Illegal logging, collusive corruption and fragmented governments in Kalimantan, Indonesia

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SUMMARY

The paper distinguishes between collusive and non-collusive corruption in the forestry sector and analyses their interaction with the political/institutional environment. While non-collusive corruption increases costs for the private sector, collusive corruption reduces costs for the bribee, therefore it is more persistent. Data from confidential interviews in Indonesia show that illegal logging, supported by collusive corruption, became widespread after the fall of President Suharto. While economic liberalisation and competition among government officials may lower non-collusive corruption, they exacerbate collusive corruption. During political transitions, countries are particularly vulnerable to collusive corruption because governments are often weak and fragmented, with underdeveloped institutions. Sustained wider reform and institutional strengthening to speed up the transition to a true democracy is needed to fight collusive corruption. For Indonesia greater accountability of government, legal and judicial reform and encouragement of public oversight could be useful corner stones for combating illegal logging and corruption.

Keywords: illegal logging, corruption, forests, Asia, governance

INTRODUCTION

The symbiotic relationship between illegal logging and corruption has been widely discussed in the literature (Callister 1999, Palmer 2001, Contreras-Hermosilla 2001, Scotland *et al.* 2000). This affinity is particularly relevant in the context of Indonesia, where illegal logging is rampant and corruption is entrenched. The Ministry of Forestry in Indonesia estimates, for example, that Indonesia is suffering a financial loss of $3.7 billion annually due to illegal logging and exports (NRM Headline News 2003). Transparency International's Corruption Perceptions Index ranks Indonesia as the seventh most corrupt country, out of 102 countries, with a score of 1.9 out of 10 for a highly clean country (Transparency International 2002).

Corruption or the abuse of public office for private gain (World Bank 1997), exacerbates illegal logging by allowing it to occur in the first place and letting it go unchecked and unpunished. Corruption also poses a corrosive challenge to improved governance. Influential government officials benefiting from corruption strive to prevent or undermine policy and institutional changes that could combat illegal logging. Therefore illegal logging is unlikely to be controlled unless tools for fighting corruption are simultaneously developed and implemented.

A number of government, non-government and donor agencies are implementing strategies to control corruption in Indonesia. Among them is an analysis of Transparency International's corruption fighting tools used to determine their relevance to combating forest sector corruption (FIN 2003) and a nation-wide survey of corruption in Indonesia (Partnership for Governance Reform in Indonesia 2001). This paper complements these efforts by drawing on literature about the political economy of corruption to highlight two factors that, arguably, have received inadequate emphasis in the design of policies: the importance of first distinguishing between types of corruption and second analysing their interface with the political/institutional environment, its history and its dynamics. In the case of Indonesia we argue that although corruption in relation to the timber industry was pervasive during the Suharto regime, now a more insidious type of corruption, which is harder to root out, has exploded after his downfall and that strategies for combating it will require wider reform.

TYPES OF CORRUPTION AND THEIR DYNAMICS DURING PERIODS OF POLITICAL TRANSITION

Following Shleifer and Vishny (1993) and Bardhan (1997), we distinguish between collusive and non-collusive corruption and analyse the impact of transitions from strong to a weak governments on each type of corruption.

Collusive and non-collusive corruption

With non-collusive corruption the government demands a bribe for a legal activity, such as obtaining a logging permit. Non-collusive corruption thus drives up costs for the private sector, which now has to pay a bribe in addition to the official cost. Non-collusive corruption thus pits the briber against the bribee.

Collusive corruption is a more decentralised type of corruption in which individual government officials and the private sector collude to rob the government of revenues. Government officials for example may let exports through without permits, or overlook tax evasion, logging outside authorised areas or the violation of harvesting regulations in return for a bribe. Bribes are insurance policies taken out to avoid paying penalties for illegal activities, the amount of the bribe being equal to the penalty times the probability of being caught and punished (Cohen 1999). Where surveillance is poor and the likelihood of paying a penalty, if caught, is minimal, levels of bribes for collusive corruption would therefore be only a fraction of the cost of carrying out the activity legally. Unlike non-collusive corruption, collusive corruption reduces costs for the private sector. With collusive corruption, neither the briber nor the bribee has an incentive to report or protest. Thus collusive corruption is insidious and difficult to detect and therefore more persistent than non-collusive corruption (Bardhan 1999, Shleifer and Vishny 1993).

Transitions from strong to weak governments and the impact on corruption

By strong governments we mean regimes characterised by political stability and governments that are powerful enough to maintain law and order and enforce contracts throughout the country. Weak, fragmented governments by contrast have a precarious hold on power and are characterised by political instability, anarchy and local fiefdoms (Frye and Shleifer 1997).

Impact on non-collusive corruption

Strong governments attempt to maximise total bribe revenue from a number of complementary legal transactions. Thus the level at which the bribe for one transaction (say obtaining a logging permit) is set, takes into consideration the impact on complementary transactions (such as obtaining a timber export permit). This is possible because the government is sufficiently powerful to coordinate bribes from complementary transactions, so as to prevent the total demand for permits from falling (Shleifer and Vishny 1993, Bardhan 1999). As a result, total bribe revenue from non-collusive corruption is often staggeringly high, particularly for states with valuable natural resources, such as oil or timber (Ascher 1999).

Under weak governments, corruption becomes decentralised (Shleifer and Vishny 1993, Bardhan 1999). Independent fiefdoms set bribes for (say) logging permits without considering the impact of the bribe level on complementary permits, such as timber export permits, which are granted by other independent fiefdoms. In addition free entry into this game leads additional agencies to create needs for new permits. The result is an anarchic system of bribery, with multiple bribes being paid to different independent agencies for carrying out legal activities.

Impact on collusive corruption

Strong governments tend to favour non-collusive corruption over collusive corruption, particularly for activities where the potential loss in government revenue from collusive corruption is high, such as evading timber taxes. However in cases where collusive corruption breaks regulations that were motivated primarily by 'cosmetic' environmental or social objectives, collusive corruption is also likely to be pervasive under strong governments. An example would be bribes taken to overlook violations of good logging practices.

Under weak, fragmented governments, the private sector has a better opportunity to lower costs through collusive corruption. Although multiple, anarchic bribes have also to be paid for collusive corruption, bribes are likely to be well below official fees because surveillance is also likely to be poor under weak governments. While the government loses revenues from fees, it is too weak to control independent fiefdoms. Collusive corruption also suits government officials, who given the political instability which characterises weak governments, are anxious to maximise short-term personal benefits, rather than building up government revenues. In the case of logging, the implication is that under weak governments the level of collusive corruption for activities such as tax evasion or illegal exports, would be higher than under strong governments.

Countries undergoing political transitions

A number of countries in recent years have experienced a political transition from strong to weak governments, accompanied by burgeoning decentralised corruption. Examples are Indonesia after the fall of Suharto, the Philippines after the fall of Marcos and post-Communist Russia. Although in all the above examples, the transition from strong to weak governments coincided with the overthrow of authoritarian rule, and in some cases also a change from centralisation of authority to decentralisation, the impact on corruption described above stems, as shown by Bardhan (1999), from government weakness and political instability resulting in the decentralisation of

corruption, rather than being inevitable consequences of democracy or the decentralisation of governance. Coolidge and Rose-Ackerman (1997) show for instance that in Somalia, the dictatorial rule of Barre was characterised by anarchic bribery because Barre was too weak to control local fiefdoms, while they attribute Botswana's relatively favourable record on corruption to its political stability.

A more relevant similarity among the examples given above, is that they all represent periods of transition i.e. periods prior to the establishment of functioning, decentralised democracies after the overthrow of authoritarian rule. Also, notably, all share a long history of kleptocracy by a clique of elites, which induces those who received relatively few benefits in the past to maximise personal benefits during what they fear will be small windows of opportunity.

ILLEGAL LOGGING, CORRUPTION AND THE POLITICAL ENVIRONMENT IN INDONESIA DURING THE SUHARTO REGIME

During the first two decades of Suharto's rule, the government could be characterised as a strong regime. Suharto centralised control over natural resources, such as oil and timber, and exploited them both for political patronage and for projects, such as transmigration programmes to the outer islands, to consolidate his power throughout the country (Ascher 1999). Forests long used by local communities under informal rights, were declared as state forests. Large-scale logging concessions were granted to forestry conglomerates controlled by Indonesian-Chinese entrepreneurs, with government officials and the military as partners (McCarthy 2000, Barber and Talbott 2003). In return for timber rents, the military enforced internal obedience to Suharto's policies throughout the country. Control over the provinces was maintained through military officers who were appointed to head provincial and district governments (Barber and Talbott 2003).

Non-collusive corruption flourished during the Suharto regime. In return for granting privileged access to forests, Indonesian-Chinese entrepreneurs granted shares in timber enterprises to Suharto's family and contributed massive funds that Suharto used for off-budget spending to further political objectives (Ascher 1999, Brown 1999). The military also benefited from non-collusive corruption by selling their influence to secure favoured access to forests for business entrepreneurs (Barber and Talbott 2003).

During the last decade of Suharto's rule, some degree of disunity arose within the government (Ascher 1999), which in turn facilitated collusive corruption. With his political power well established, Suharto distanced himself from the military's timber interests (Ascher 1999, Barber and Talbott 2003). The military now turned to supplementing its income through collusive corruption. Timber processing capacity by now, far exceeded sustainable timber supplies and the shortfall was met by concessionaires by harvesting above their annual allowable cut, repeat harvesting before the approved cutting cycle and logging outside approved areas both within and outside their concessions (Barr and Resosudarmo 2002). Timber brokers also provided logs from unauthorised areas to processors who had inadequate supplies (Obidzinski 2001). The military benefited substantially from collusive corruption during this period by extorting fees from illegal operators.

Thus for most of the Suharto regime, non-collusive corruption was the dominant form of corruption. Collusive corruption became widespread in the last decade of his rule. However, one organisation – the military – was the main beneficiary of bribes from collusive corruption and the military still maintained strong political ties with Suharto, although economic ties were now considerably weaker. Thus, collusive corruption was far more coordinated than the archetypal collusive corruption that occurs under weak, fragmented governments.

ILLEGAL LOGGING, CORRUPTION AND THE POLITICAL ENVIRONMENT AFTER THE FALL OF SUHARTO

After the fall of Suharto the government became weak, fragmented and politically unstable. Indonesia had three heads of state within three years, East Timor province broke away and separatist movements in Aceh and Irian Jaya provinces experienced resurgence. The aftermath of the Asian economic crisis added to the problems, as the currency depreciated steeply leading to banks being saddled with a high level of non-performing loans, caused by the technical bankruptcy of prominent manufacturing organisations with foreign currency debt service obligations. Unemployment soared and petty crime became widespread.

It was in this chaotic environment that administrative and regulatory authority was decentralised, primarily to the district level, with district heads reporting to locally elected legislative assemblies. Under decentralisation, regional governments are entitled to a larger share of resource revenues and are given authority to oversee management of community forests. Customary rights to forests are restored to local communities. In order to generate revenue from local sources after decentralisation, district governments have issued numerous short term, small-scale forest conversion permits, known as Timber Extraction and Utilisation permits (IPPK) largely to companies that are joint ventures between Indonesian regional entrepreneurs, locally known as 'contractors', and Indonesian or Malaysian timber buyers, locally known as 'investors' (Obidzinski 2001). Before obtaining a permit companies secure a timber harvesting agreement with the community, under which they pay a small royalty to the community in exchange for harvesting rights. IPPKs are supposed to be granted in community forests that lie outside areas defined by the national government as Permanent

Forest Estate. In practice, however, many IPPKs have been granted within the boundaries of logging concessions established during the Suharto period (Barr *et al.* 2001).

In effect IPPKs provide a means by which much of the illegal logging that was going on before could be 'legalised' (Casson and Obidzinski 2002, Obidzinski 2001, Tacconi *et al.* in press). In spite of this, illegal logging is widely believed to have exploded after the fall of the Suharto regime, based on reports by researchers and NGOs (Scotland *et al.* 2000, EIA/Telapak 2000, Casson and Obidzinski 2002, Obidzinski 2001), as well as public acknowledgement of the problem by the Ministry of Forestry and Estate Crops (quoted in Scotland *et al.* 2000). Corruption is also perceived to have worsened. In Transparency International's Corruption Perception Index the score for Indonesia has fallen from 2.65 (out of 10 for a highly clean country) in 1996 to1.9 in 2002 (Transparency International 2002).

The study area

The study area consists of three districts in north-east Kalimantan: Bulungan, Malinau and Nunukan. Kalimantan is estimated to contain about 30% of Indonesia's forest area and around 50% of Indonesia's production forests i.e. forests designated by the government for timber extraction (Ismael 2000). Deforestation in Kalimantan is estimated to be around 706,000 ha/year (World Bank 2000a). IPPK permits have been rapidly issued in Bulungan and Malinau and at a somewhat slower rate in Nunukan (Table 1). Permit holders are liable for an area-based tax, known as the Third Party tax, equivalent to about \$20/ha and a volume-based production tax equivalent to about \$1.5/m^3. A royalty, usually around \$3/m^3 is negotiated with local communities. Exports require a permit and a fee equivalent to about \$12/m^3 for *meranti* species. In addition transport permits are required with the fee that varies amongst species.

Much of the timber harvested from east Kalimantan is exported across the border to Sabah, Malaysia, where plywood companies face an acute shortage of raw materials due to the depletion of local timber stocks and increased enforcement of regulations on timber extraction. Data on the timber trade were therefore also collected from Tawau, Sandakan and Kota Kinabalu in Sabah Malaysia.

Data collection methods

Data were collected by first using rapid rural appraisal methods, consisting of semi-structured interviews with key informants including government officials, timber industry actors and members of local communities. IPPK industry operators had to be identified through informal contacts, given their shadowy nature and their unwillingness to be formally interviewed. Data on corruption were collected through informal, confidential interviews with anonymous IPPK operators. Rapport was established by requesting their cooperation in understanding the IPPK system and the problems its operators face. We emphasised that we were not requesting information on specific companies or officials. Given the sensitive nature of the data, and the time consuming process of establishing rapport, information was collected opportunistically from very small samples, often single to three or four cases. In addition, primary and secondary documents on government statistics and laws at the district level were also reviewed.

Empirical evidence

Although IPPKs provide a cover of legality for previously illegal logging activities, our study reveals that in practice, a high degree of irregularity exists in the IPPK system. The maximum volume of timber authorised to be harvested from the IPPK area is usually well in excess of planned harvests, thus enabling companies to harvest areas substantially larger than the authorised area. Inspection

TABLE 1 *Tax revenues*[1] *and estimated informal payments*[2] *from local logging permits: Bulungan, Malinau and Nunukan Districts, north-east Kalimantan, Indonesia: August 2001*

District	Active local logging permits[3] ('000ha)		Taxes payable (\$'000)		Realised tax revenue (\$'000)		Realised as % of payable		Estimated informal payments (\$'000)		Realised tax revenues as % of informal payments	
	2000	2001 (Jan–Jun)	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
Bulungan	10	23	200	240	15	50.4	8	21	142	311	11	16
Malinau	32	16.5	640	330	329.4	292	51	88	451.2	683.9	73	43
Nunukan	3.7	5.1	No tax	102	No tax	3.6	No tax	4	52.2	124.1	No tax	3

[1] Data source: Economics section, District Offices: Bulungan, Malinau, Nunukan, north-east Kalimantan. Figures include Third Party Tax (\$20/ha) only.

[2] Three payments of \$25,000 per average permit size of 1766/ha are made to obtain approval of logging permits. Data for year 2000, assume only first payment of \$25,000/1766ha. is made. Data for year 2001, assume first payment of \$25,000/1766ha. for new permits plus second payment of \$25,000/1766ha. for permits issued in 2000. Data source: average figures from three confidential interviews with Indonesian timber contractors in Malinau and Bulungan (north-east Kalimantan).

[3] Data source: Economics section, District offices: Bulungan, Malinau, Nunukan, north-east Kalimantan.

of a random sample of 10% of IPPK records in the study area showed that the average authorised volume is 49 m^3/ha. According to confidential interviews however, volumes actually harvested averaged ~ 20 m^3/ha. The implication is that the area actually harvested may be 2.5 times greater than the authorised area. This is consistent with reports documented by Barr *et al.* (2001) of an influx of logging equipment into east Kalimantan, well in excess of requirements for logging authorised areas. Logging outside authorised areas was openly acknowledged by district heads, who blamed provincial forestry officials for not checking the feasibility of authorised volumes in the field. A member of the district legislative assembly claimed that provincial forestry officials and district government officials had stakes in IPPK companies. Some district officials claimed they were unable to convict offenders, because of the intervention of the police and military, who were under the control of the central government.

Although IPPKs were granted to generate revenue for district governments, tax evasion is widespread. Official data (Table 1) on the area-based tax of $20/ha show that tax receipts were only 8% and 21% of taxes payable in 2000 and 2001 in Bulungan, and 4% of taxes payable in 2001 in Nunukan. Comparable figures from Malinau are significantly better for 2001, but indicate that considerable tax evasion occurred in 2000. While data on tax evasion in the timber industry during the Suharto regime are not available, we do know that the government obtained substantial revenues from the timber industry in spite of keeping timber royalties at very low levels. The Reforestation Fund into which the Reforestation fee was deposited was estimated, for instance, to be $800 billion. These data indicate that Suharto was able to exact a higher degree of tax compliance from the timber industry than district governments after his fall and had better control over the proceeds.

Substantial illegal exports from east Kalimantan to Sabah, Malaysia also appear to be occurring given the significant volume of unaccounted logs i.e. the difference between the official log supply in Sabah (domestic plus net imports) and the volume of logs processed there. For the purposes of this analysis official log supply in Sabah (LS) is estimated as:

LS = M + LP – X .....Eqn 1

Where
M = Malaysian data on official imports into Sabah
LP = Domestic log production in Sabah
X = Official exports of logs from Sabah

The volume of unaccounted logs (UNL) is estimated as:

UNL = LP – LS .....Eqn 2

Where LP = Input of logs into the timber processing industry in Sabah.

Table 2 shows that the estimated volume of unaccounted logs was 1.86 million m^3 and 1.59 million m^3 in the first seven months of 2001. If total imports are taken as the sum of official imports (M) and unaccounted logs (UNL), then official Malaysian imports are estimated to be only ~ 10% of estimated total imports (Table 2). If M in equation 1 is substituted by Indonesia data on official exports from north-east Kalimantan to Sabah, Malaysia, official Indonesian exports are estimated to be only ~ 3% of estimated total imports (Table 2). These figures should be taken as only rough estimates. We assume that all imports into Sabah are from Kalimantan. While this need not be the case, it is arguably not too inaccurate, because industry representatives say that virtually all imports are from Kalimantan. Data on LP may also under represent actual log production in Sabah. However, under reporting in Sabah is relatively small, because industry representatives claimed that improvements in enforcement of logging restrictions

TABLE 2 *Estimates of unaccounted log exports from North-east Kalimantan to Sabah, Malaysia: 2000 and 2001*

	2000 (million m^3)	2001 (Jan–July) (million m^3)
1. Indonesian data on official exports from north-east Kalimantan [1]	.06 [2]	.01 [3]
2. Malaysian data on official imports into Sabah [4]	0.21	0.13
3. Domestic log production in Sabah [5]	3.7	1.7
4. Official exports of logs from Sabah [6]	0.37	0.62
5. Input of logs into timber industry in Sabah [5]	5.4	2.8
6. Unaccounted logs (based on Malaysian imports) {5-(2+3-4)}	1.86	1.59
7. Unaccounted logs (based on Indonesian exports) {5-(1+3-4)}	2.01	1.71
8. Official imports into Sabay as % of estimated total imports {2/(6+2)}	10	8
9. Official exports from north-east Kalimantan as % of estimated total exports {1/(6+1)}	3	0.6

[1] Office of Trade and Industry and Customs Office, Tarakan and Customs Office, Nunukan.
[2] Exports to all countries.
[3] Exports to Sabah.
[4] Sabah Timber Industries Association, Kota Kinabalu and Sabah Department of Forestry, Sandakan. The above organisations claim that almost all imports are from north-east Kalimantan.
[5] Sabah Department of Forestry, Sandakan.
[6] Malaysian Timber Industries Board, Kota Kinabalu.

had left them with little choice but to import logs from Indonesia. Both the above qualifications imply that unaccounted logs may have been overestimated to some extent. Notwithstanding these caveats, the data indicate the existence of substantial illegal exports from Kalimantan to Sabah. This is consistent with statements by the Indonesian Ministry of Forestry and Estate Crops (quoted in Scotland *et al.* 2000) and observations by field researchers (Obidzinski 2001; Casson and Obidzinski 2002).

Data on illegal exports during the Suharto regime are not available. However, enforcement of a log export ban in the 1980s was clearly sufficiently effective to force Indonesian timber entrepreneurs into domestic log processing, in spite of processing being less profitable than raw log exports (Ascher 1999). Thus it is likely that illegal exports were lower during the Suharto regime.

Confidential interviews with IPPK operators showed that the above illegal activities were made possible by collusive corruption. Timber contractors were able to specify authorised timber volumes according to their convenience, subject to informal payments to provincial forestry officials. Local communities are aware of harvesting outside authorised areas, but have little incentive to report irregularities since the royalty they receive is volume-based. Village heads also connive with IPPK operators because of informal payments they receive in return for harvesting agreements in customary forests, as well as for the employment opportunities provided by IPPK operations. IPPK operators make payments to the police and military to overlook logging outside authorised areas and the transport of logs to the border without transport permits. Border patrol personnel are paid off to permit exports without export permits. In addition, informal payments are made to Malaysian officials in order to 'legalise' illegal exports from Indonesia. Although we were not told of informal payments made specifically to overlook tax evasion, it is likely that informal payments were made in lieu of taxes. Alternatively, it is possible, as one member of the district legislative assembly claimed, that tax revenues were being siphoned off by district and provincial level officials. Unofficial payments are also made to district government officials to obtain approval for IPPK permits, thus indicating the existence of non-collusive corruption. Table 1 (column 7) shows that estimates of informal payments for approval of IPPK permits far exceed realised revenues from area-based logging taxes.

In addition to illegal logging and exports in connection with the IPPK system, logging within national parks exploded during this period. National parks are attractive because of their commercially valuable stands. At the same time they are particularly vulnerable after decentralisation, because they remain the responsibility of the central government, whose weakness erodes its capacity to secure these remote areas. District governments offer little cooperation on enforcement as illegal activities within national parks are perceived to be the product of unjust treatment by the Suharto government towards the regions (Barr and Resosudarmo 2002). During the Suharto regime by contrast, while enforcement in national parks was not entirely effective, it was tougher than now, due to policing activities by the military (Barr and Resosudarmo 2002).

Illegal logging in national parks is also facilitated by collusive corruption, with government officials, military and police receiving bribes for overlooking these activities (McCarthy 2000). The judiciary has also reportedly been paid off to prevent conviction of high profile figures behind illegal logging gangs (EIA/Telapak 1999).

Thus in addition to non-collusive corruption remaining widespread after the fall of Suharto, the evidence points also to an explosion of collusive corruption. As we argue below, government weakness makes this type of corruption and the illegality associated with it particularly difficult to eradicate.

Impact of a weak, fragmented government

Decentralisation in Indonesia was largely a political manoeuvre in response to separatist movements and the dissatisfaction of resource rich regions with the centralisation of resource revenues under the Suharto regime (Barr and Resosudarmo 2002). As a result, decentralisation was rushed through before strong institutions necessary for a stable, functioning democracy could be established. The whole process has also been ad hoc in nature, with little coordination among national, provincial and district governments. On the contrary, it has been characterised by a power struggle among the different levels of government and conflicts among different categories of forest stakeholders.

The power struggle between different levels of government has blurred the lines between legality and illegality and made illegal activities easier. Provincial and district officials have instituted reforms that extend well beyond the authority granted to them under central government regulations. As a result, laws have often been contradictory and unclear. For example, IPPK permits were issued in the study area before the implementing regulations for the central governments transfer of authority to the regions had been finalised (Barr *et al.* 2001). Allocation of IPPK permits by the district government continued in spite of central government instructions to suspend the granting of IPPK permits, due to high levels of irregularities. Barr and Resosudarmo (2002) report that this is because district governments recognise that the national government has little capacity to block allocation of new permits by district governments. Contrary to national level laws, IPPK permits have been issued within logging concessions granted by Suharto. Barr *et al.* (2001) contend that this is to emphasise to concessionaires that access to timber profits depends on the support of the district government and cannot be guaranteed, as in the past, by connections with the central government.

Weakness of the government in enforcing the rule of law has also resulted in anarchy and widespread conflict among forest stakeholders. Conflict rages between concessionaires and IPPK operators over harvesting rights,

among different groups of local communities over claims to community forest and between provincial and district governments over forest administration and control. This anarchic situation has further blurred the lines between legality and illegality. Because of this, IPPK operators have preferred to remain as anonymous, shadowy characters. For example, in our study we were unable to openly interview any IPPK operator. IPPK offices refused interviews, district offices could not supply us with names of IPPK operators. Interviews had to be carried out anonymously and confidentially after identifying IPPK operators through local networking. This was in spite of one of the authors (Suramenggala) hailing from the study area and another of the authors (Obidzinski) having spent a couple of years doing field work in the study area. This secrecy surrounding IPPK operations makes the corruption associated with it more insidious and therefore more difficult to detect and root out. In contrast to IPPK operators, we were able to openly interview holders of concessions granted under the Suharto regime. While many concessionaires are also guilty of illegal activities and corruption, it has also been possible to openly involve them in multi-stakeholder discussions on improving forest management in Indonesia, thus increasing the chances of addressing the underlying causes that cause them to opt for illegal activities and corruption.

Government weakness has made it possible for a wide variety of agents to now benefit from illegal activities and the corruption associated with it, ranging from the police and military, local government officials at the district and provincial level, local communities, timber contractors and investors, as well as customs officials and the wood processing industry in Malaysia. This is pernicious, because as the number of corrupt people increases, the gains from corruption also increase. This occurs because expected losses, when detected, decline when more people become corrupt. The offender is then more likely to be caught by a corrupt than a non-corrupt person and can therefore get away by paying a bribe, which by its very nature, is significantly lower than the penalty that would be payable if detected by a non-corrupt person (Andvig 1991, Cadot 1987). Many of those now involved in illegal activities and corruption are new actors (Barr and Resosudarmo 2002), who were deprived of forest rents during the Suharto regime. Most significantly, these actors are now independent agents, motivated by diverse agendas. Thus the nature of corruption has changed from being controlled and driven by Suharto and his cronies, to an anarchic explosion of attempts to profit from illegal activities, while the governance vacuum provides a window of opportunity.

TOWARDS STRATEGIES FOR CONTROLLING CORRUPTION AND ILLEGAL LOGGING

Where corruption is widespread, as in Indonesia, straightforward strategies are unlikely to be effective. Oh (1995) shows, for example, that increasing the level of penalties for corrupt activities is unlikely to work, unless surveillance is also improved. But, how does one improve surveillance if the police are corrupt? Other measures, such as anti-corruption investigative units are unlikely to be effective in highly corrupt countries because corruption units are likely to become corrupt themselves. Nor is an increase in the salaries of civil servants likely to work. It is more likely to increase the number and rate of attractive positions that are bought (Andvig and Fjeldstad 2000). Bardhan (1997) argues that where corruption is widespread, a critical mass of opportunistic individuals will have to be convinced over a long enough period that corruption no longer pays. Thus strategies have to be sustained over the long-term and are likely to require broader reform. Here we evaluate, in the Indonesian context, a few such strategies, some of which reduce the gain from corruption and others that increase the probability of corrupt activities being detected and punished.

Economic competition

One strategy advocated for reducing the gain from corruption is economic liberalisation, through measures such as removal of subsidies, opening up the economy to foreign competition, breaking up monopolies. When economic competition is restricted, industries protected from competition make 'excessive profits' or rents, i.e. profits higher than the market rate of return on investments. Thus they seek to corner access to resources in protected sectors, by bribing officials in charge of allocating these resources. When economic competition is introduced, rents are dissipated and thus the returns of corruption are reduced. In particular, non-collusive corruption, which increases costs for the private sector, is likely to become less attractive when protected industries are exposed to competition. Shliefer and Vishny (1993) show however, that economic competition causes collusive corruption to spread more widely. If one company lowers costs through collusive corruption, those that do not, will find it increasingly difficult to survive. What is more, Bardhan (1997) points out, that even non-collusive corruption may be exacerbated by economic competition. As restrictions on trade for instance are relaxed and economic activity increases, government officials may see more opportunities for non-collusive corruption. Under intense competition, the private sector too may resort to 'grease payments' to speed up transactions. These qualifying factors probably explain why econometric analysis shows that government trade policies are only weakly related to levels of corruption (Andvig and Fjeldstad 2000).

In the Indonesian case, non-collusive corruption during the Suharto regime was supported by subsidies including low timber royalties, monopolies in the export of processed wood products and loans at subsidised rates. Arguably, the financial contributions made by the timber industry for Suharto's benefit may not have been economically viable without the subsidies that artificially inflated their profits.

The situation in Indonesia after the fall of Suharto, however, appears to support Schleifer and Vishny's (1993)

contention that economic competition may increase collusive corruption. Economic competition in the plywood industry increased markedly after Suharto's fall because plywood from Indonesia, which is produced from tropical hardwoods, began to be undercut by plywood with cheap timber cores from China. At the same time demand from Japan declined due to the downturn in the Japanese economy (ITTO 2002). These factors are reflected in a substantial fall in the price of Indonesian plywood, whose price index (with January 1997 as 100) declined during the course of 2001 from 60 to 45 (ITTO 2002). Confidential interviews with timber investors and contractors in East Kalimantan revealed that faced with the price decline, companies used collusive corruption to cut costs and thus maintain returns to sunk investments in machinery and distribution infrastructure. In fact one claimed that it was no longer possible to make profits without resorting to such means.

The implication is that while economic competition may, arguably, reduce non-collusive corruption it also runs the risk of exacerbating collusive corruption. Economic liberalisation therefore needs to be accompanied by dramatically improved law enforcement, in order to contain the risk of increased collusive corruption.

Political competition

Some aspects of political competition reduce the gains from corruption, while others increase the probability of detection and punishment.

Reducing the gain from corruption
Schleifer and Vishny (1993) argue that in a federal or decentralised government competition among states or districts in the provision of government supplied goods (say logging permits) could drive bribes for non-collusive corruption down to zero. Non-collusive corruption increases costs for the private sector. Companies would therefore choose to invest in the state or district where bribes are lowest. This would reduce the gains from corruption for government officials and reduce incentives for non-collusive corruption. Schleifer and Vishny (1993) caution however that competition among districts may increase collusive corruption. Collusive corruption drives down costs for the private sector and companies may choose to invest where collusive corruption enables them to keep costs down. Thus, as in the case of economic competition, political competition needs to be accompanied by significant improvements in law enforcement, in order to control collusive corruption.

Increasing the probability of detection and punishment
An increase in the probability of detection and punishment increases the amount of bribe that has to be paid for overlooking an illegal activity and thus reduces the private sector's willingness to participate in either collusive or non-collusive corruption. Political competition has built in mechanisms for increasing the probability of detection and punishment, due to competition among officials of the ruling party as well as from opposition parties. Corrupt officials may be voted out of office. Competitors for office may reveal corrupt activities by their competitors. Democracies also provide more space for public pressure against corruption through laws, democratic elections, parliamentary oversight and independent judiciaries, press and watchdog bodies (Schleifer and Vishny 1993).

Democracy, decentralisation and corruption
While the above arguments appear to be eminently sensible, Andvig and Fjeldstad (2000) report several econometric studies that show that the effect of democracy and decentralisation on corruption is dubious. Their analysis shows that corruption is highest in situations of political transition from authoritarian to democratic rule, i.e. before a fully functioning democracy with checks and balances and legitimate and accountable institutions has been established. This is consistent with Huntington (1968), who attributes the high incidence of corruption in political transitions to underdeveloped institutions. The concept also fits neatly into the Indonesian experience, where the incidence of corruption appears to have increased during a political transition that was hasty and ad hoc in nature. This highlights the importance of building up strong public institutions at all levels of government to speed up the transition to a strong, fully functioning democracy.

Strengthening public institutions

Bardhan (1997) has argued that a strong government, capable of enforcing laws and property rights is more important for reducing corruption than economic or political competition. In countries moving towards democracy, strength and political stability come from the legitimacy of the government in the eyes of the people. This in turn requires the government to address the grievances and aspirations of the people. This is particularly important for the forestry sector in Indonesia, given its long history of appropriation of forest rents by a selected few. In countries undergoing political transitions, institutions to make local legislative assemblies accountable to their constituents need to be established, such as free and fair elections, public meetings and democratic and transparent organisations for debating policy issues both at the village level and between villages and the district and provincial government. Ideally, participants in such activities should include all forest stakeholders, including local communities, the private sector, government officials and members of civil society groups. However, involving the private sector may be difficult to achieve at present in Indonesia, given the shadowy nature of IPPK operators.

In Indonesia, improving law enforcement and establishing the rule of law will require, at the very minimum, first, a clarification of the law through clear demarcation of national, provincial and district jurisdictions and the elimination of contradictions among laws passed at different levels of government; secondly, a thorough reform of the

judicial system will be needed, to make law enforcement fair and equitable. In Indonesia today, active civil society groups have successfully revealed and identified illegal logging operators (see EIA/Telapak 1999 for instance). However, offenders have been brought to justice only selectively, due to judicial corruption (Scotland *et al*. 2000). In this context it is worth noting that judges and the Office of the Prosecutor were among the public institutions that were given the lowest scores by the public for integrity (Partnership for Governance Reform 2001); thirdly, public oversight needs to be encouraged by further strengthening civil society organisations and the freedom of the press. Barber and Talbott (2003) argue that strengthening counter-balancing institutions of government and civil society is also the most promising route to reforming the military.

CONCLUSIONS

The analysis above illustrates the importance of distinguishing between collusive and non-collusive corruption and understanding their interface within the political and institutional environment. While non-collusive corruption was widespread during the autocratic Suharto regime, a more insidious type of corruption – collusive corruption – has exploded after his fall, as the country moved towards a decentralised and more democratic regime. The explosion of collusive corruption cannot however be attributed to democracy and decentralisation. On the contrary, fully functioning democracies create public pressure against corruption and bring about institutional changes to control corruption.

It was the weak, fragmented nature of government, characterised by power struggles, anarchy, conflict and contradictory laws that blurred the lines between legality and illegality and therefore made it easier for illegal logging, supported by collusive corruption, to flourish. Periods of transition from autocracy to democracy are particularly vulnerable to burgeoning collusive corruption, because during transitions, institutions essential for fully functioning democracies are still underdeveloped, leading to a governance vacuum.

Because collusive corruption reduces costs for the private sector, it is more difficult to root out. While some strategies, such as economic competition and competition among officials in the provision of government goods, may be effective in controlling non-collusive corruption, these measures actually exacerbate collusive corruption.

The analysis shows that a strong government capable of enforcing the rule of law is required for controlling widespread collusive corruption. In Indonesia, this will require wider, sustained reform and institutional strengthening. The results suggest that political stability, mechanisms to make governments accountable to their constituencies, removal of inconsistencies in the legal framework, judicial reform and encouragement of public oversight could be useful, if daunting cornerstones in the fight against illegal logging and corruption, particularly during political transitions.

ACKNOWLEDGEMENTS

DFID, UK provided partial funding for this study. The authors thank David Kaimowitz, Gill Shepherd, Adrian Wells and Petrus Gunarso for useful comments on a seminar on which this paper is based.

REFERENCES

ANDVIG, J. C. 1991. The economics of corruption: a survey. *Studi Economici*, 43,57–94.

ANDVIG, J. C. and FJELDSTAD, O-H. 2000. Research on corruption: a policy oriented survey. Report commissioned by NORAD (Norwegian Agency for Development Cooperation. Chr. Michelsen Institute and Norwegian Institute of International Affairs, Bergen and Oslo.

ASCHER, W. 1999. *Why Governments Waste Natural Resources.* The Johns Hopkins University Press, Baltimore and London.

BARBER, C. V. and TALBOTT, K. 2003. The Chainsaw and the gun: the role of the military in deforesting Indonesia. In: Price, S. V. (ed). *War and Tropical Forests: Conservation in Areas of Armed Conflict.* The Haworth Press, Inc, pp 137–166.

BARR, C. and RESOSUDARMO, I. A. P. 2002. Decentralisation of forest administration in Indonesia: Implications for forest sustainability, community livelihoods, and economic development. Centre for International Forestry Research, Indonesia.

BARR, C., WOLLENBERG, E., LIMBERG, G., ANAU, N., IWAN, R., SUDANA, I.M., MOELIONO, M. and DJOGO, T. 2001. The impacts of decentralisation on forests and forest-dependent communities in Malinau district, East Kalimantan. Case Studies on Decentralisation and Forests in Indonesia. Case study 3. CIFOR (Centre for International Forestry Research), Indonesia.

BARDHAN, P. 1997. Corruption and development: a review of issues. *Journal of Economic Literature,* XXXV: 1320–1346.

BROWN, D. 1999. Addicted to rent: corporate and spatial distribution of forest resources in Indonesia. Implications for forest sustainability and government policy. Report No. PFM/EC/99/06. DFID UK, Tropical Forest Management Programme, Jakarta.

CADOT, O. 1987. Corruption as a gamble. *Journal of Public Economy,* 33, 223–244.

CALLISTER, D. J. 1999. Corrupt and illegal activities in the forestry sector: current understandings and implications for World Bank forestry policy. Forest Policy Implementation Review and Strategy Development: Analytical Studies. World Bank, Washington DC.

CASSON, A. and OBIDZINSKI, K. 2002. From new order to regional autonomy: shifting dynamics of 'illegal logging' in Kalimantan, Indonesia. *World Development* 30, 2133–2151.

COHEN, M.A. 1999. Monitoring and enforcement of environmental policy. In: Tietenberg, T. and Folmer, H. (eds). *International Yearbook of Environmental and Resource Economics,* 3. Edward Elgar Publishers.

CONTRERAS-HERMOSILLA, A. 2001. Forest law enforcement. World Bank, Washington DC.

COOLIDGE, J. and ROSE-ACKERMAN, S. 1997. High –level rent seeking and corruption in African regimes: theory and cases. The World Bank, Washington DC.

EIA/TELAPAK 1999. The final cut: illegal logging in Indonesia's Orang-Utan parks. Environmental Investigation Agency, London and Telapak, Indonesia.

FIN (FOREST INTEGRITY NETWORK). 2003. FIN Newsletter, Issue 5, June 2003.

FRYE, T. and SHLEIFER, A. 1997. The invisible hand and the grabbing hand. *AEA Papers and Proceedings,* 87(2), 354–358.

HUNTINGTON, S.P. 1968. *Political Order in Changing Societies.* Yale University Press, New Haven.

ISMAEL, N. M. 2000. Rencana Stratejik. RAKERNAS 2000, Ministry of Forestry, 26–29 June 2000, Jakarta, Indonesia.

ITTO (INTERNATIONAL TROPICAL TIMBER ORGANISATION). 2002. Tropical Timber Market Report 16–31st December 2001. http://www.itto.or.jp/market/

McCARTHY, J.F. 2000. The changing regime: forest property and *reformasi* in Indonesia. *Development and Change,* 31, 91–129.

NRM HEADLINE NEWS. 2003. Asia Pulse, 18 June 2003, quoted in NRM Headline News, 11, June 26, 03. Natural Resources Management Program Indonesia, USAID.

OBIDZINSKI, K. 2001. Illegal logging in East Kalimantan, Indonesia and its transformation in times of regional autonomy. ASIT workshop paper, 27th March 2001.

OH, Y. 1995. Surveillance or punishment? A second-best theory of pollution regulation. *International Economic Journal,* 9, 89–101.

PALMER, C. E. 2001. The extent and causes illegal logging: an analysis of a major cause of deforestation in Indonesia. CSERGE (Centre for Social and Economic Research on the Global Environment), London.

PARTNERSHIP FOR GOVERNANCE REFORM IN INDONESIA. 2001. A national survey of corruption in Indonesia. Executive Office of the Partnership for Governance Reform in Indonesia, Jakarta, Indonesia.

SHLEIFER, A. and VISHNY, R.W. 1993. Corruption. *The Quarterly Journal of Economics,* August 1993, 599–617.

SCOTLAND, N., SMITH, J., HIKMA, L., HILLER, M., JARVIS, B., KAISER, C., LEIGHTON, M., PAULSON, L., POLLARD,E., RATNASARI, D., RAVANELL, R., STANLEY, S., ERWIDODO, CURREY, D. and SETYARSO, A. 2000. Indonesia Country Paper on illegal logging. Prepared for the World Bank-World Wide Fund for Nature Workshop on Control of Illegal Logging in East Asia. 28th August 2000. Jakarta, Indonesia.

TACCONI, L., OBIDZINSKI, K., SMITH, J., SUBARUDI, SURAMENGGALA, I. *In press*. Can 'legalisation' of illegal forest activities reduce illegal logging? Lessons from East Kalimantan. Journal of Sustainable Forestry (in press).

TRANSPARENCY INTERNATIONAL. 2003. Transparency International's Corruption Perceptions Index 2002. http://www.transparency.org.

WORLD BANK. 2000a. Deforestation in Indonesia: a preliminary view of the situation in 1999 (Draft report). The World Bank, Jakarta, Indonesia.

WORLD BANK. 2000b. The challenges of World Bank involvement in forests; an evaluation of Indonesia's forests and World Bank assistance. The World Bank, Washington DC.