process if needed.

METHODOLOGY

Source of Data

I use secondary data of court's verdict in the year of 2002-2008 published by Indonesia Supreme Court of illegal logging case[10]. The data were taken from website in the form of verdict sheet containing information about defendants, detention period judgment, fines, and others. Those data were divided into several variables and then estimated by econometric specification.

Econometric Specification

Model of econometric that was built is Tobin's probit model (known as Tobit model) that uses maximum likelihood estimation because dependent variable in model, detention period, has no under-null value. General form of Tobit model following as:

$$y^*_i = \beta' X_i + u_i \text{ [11]},$$

$$y_i = 0 \qquad \text{jika } y^*_i \leq 0,$$

$$y_i = y_i \qquad \text{jika } y^*_i > 0.$$

Tobit model had been assumed has normal distribution of residual and independently identical with zero mean values and common variance σ^2 ($u_i \sim IN(0, \sigma^2)$). Tobit model was estimated by maximum likelihood to get consistent β' and σ'. Maddala (1992) showed that maximum likelihood method used by Tobit model was following these assumptions:

1. Positif values of y_i observation is a standard normal density function. $(y^*_i - \beta' X_i)/\sigma$ has standard normal distribution where y^*_i is dependent variable (estimated value) and X_i is independent variable observed values.
2. Null values from observed values of y_i in model is written as $y^*_i = 0$ atau $\beta' X_i + u_i \leq 0$. When u_i/σ has standard normal distribution, the equation for u_i/σ can be expressed as $u_i/\sigma \leq - \beta X_i + u_i$ where u_i is got from $y^*_i - \beta' X_i$.

[10] All of data were taken from Indonesia Supreme Court website, http://www.putusan.mahkamahagung.go.id

[11] Where y^*_i is estimated parameter, y_i is observed variable, σ is standard deviation of model, and $\beta' X_i$ is estimator. Whereas u_i is error term of model $(y_i - y^*_i)$.

Density function of $f(y^*_i)$ that has standard normal distribution can be classified as:

$f((y^*_i - \beta' X_i)/\sigma)$ for positive value observation, and

$u_i \leq -\beta' X_i$ for non-positive value observation

Cumulative density function of standard normal density $f(y^*_i)$ are:

$$P(u_i \leq -\beta X_i) = P(u_i/\sigma \leq -\beta X_i/\sigma) \quad (1)$$

$$= F(-\beta X_i/\sigma)$$

Where $F(.)$ is cumulative density function and $P(.)$ is probability of non-positive observed values. Using notation (1) and (2), likelihood function of Tobit model can be written as:

$$L = \prod_{y_i>0} \frac{1}{\sigma} f\left(\frac{y_i - \beta X_i}{\sigma}\right) \prod_{y_i \leq 0} F\left(-\frac{\beta X_i}{\sigma}\right) \quad ....(3)$$

By maximizing likelihood function to parameter β and σ, we can get maximum likelihood estimation of each parameter that result asymptotic consistent and efficient estimator. Olsen simplified likelihood function on notation (3) to get log-likelihood function into:

$$L = \prod_{y_i>0} h.f(hy_i - BX_i) \prod_{y_i} F(-BX_i) \quad (4)$$

Whereas $h = 1/\sigma$ and $B = \beta/\sigma$

$$\ln L = n.\ln(h) - \tfrac{1}{2} \sum_{y_i>0} (hy_i - BX_i)^2 + \sum_{y_i \leq 0} \ln[F(-BX_i)] \quad (5)$$

Whereas n is data sample.

By deriving log-likelihood function into first-order form to parameter B and h, we can get maximum value of parameter and deriving into second-order form to parameter B and h to get maximum likelihood function[12].

Based on general form of Tobit model, model in this research can be written as:

$$y_i = \begin{cases} \beta' X_i + u_i & \textit{If SC made a quilty judgment for defendants} \\ 0 & \textit{If SC decided absolve defendants} \end{cases}$$

An estimating model used in this research is normal censored regression model. This model assumed that detention period judged by Supreme Court can be estimated and the regression model can be written as:

$$\begin{aligned} HMA^*_i = {} & \beta_0' + \beta_1' TJPUi + \beta_2' HPNi + \\ & \beta_3' UTi + \beta_4' GT_i + \beta_5' PTTi + \\ & \beta_6' JOB\_PN_i + \beta_7' JOB\_BTSD_i + \\ & u_i \end{aligned} \quad (6)$$

Equation (6) is based on assumption that the likelihood of detention period may be associated with various static and dynamic criminogenic factors[13]. Gender, indictment by prosecutor, judgment by district court, and appeal to high court are considered as static criminogenic factors. Whereas age and occupation are considered as dynamic criminogenic factors.

Explanation of variables used in the model are as follows:

HMA = detention period of defendants (in months). Judged by Supreme Court.

TJPU = detention period of defendants (in months). Indictment by prosecutor.

HPN = detention period of defendants (in months). Judged by district court.

UT = defendant's age (in years).

[12] See Olsen (1978) for details.

[13] Static criminogenic factors are unchangeable information of individual from time to time, whereas dynamic criminogenic factors are changeable information of individual from time to time.

GT = defendant's gender (dummy variable; 0 for male and 1 for female).

PTT = Appeal to high court (dummy variable; 0 for not appeal and 1 for appeal).

JOB_PN = defendant's occupation (dummy variable; 1 if defendant works in public sector, and 0 if others).

JOB_BTSD = defendant's occupation (dummy variable; 1 if defendant works as worker, farmer, driver, and merchant, and 0 if others).

ANALYSIS

Defendant information

There were 261 defendants of illegal logging in 2002-2008 who were involved in 189 illegal logging cases. Most of them are male who took 98% (256 defendants) whereas female only took 2% (5 defendants).

Table 2. Defendant's Gender on Illegal Logging Case 2002-2008

Gender	Number
Male	256
Female	5
Total	261

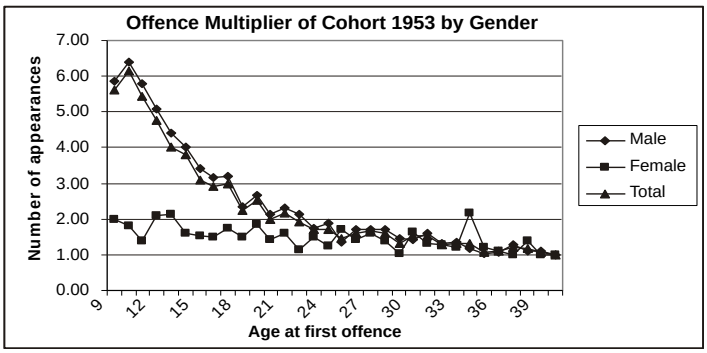
Source: Indonesia Supreme Court, 2002-2008

Bowles and Pradiptyo (2005) found that women have low constant offence multiplier tendency in every single age on beginning starting criminal activity rather than men. On the other side, men have decreasing offence multiplier tendency along with the age on beginning starting criminal activity. It is concluded that the older of man, the more decrease level of criminal activity.

Defendants were occupying different jobs. Many of them were worker, farmer, driver, and merchant who took totally 130 defendants (49.81% of total defendants), then entrepreneur/private sector who took 112 defendants (42.91% of total defendants). There were also defendants worked in public sector (including police, government employees, and their retiree).

Based on defendant's age, the youngest was 18 year old who worked as a farmer, and the oldest was 75 years old who worked as an entrepreneur. Mean of defendant's age was 39 year old and modus of defendants took place on 30-50 year old.

Since 2002 until 2008, Supreme Court had given verdicts on 261 individual illegal logging cases and had volatile trend of number cases. Top number of cases was taking place in the year of 2007 where Supreme Court adjudicated 102 individual illegal logging cases.



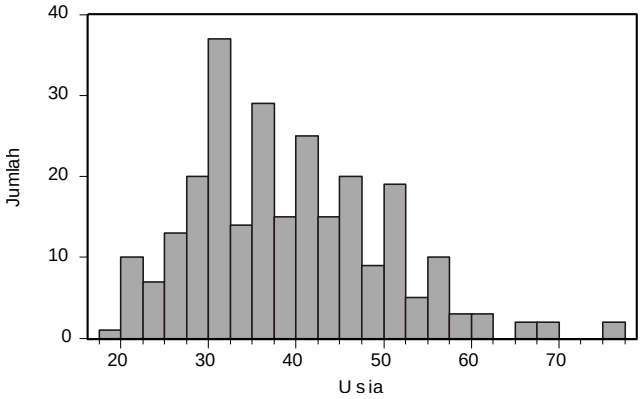
Source: Bowles and Pradiptyo (2005)

Figure 2. Offence Multiplier Cohort 1953 from Offender Index in England

Table 3. Defendant's Occupation on Illegal Logging Case 2002-2008

Defendant's Job	Numbers	Percentage
Entrepreneur/private sector	112	42,91%
Worker, farmer, driver, and trader	130	49,81%
Public sector	19	7,28%
Total	261	100%

Source: Indonesia Supreme Court, 2002-2008



Source: Indonesia Supreme Court, 2002-2008 (revised)

Figure 3. Age Distribution of Illegal Logging Defendants

Table 4. Number of Individual Illegal Logging Case Decided by Supreme Court

Year	2002	2003	2004	2005	2006	2007	2008	Total
Number of Defendants	5	4	8	29	81	102	32	261

Source: Indonesia Supreme Court, 2002-2008

In 2007, there were two cases being re-observed. However, Supreme Court had guilty verdict for defendants and consistent with previous punishment. This re-observed decision was asked by defendants if there were supported evidence that can change Supreme Court verdict.

Suitability of Court's Decision to Law

According to Forestry Act 41/1999 and 19/2004, minimum detention period for illegal logger is three months and maximum of fifteen years. In addition, according to section 78, minimum fine is ten million Rupiahs and maximum fine is five billion Rupiahs. Other punishments to defendants are financial punishment and probation.

Table 5 shows that mean of detention period decided by district court was the lowest compared to prosecutor and Supreme Court decision. District court also has lowest number of prisoner than prosecutor and Supreme Court (182 prisoners or 69.7% of total defendants). On the other side, there was no level of jurisdiction that sentenced maximum detention period on prisoner, hence all levels jurisdiction had minimum detention period punishment under law's rule and punishment could decrease if defendant/prosecutor proposes appeal against court's decision.

Table 5. Detention Period for Illegal Logging Prisoners in Indonesia[13]

Level of Jurisdiction	Number of Prisoner	Proportion	Mean of Detention Period	Min. of Detention Period	Max. of Detention Period
District Court	182 prisoners	69.7%	12.97 months	1 months	96 months
Supreme Court	200 prisoners	76.6%	16.82 months	1 months	96 months
Prosecutor	261 prisoners	100 %	29.97 months	2 months	144 months

Source: Indonesia Supreme Court, 2002-2008 (revised)

Tabel 6. Test for Equality Between Mean Series of Detention Period Judged by Prosecutor, district court, and Supreme Court

	Paired Differences				t-stat.	Prob.
	Mean	Std. Dev.	S.E. of Mean	df		
1. Prosecutor_sentence-SC_sentence	21.40153	18.80031	0.822867	520	11.69579	0.0000
2. Prosecutor_sentence-DC_sentence	19.51188	18.51729	0.81048	520	15.63513	0.0000
3. DC_sentence-SC_sentence	10.94023	12.1832	0.533244	520	3.583748	0.0004

Source: Indonesia Supreme Court, 2002-2008 (revised)

Again, district court was level of jurisdiction that had smallest number of guilty verdicts than other level of jurisdiction. District court made guilty judgment to 182 defendants of 261 defendants, or 69 percent of total, whereas prosecutor will always make guilty judgment to all of defendants. But if prosecutor made appeal from district court to Supreme Court, there were possibility of guilty judgment by Supreme Court when district court absolved defendants. It showed by number of guilty defendants on district court and Supreme Court level.

Result of the test in Table 6 shows lower level of jurisdiction charged longer detention period to illegal logging prisoners. All of test result between prosecutor with Supreme Court, prosecutor with district court, and district court with Supreme Court are statistically significant (α=5%). By mean, prosecutor judged detention period twenty one months longer than Supreme Court judgment, nineteen months longer than district court judgment, and district court judged ten months longer than Supreme Court judgment.

Table 7. Comparison of District Court And High Court Decision on Illegal Logging Case

		Guilty verdict by HC		Total
		Yes	No	
Guilty verdict by DC	Yes	173	8	181
	No	1	1	2
Total		174	9	183

Source: Indonesia Supreme Court, 2002-2008 (revised)

Statistic resulted from Table 7 shows that there is significant relationship between district court and high court (χ^2 = 8.788; df = 1; p = 0.003; with α < 1%)[15]. This result shows decision consistency between district court and high court, which means little possibilty

[14] Detention period judged by high court could not be presented because not all of cases were appeal against punishment.

[15] See appendix IV.

for high court to change decision made by district court[16].

Table 8. Comparison of District Court and Supreme Court Decision on Illegal Logging Case

		Guilty verdict by SC		Total
		Yes	No	
Guilty verdict by DC	Yes	174	9	183
	No	26	52	78
Total		200	61	261

Source: Indonesia Supreme Court, 2002-2008 (revised)

There is a consistency on decision made by district court and Supreme Court as indicated in Table 7. Statistic test shows that there is significant relationship between district court and Supreme Court's decision (χ^2= 116.4343; df=1; p = 0.000; with α<1%)[17]. This result shows little probability of Supreme Court to change decision made by district court[18]. Beside direct judgments, court could also give probation to their defendants. Probation would be inflicted to guilty defendants if they do same crime in certain period[19].

Table 9 showed that district court gives dispensation more than other level of jurisdiction. It can be seen from number of guilty defendats get probation in district court level. Whereas on the first level, prosecutor, never gives probation but always gives detention. Third form of punishment made by jurisdiction is fines. As explained on Forestry Act 19/ 2004 Section 78 for illegal logging case, minimum fines is ten million Rupiahs and maximum fines is five billion Rupiahs.

Table 9. Probation Sanctioned By Prosecutor, District Court, and Supreme Court For Indonesia Illegal Logging Case Defendants[20]

Level	Prisoner	Mean of Probation Period	Min. Probation Period	Max. Probation Period
DC	9	14.22 months	2 months	24 months
SC	1	24 months	24 months	24 months
Prosecutor	-	-	-	-

Source: Indonesia Supreme Court, 2002-2008 (revised)

Prosecutor and Supreme Court do not apply Forestry Act 19/2004 for fines punishment. Both of them give minimum fines below the amount ruled by law. On the other side, Supreme Court gives maximum fines as ruled by law, which is not always be done by prosecutor. Total fines collected by Supreme Court was higher than prosecutor in context to guilty defendants judged by Supreme Court (fine ratio is 1:1.145) and it shows that nominal fines will raise along with appeal decision made by defendants or prosecutor.

Other punishment given by court is subsidiary of compensation. As stated on Forestry Act 19/2004 Section 80 sub 1, subsidary of compensation has been used to compensate damage caused by illegal logging case. Nominal compensation depends on the damage itself and regulated by government and ministry of forestry.

[16] Hypothesis of test is:
Ho = no consistency between DC decision and HC decision.
Ha = there is consistency between DC decision and HC decision.

[17] See appendix V.

[18] Hypothesis of test is:
Ho = no consistency between DC decision and SC decision.
Ha = there is consistency between DC decision and SC decision.

[19] When guilty defendants on probation period, they were not on prison but will be prisoned if guilty defendants do same crime in decided period.

[20] Not all of defendants and prosecutors made appeal to HC and some of HC decisions were just to strengthen DC decision so the information about HC is not valid to be compared with other level of jurisdiction.

Table 10. Fines Judgment By Supreme Court And Prosecutor For Indonesia Illegal Logging Defendants[20]

Level	Prisoner (A)	Total Fines (B)	Max. Fines (C)	Min. Fines (D)	B:A	B(1) : B(2)
SC (1)	200	Rp. 7,605,325,000	Rp. 5,000,000,000	0	Rp. 38,026,625	1.145
Prosecutor[21] (2)	200	Rp. 6,640,250,000	Rp. 500,000,000	0	Rp. 33,201,250	1

Source: Indonesia Supreme Court, 2002-2008 (revised)

Table 11. Nominal of Subsidiary of Compensation For Illegal Logging Defendants in Indonesia 2002-2008

Level	Prisoner	Total Compensation	
		In Rupiah	In Dollar
DC	-	0	0
SC	-	0	0
Prosecutor	2	351,061,627,800	7,144,191.21

Source: Indonesia Supreme Court, 2002-2008 (revised)

Only prosecutors are able to inflict subsidiary of compensation to their defendants, and only two out of 261 defendants that are imposed to the type of punishment (about 0.77% out of total). Whereas district court and Supreme Court have never given that punishment to their defendants. This is an interesting point of concern because forestry act[23] has stated that compensation has to be inflicted to guilty defendants for compensating the damages.

There is court of cassation in Indonesia. Appealing to high court may have three possible decisions; strengthen district court decision, reject prosecutor's accusation, and cancel district court decision to establish its own decision for defendants. However, defendants or prosecutor could make an appeal through to Supreme Court, by passing high court level.

Table 12. Appeal Process On High Court Level of Indonesia Illegal Logging Case

Action	Numbers	Proportion
Made an appeal	183 offers	70.11%*
HC strengthened DC decision	171 offers	93.44%**
HC rejected prosecutor's decision	6 offers	3.28%**
HC cancelled DC decision	6 offers	3.28%**

Source: Indonesia Supreme Court, 2002-2008 (revised)

* Out of total defendants

** Out of total appeal on HC

From 261 decision, 183 (70.11%) decision were offered an appeal by defendants or prosecutor or both of them. It used to be done by defendants who got guilty verdict by district court, whereas prosecutor used to offers appeal to Supreme Court if district court did not give guilty judgement. Indonesia jurisdiction system allows defendants and pro-

[21] The table only informs about fine judged by prosecutor and SC. Not all of DC and HC decision are match with SC decision, so fine sentenced by DC, HC, and SC can not be compared. It is different with prosecutor which always made guilty judgment to defendants, so that they can be compared.

[22] Only for defendants who had guilty judgment by prosecutor and SC.

[23] Forestry Act 19 Year 2004 Section 80 Sub 1.

secutor to make an appeal directly through to Supreme Court without firstly propose an appeal to high court.

Highest tendency of high court decision upon appeal was strengthen district court decision (about 93% out of total appeal), and 3.28% for each of high court rejected prosecutor decision and cancelled district court decision. Rejected prosecutor decision had happened when prosecutor made an appeal over district court decision then high court refined or cancelled the decision. Whereas high court had cancelled district court decision while defendants made an appeal then high court made own decision to defendants.

The interested thing about Indonesia jurisdiction system is defendants or prosecutor can make an appeal directly through to Supreme Court and bypassing high court. It does not follow hierarchial path of jurisdiction level and seems that high court can not show its existency as a formal institution.

Test of Hypotheses

Model that is been built in this paper is maximum likelihood-censored normal regression and is used to analyze behavior of court's decision in Indonesia on illegal logging case. The model is used to obtain information, on whether independent variables are significant to dependent variable and how independent variables affect dependent variable (positve or negative effect). The result is shown below (Table 13).

Table 13 shows that defendant's age, prosecutor's judgment, and district court judgment have effects on Supreme Court decision in order to decide detention period. Supreme Court tends to reduce detention period for older defendants, and the older defendants the lower detention period judged. On the other side, accusation made by prosecutor and judgement by district court could be a reference for Supreme Court decision. Although there were no discrimination on gender and occupation, there is age

Table 13. Estimation Result

Independent Variables	Coefficient	*Std. Error*	*z-Statistic*	Probability
1. Constanta	7.219853	3.259833	2.214793	0.0268
2. Age of defendants (UT)	-0.224289	0.067316	-3.331870	0.0009
3. Detention period judged by prosecutor(TJPU)	0.194691	0.044712	4.354318	0.0000
4. Detention period judged by DC (HPN)	0.947194	0.090476	10.46901	0.0000
5. Gender of defendants (GT)	-5.876443	5.183528	-1.133676	0.2569
6. Appeal to HC (PTT)	-0.925402	1.676691	-0.551922	0.5810
7. Occupation 1(JOB_BTSD)	-2.046553	1.496334	-1.367712	0.1714
8. Occupation 2 (JOB_PN)	-2.924270	2.896227	-1.009682	0.3126
Observation	261	Log likelihood		-809.0940
R-squared	0.585781	Average log likelihood		-3.099977
Adjusted R-squared	0.572631	Akaike Info Criterion		6.268920
S.E. of regression	9.054102	Schwarz Criterion		6,391834
Sum squared residual	20658.15	Hannan-Quinn Criterion		6,318327

Source: Indonesia Supreme Court, 2002-2008 (estimated)
Explanation:
a. Dependent variable:
Detention period judged by SC. Null value showed that defendants were innocence.
b. Method: ML-censored normal (Tobit) (quadratic-hill climbing).

discrimination. In addition, Indonesia jurisdiction system does not strictly base its decision to law and justice. As Pradiptyo research (2009) on corruption cases, there is also age discrimination on corruption cases by jurisdiction system.

Revealed fact on this research shows that Indonesia jurisdiction system, especially on handling illegal logging cases, is far from law and regulation. Aim of regulations made in Indonesia is to give detterent effect to offenders. If there were no detterence effect created, offenders or potential offenders will commit to do crime activities as long as the benefit is higher than the cost.

CONCLUSIONS

The findings of this study show that there are deviation on jurisdiction's decisions. There are two types of deviation, that are descrimination about age of defendants. The older defendants, the lower detention period they would get. This is indicated in a negative relationship between detention period imposed by Supreme Court and defendants age of illegal logging case. That could be inconsistency on the regulation (Forestry Act No. 29/2004) and practices in the criminal justice in relation to the court judgement. This is occured on the regulation about minimum detention time, fines, and subsidiary of compensation for the damages caused by the criminal activities, which is very often charged to be less than required by the law.

The regression analysis shows that detention period judged by Supreme Court was influenced by prosecutor and district court judgment for detention period. In addition, court's decision over forestry case in Indonesia have a consistent likelihood so that when the accused is considered to be guilty in the lowest level (district court), little possibilities for higher level changing the decision eventhough prosecutor or defendants proposed an appeal and vice versa.

The implication of this research is to show the evidence of inconsistency on Forestry Act 19/2004 and judgment made by court. Of course that will decrease detterence effect of punishment and potentially increase illegal logging activities. Becker (1968) showed that crime activities would happen if benefit of the activity is higher than cost of activity including punishment that will be gotten.

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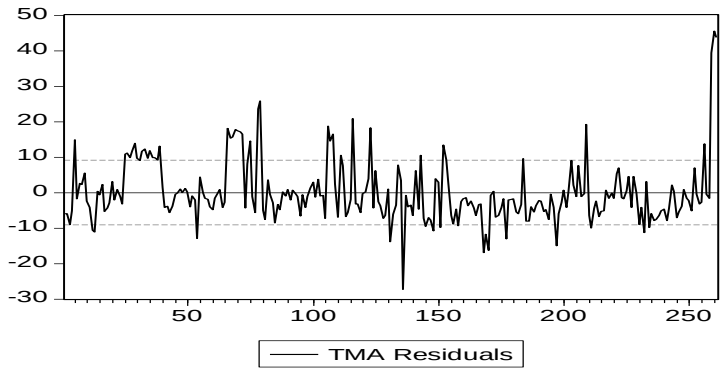
APPENDICES

I. Censored Normal Regression Estimation

Dependent Variable: TMA
Method: ML - Censored Normal (TOBIT) (Quadratic hill climbing)
Date: 02/23/10 Time: 02:22
Sample: 1 261
Included observations: 261
Left censoring (value) at zero
Convergence achieved after 5 iterations
Covariance matrix computed using second derivatives

	Coefficient	Std. Error	z-Statistic	Prob.
TPN	0.947194	0.090476	10.46901	0.0000
UT	-0.224289	0.067316	-3.331870	0.0009
TJP	0.194691	0.044712	4.354318	0.0000
PTT	-0.925402	1.676691	-0.551922	0.5810
JOB_PN	-2.924270	2.896227	-1.009682	0.3126
GT	-5.876443	5.183528	-1.133676	0.2569
JOB_BTSD	-2.046553	1.496334	-1.367712	0.1714
C	7.219853	3.259833	2.214793	0.0268
Error Distribution				
SCALE:C(9)	10.98022	0.573213	19.15555	0.0000
R-squared	0.585781	Mean dependent var		12.82989
Adjusted R-squared	0.572631	S.D. dependent var		13.84981
S.E. of regression	9.054102	Akaike info criterion		6.268920
Sum squared resid	20658.15	Schwarz criterion		6.391834
Log likelihood	-809.0940	Hannan-Quinn criter.		6.318327
Avg. log likelihood	-3.099977			
Left censored obs	62	Right censored obs		0
Uncensored obs	199	Total obs		261

II. Residual Graph of Estimation



III. Statistic Sample

	Mean	N	S.D.
Detention period judged by prosecutor	29.97318	261	19.20765
Detention period judged by DC	9.050575	261	9.921956
Detention period judged by SC	12.82989	261	13.84981

IV. Classification Table for Guilty Judgment 1

		Guilty judgment by HC		
		Yes	No	Total
Guilty judgment by DC	Yes	173	8	181
	No	1	1	2
Total		174	9	183

Chi-Square Test

Statistic test	df	Value	Prob.
Pearson Chi-Square	1	8.788579	0.003
Likelihood Ratio	1	3.452088	0.0632

V. Classification Table for Guilty Judgment 2

		Guilty judgment by SC		Total
		Yes	No	
Guilty judgment by DC	Yes	174	9	183
	No	26	52	78
Total		200	61	261

Chi-Square Test

Statistic test	df	Value	Prob.
Pearson Chi-Square	1	116.4343	0.000
Likelihood Ratio	1	112.7592	0.000