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Understanding illegal logging in Ghana: A socio-legal study on (non)compliance with logging regulations

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Citation

Boakye, J. (2020, October 14). *Understanding illegal logging in Ghana: A socio-legal study on (non)compliance with logging regulations*. Meijers-reeks. Retrieved from <https://hdl.handle.net/1887/137750>

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Issue date: 2020-10-14

6.1 INTRODUCTION

Ghana's attempts at sustainable forest management have a long history dating back to 1909 with the establishment of the then Forestry Department (FD) and creation of 1.8 million ha permanent forest estates nationwide. The Department (now Forestry Commission, pursuant to Act 571, 1999) was mandated, among other things, to sustainably manage, protect, develop and regulate the forest resources to provide vital ecosystem services and functions for the well-being of millions of forest dependent dwellers and those beyond, well into the future. Since then, various policy and legal instruments have been enacted, implemented and enforced to ensure the sustenance of the forests. However, the last few decades have witnessed appreciable levels of human-induced forest cover loss and degradation from different drivers including illegal logging.

There are two main logging actors in Ghana. These are the licensed logging firms and unlicensed chainsaw operators. First, the licensed logging firms are privately owned business entities registered under the laws of Ghana to undertake timber harvesting and/or processing of logs to semi-finished and finished timber products. They have been in existence since the 1880s and can be categorised into large, medium and small-scale operators based on their production output and the number of people employed (see 3.3). The majority of the firms is Ghanaian-owned but the large-scale firms are predominately foreign-owned. In terms of trade outlets, they export to every continent in the world with the bulk of their products being traded in Asia/Far East, Africa and Europe (TIDD, 2015). Annually, they contribute about USD 300 million in foreign exchange (from exports of about 0.5 million m³ of mainly secondary processed wood products) and directly employ about 100 000 persons and indirectly provide livelihood support to about two million people (GoG, 2012). It is important to indicate that all licensed logging firms are expected to be in compliance with the timber harvesting regulations always. However, the reality is that they comply to some extent and violate to another extent. A detailed account of the licensed logging firms and their compliance performance is given in chapter 3.

Second, the chainsaw operators are another important actors in the timber industry. They consist of individuals and groups who have no license or legal locus to engage in timber harvesting business but do so underground and harvest even more volume than the licensed logging firms (Hansen and Treue, 2008; Marfo, 2010). They use fuel-powered chainsaw machines

to illegally harvest trees and convert them in-situ to lumber for commercial purposes (a banned practice under the Timber Resources Management Regulations (TRMR, 1998)). This means that all chainsaw operators by definition operate in violation of the law. Nonetheless, they continue to operate virtually in every forest area and employ an estimated 97,000 persons along the entire production and marketing chain (Marfo and Acheampong, 2011). In terms of trade, chainsaw lumber accounts for about 1.1 million m³ (i.e., 72% of the annual national production) of lumber traded on the domestic market valued at GhC 544.39 million based on the average market price of GhC 494.00/m³ for all species (Marfo et al, 2017). Though to a relatively smaller extent, some of the illegal products are offloaded directly within the Economic Community of West African States (ECOWAS) sub-regional market, others are mixed up with legal products and traded on the international market. Chapter 4 gives further account of the chainsaw operators.

Why illegal logging persists in Ghana and what measures are required to address the menace have been subjects of great concern to many stakeholders in Ghana and beyond. This book on regulatory compliance in the logging sector in Ghana, has attempted to understand how and why the key logging actors in Ghana's timber industry (i.e., licensed logging firms and chainsaw operators) respond to regulations in the sector and the extent to which the Forestry Commission, the main state regulatory institution, enforces these regulations to ensure compliance. In so doing, it addressed the following three research questions:

- i. What influences loggers in Ghana (i.e., licensed logging firms and chainsaw operators) in their decisions to comply with or violate logging regulations?
- ii. How do enforcement practices of the Forestry Commission contribute to compliance-violation behaviour of loggers in Ghana?
- iii. What are the broader theoretical and empirical implications from this study for forest regulation, compliance and enforcement in Ghana and other developing countries?

Research questions 1 and 2 are addressed in chapters 3 to 5 whereas question 3 is answered in this concluding chapter.

The remainder of the chapter is structured as follows. Section 2 presents the findings of the first two research questions. The section that follows attempts to situate the findings of the study in a broader perspective, beyond the context of Ghana. Section 4 highlights the significance of contextual factors to understanding low compliance performance in Ghana and other developing countries. Section 5 examines the broader theoretical and empirical implications of the study (thus answering research question 3) and section 6 reflects on the methodological approaches used. The final section looks at future research beyond the scope of this study.

6.2 FINDINGS AND ANSWERS TO THE RESEARCH QUESTIONS

This subsection presents the conclusions from the findings of the research questions set out in this study.

6.2.1 Research question 1: What influences loggers in Ghana in their decisions to comply with or violate logging regulations?

This research question sought to generally understand what influences the compliance-violation behaviour of the two key logging actors (licensed logging firms and chainsaw operators) in Ghana. Due to differences in the legal status and mode of operations of the two key actors, the findings for this research question are separately presented. First, the licensed logging firms and second, the chainsaw operators.

Licensed logging firms

The study found that economic, social and normative motivations have both positive and negative influence on compliance performance of all the three categories of licensed logging firms in Ghana. Economic motivations were important determinants of compliance among logging firms. For economic motivations, the study investigated both the basic deterrence, which focuses on perceived risks of detection and sanction severity, and the perceived operational costs-benefits of legal and illegal behaviour. The perceived risk of detection by the state regulatory institution was found to be low. Also, sanctions from the state for illegal logging, particularly the stumpage fee-indexed penalty provided under the logging manual, were found to be low and created a huge financial incentive for firms to violate the logging regulation. Alternatively, the study found that deterrence from third party non-state actors (including forest certification bodies) produced better compliance than the state. It was also found that the firm's market destination influenced their compliance performance. Firms who exported to the EU market complied better than their colleagues who exported to markets in Asia and Africa. Also, firms with positive cost-benefit ratio for legal operations complied better than those with negative cost-benefit ratio.

Regarding social motivations, the study revealed that social pressure was very important in shaping the violation behaviour of logging firms in various ways. First, firms had a high perception of violation among their colleagues and this perception influenced them to do likewise. Second, firms knew that chainsaw operators were harvesting trees illegally. For most licensed firms, this is, perhaps, the single most important factor that drives them to violation. Third, pressures from the local communities within which the firms operated for infrastructural and monetary supports pushed them to violate the rules to be able to meet those demands. The study found no evidence that there was pressure on the firms from either the local community members or the timber trade association to comply.

However, the study recorded few firms whose compliance decisions were motivated primarily by the desire to maintain a good corporate image or reputational capital.

On normative motivations and how they influenced firms' compliance-violation performance, the study considered the actors' felt sense of duty to comply (morality), perceived reasonableness of the law and the perceived legitimacy of the regulatory agency. The study found that all the three domains had more influence on the firms' violation behaviour than compliance. For most firms, decisions to comply with or not were purely an economic one and not about morality. However, there were few firms who considered morality, particularly the hope in eternal life, more crucial than any economic consideration in deciding whether to comply or not. The study found that most of the firms perceived the existing rules on logging that restricted the number of trees they could harvest from a production forest to three per hectare as unreasonable and manifested their disapproval through violation. Finally, the inability of the regulatory agency to vigorously enforce the ban on chainsaw operation presented a huge challenge for it to enforce the rule on illegal logging against licensed logging firms. The firms considered it unfair for the regulators to tighten the screw on them while chainsaw operators continue to operate with impunity. The end result was the declining legitimacy of the regulatory agency with its possible manifestation in low compliance performance.

The overall finding on compliance variation among different categories of firms shows that, small-scale firms comply better than medium and large-scale firms. On economic motivations, the small-scale firms' compliance performance was better than the medium and large-scale firms due to their higher perception of sanctions and weak financial capacity. The small-scale firms also recorded a higher compliance performance with social motivations than the medium and large-scale firms. The main reason here appears to be the low community demands on them for various forms of assistance including infrastructural and monetary supports. Again, the small-scale firms performed better on normative motivations than their counterparts. Their felt sense of duty to comply with the regulation and perceived reasonableness of the rule were much better than the medium and large-scale firms.

Chainsaw Operators

The chainsaw operators may best be described as 'invisible logging actors' and their study provided valuable insights into the motivations of actors who offend the basic premise of logging regulations in Ghana. In other words, they operate without any legal locus, thus pure illegality. The findings, to a large extent, are consistent with regulatory studies that have underscored the importance of low deterrence, social support for criminal activity, corrupt institutions and contextual factors in shaping violation

behaviour among regulated actors. The study found that perceived low sanction severity and financial gains to be derived from illegal operations were the major drivers of the violation behaviour among chainsaw operators. The current sanctions were perceived as low and unlikely to deter violators from engaging in illegal practices. Apart from that, there were influential persons at the various levels of governance who in most instances jumped to their defence to bail them out completely or have the sanctions mitigated for reasons that included economic, social and political considerations. Under such conditions, the use of threat of sanctions as a policy instrument to elicit compliance pales out and the violation persists (Cohen, 2000).

On social motivations, the study found strong social acceptance/support for the violation behaviour due to many reasons. First, there was (and still is) a high demand and patronage of chainsaw milling lumber on the domestic market. It is readily available and cheaper than lumber from the licensed logging firms. This confirms research that has shown that violation or criminal activities persist as long as the goods and services provided by them are in great demand by the populace (Passas, 2002). Second, it helped to create jobs for the youth in and around the local community where they operated. This includes carrier boys, who assist in conveying the processed lumber from the stump site to the road side and load the lumber onto trucks which transport them to various marketing centres and vendors, and those who re-saw the lumber to the specifications required by the various customers. One study has estimated that about 97,000 people are employed across the entire chainsaw production and marketing chain (Marfo and Acheampong, 2011). This suggests that the violation of the law is not only related to the (economic) interests of the chainsaw operators but also thousands of others who depend on the illegal operation for their livelihoods. Third, chainsaw operators support infrastructural developments such as school buildings, clinics and bridge construction in the local communities they operate in the form of lumber and money. The study did not record any social sanctions and pressures from the local communities within which the chainsaw operators operated.

Regarding normative motivations, the study focused on actors' standards of personal morality, perception of reasonableness of the law that bans chainsaw milling and legitimacy of the regulatory agency. On personal morality, the study reveals that violation appears normal and does not produce any shame or guilt-feeling among chainsaw operators. For them, chainsaw milling is about livelihood and survival and has nothing to do with morality. In other words, the 'violating behaviour' appears to be good for one's social and economic development and does not appear as breaking the rules on timber harvesting. Another finding was that, actors were dissatisfied with the law that made chainsaw operations illegal because it tended to strain their livelihood and survival needs. The violation behaviour of the actors could therefore emanate from principled disagreement with law (Tyler, 1990). Again, the study showed that the legitimacy of the

regulatory agency may have been compromised from the view point of the chainsaw operators since they are, in most instances, met with demands for informal payments (bribes) when arrested. The widely-held perception among them is that some FC officials take bribes to facilitate their illegal operations. It should be noted that, once actors recognise they can evade or minimise detection and/or sanctions by informal payments to regulatory institution; the legitimacy of such an institution is greatly diminished. In other words, corruption tag on regulatory institution lowers its legitimacy before its actors and thereby motivate those actors to violate the regulation.

Finally, the study points to some contextual factors that played a critical role in shaping noncompliance behaviour among the regulated actors. They included poverty and political issues. The chainsaw operators who are actually involved in logging at the forest level lived on less than a dollar per day without chainsaw income but moves to about two dollars when combined with proceeds from chainsaw milling. Whichever way one looks at it, chainsaw operators may be described as very poor. For these people therefore, chainsaw operation is used either to supplement their income or is their main source of income. It may be said then that for these actors the violation of the regulation is not about unwillingness to comply but inability to do so (Huisman, 2001). Perhaps, indications of a favourable political context for the widespread violation are the use of chainsaw lumber for some government-funded projects in the country and the lack of political will by authorities to enforce the law at the market places across the country where the illegal lumber products are openly sold. These could create a perception in the minds of the actors about the political support for their illicit operations and thereby incentivise them to persist in such illicit practice.

6.2.2 Research question 2: How do enforcement practices of the Forestry Commission contribute to compliance-violation behavior of loggers in Ghana?

The enforcement practices of the FC regarding detection of violations and responding to such violations through sanctions to promote compliance with logging regulations formed the subject matter of chapter 5. Generally, the study highlights the reasons why enforcement has had limited impact on the compliance performance of both logging firms and chainsaw operators.

Three categories of frontline officials are directly engaged in the enforcement of logging regulations in Ghana: forest guards, range supervisors and district managers. Forest Guards are the first frontline personnel at the forest level and their main task is to protect forest reserve boundaries, a responsibility that includes cleaning with machete and patrolling to detect and arrest violators. Range Supervisors are middle-level frontline personnel who supervise the forest guards. Additionally, they conduct logging areas inspection to ensure that only legally allocated trees are logged. District Managers head the frontline enforcement personnel and their primary task

is to coordinate all enforcement activities within a forest district. Details of the enforcement responsibilities of the three frontline personnel are captured in chapter 5.

The study finds that officials have had difficulties detecting violations for various reasons. The first was inadequate resources in terms of personnel, transport and funding. These have resulted in increased workload, reduced frequency of inspections and decreased detection probability. It was determined that forest guards were the hardest hit by these resource constraints followed by range supervisors and finally, district managers. Second, the violators employed various strategies that enabled them to minimise detection. They included working deep in the night, weekends and other statutory public holidays, planting their own informants at vantage points to alert them of any approaching enforcement official (through phone calls). Also, when transporting the wood product, use leading vehicles that warn them of routes to avoid to secure safe passage.

The study reveals that, to help improve detection, each forest district operates a timber task force consisting of the Assistant District Manager or a Range Supervisor (as leader) and personnel from the Military and/or the Police as members. The timber task forces mainly patrol highways and does spot checks at vantage points to inspect trucks conveying timber products. They also respond to reports from forest guards or range supervisors for help to arrest violators or evacuate chainsaw milled lumber. However, the operations of the task forces come with some challenges. First, they particularly focus on road patrols and checkpoints inspections instead of moving into the reserves to flush out the illegal operators. In such cases, the harm is caused and only remedial action (i.e., salvaging the wood products) can be carried out at that point. Second, the high cost of maintaining the security personnel on the team. Third, alleged corrupt practices including accusations of extortion of money from illegal operators and fronting for them are common.

Aside from the frontline officials proactive detection work, they also depend on reports and complaints from informants, both paid and voluntary, to track and detect violations (so-called reactive detection). The paid informants are individuals and groups who provide information about illegal logging for a fee whereas the voluntary ones do so for reasons other than monetary considerations. Though very useful and beneficial, the use of informants has its attendant problems including extortion of moneys and leakage of information about intended inspections and movements by enforcement officials, once they become aware, to the illegal operators and thereby frustrate their efforts.

On how violators are dealt with, the study found that the existing legal regimes prescribe two types of sanctions namely, administrative fines and court-determined fines and penalties. Another finding was that, under the existing legal regimes both the FC and the courts lack sufficient authority to issue strong sanctions. In other words, the fines and penalties under the current legal regimes are palpably low compared with the benefits derived

from violation. The study also reveals that, even when the legal regime allowed for higher or stronger sanctions, the FC was unable to impose them due mainly to interferences from the political through socio-cultural to administrative settings. Again, it was determined that the FC preferred issuing administrative fines to prosecuting cases in court for reasons that included the low prioritization of logging cases by the judiciary. Finally, the study noted that the low remuneration paid to frontline officials and corrupt practices within the regulatory context substantially interfered with successful detection and sanctioning of illegal operators.

6.3 REFLECTIONS ON THE FINDINGS OF THE STUDY IN BROADER PERSPECTIVES

It is imperative to state that this study does not claim statistical representativeness for any of the actors investigated (i.e., logging firms, chainsaw operators and forestry enforcement officials), due largely to the small sample sizes used. Nonetheless, when the findings of this research are compared with other studies from Ghana and elsewhere, they reveal some common trends and differences that have relevance for compliance-violation studies generally.

6.3.1 Compliance-violation behaviour of logging firms

On compliance-violation behaviour of logging firms, this study generally confirms most of the findings from prior research (in Ghana and other developing countries) that economic, social and normative motivations shape compliance and violation behaviour. However, there are some important differences from this study. The existing research has lumped all logging firms together as one unit and does not look at variations in compliance-violation performance across different categories of firms as done in this study. Second, for economic motivations, previous research primarily focused on the deterrence logic (i.e., the probability of being caught and sanctioned for violation) at the neglect of operational cost-benefit analysis of legal and illegal operations. This study captures the operational cost-benefit analysis as well. Third, unlike earlier studies that considered deterrence as sanctions solely originating from the state, this study considered other sources including those from third party non-state actors particularly the EU market actors and private international regulatory bodies like the Forest Stewardship Council in influencing compliance behaviour. Last, earlier studies mostly focused on how financial gains have influenced violation but not the impact of high cost of legal operations/compliance and the violation effect of chainsaw operations

The study also reveals some insights that are not found in prior research. First, it uncovered how some firms had to violate the law in order to satisfy pressures from the local communities for developmental assistance. The firms explained that the pressure on them from the forest fringe communi-

ties through the District Assemblies to the traditional authorities for various assistance including maintenance of roads, construction of school buildings and money for celebration of festivals were unbearable. They explained that these informal payments were substantial and huge drain on their finances and push them to engage in illegal logging. Second, the study shows how the importance of maintenance of good reputational capital influences firms' compliance behaviour and third, how for some regulated actors, their religious beliefs including hope in eternal life positively impact on compliance performance.

In the developed world context, the findings of this study generally fit into the economic, social and normative motivations posited by existing western regulatory literature to shape compliance-violation behaviour of regulated actors. There are, however, some variations when Ghana is compared to the western world. First, though this study confirms the importance of deterrence from different sources and actors on compliance behaviour, in the case of the West such deterrence has been shown to primarily originate from their own state and internal non-state actors/institutions and not that of external/foreign actors as was the case in this study. Second, whereas this study found that social pressures largely undermine compliance behaviour, the reverse is the case for most compliance studies from the developed countries. Third, the influence of normative motivations on compliance behaviour was found to be less pronounced in this study than compared to the developed countries. However, the influence of regulated actors' religion (i.e., hope in eternal life) on compliance found in this study was quite revealing but appears not to have received much attention in western literature. Fourth, this study and those from the West agree on the role of corruption and its adverse impact on compliance generally. Nonetheless, it appears from existing literature that state regulatory institutions in the developed economies are relatively less corrupt and are therefore able to better promote compliance than found in this study. Finally, on compliance variation among different categories of firms, the general finding of this study tends to support the strand of literature that argues that small-scale firms comply better than large-scale firms. The large-scale firms were found to use their status in the economy to evade compliance.

6.3.2 Violation behaviour of chainsaw operators

The findings that deterrence, social, normative motivations and contextual factors were largely responsible for illegal logging by chainsaw operators exist in prior research that had investigated chainsaw operations in Ghana and other developing countries. Specifically, the findings that chainsaw operations are largely poverty-driven or motivated by financial considerations, attract low sanctions when violators are caught, have wider societal acceptance in the sense that it provides livelihood support to the local inhabitants, support local infrastructural development, account for the bulk of timber products (mainly lumber) consumed locally and do not attract

sanctions from the community or group members resonate well with earlier studies in Ghana and other developing nations. Again, findings concerning the regulated actors' perception about the unreasonableness of the law prohibiting chainsaw operations and corrupt practices among the regulatory officials equally find support in prior research.

Nevertheless, there are some noteworthy differences and lessons from this study. First, this study adopted a socio-legal approach to understand why and how chainsaw operations persist and the motivations of the actors involved. It thus, went beyond just the nature, extent and distribution or marketing of chainsaw lumber products, which have dominated the existing literature that considers chainsaw operations in Ghana and other developing economies. Second, flowing from the above, most of the existing studies on chainsaw operations are not well-embedded in regulatory compliance-violation literature that seeks to explain the motivation, and influencing factors behind actors' violation or deviant behaviour. Third, an important insight from this study is that the actors involved do not see the violating behaviour as a moral issue but as a vital necessity for their social and economic development. In other words, to these actors' illegal logging, even if it is wrong, is an essential requisite for their livelihood and survival. It thus suggests that for these actors unless adequate alternative and sustainable livelihoods options are made available, voluntary compliance is unlikely to emanate from them any time soon.

Notwithstanding the fact that illegal logging is a worldwide problem, for now, it thus appears from existing literature that the use of chainsaws for commercial production of lumber or timber products is largely limited to developing tropical forest countries. However according to one study illegal logging in the US is mostly undertaken by individuals-private lumber producers and small-scale firms (Sheikh, 2008), thus suggesting the possibility of existence of chainsaw-like operations as pertained in the developing world context.

6.3.3 Law enforcement

The findings about the FC's weak proactive detection capacity due to resource challenges in terms of personnel, equipment (particularly transport) and funding are consistent with prior research in Ghana and elsewhere. Research indicates that even in developed countries, enforcement is only capable of detecting a small fraction of infringements (Stern, 2008). Similarly, the determination that violators employ various strategies to evade detection finds support in existing studies in Ghana and other jurisdictions concluding that illegal logging occurs outside the purview of most citizens and sometimes literally under the cloak of darkness (Cerutti et al., 2013; Marfo, 2010). Also, the findings concerning the operations of timber task forces and associated corrupt practices are consistent with prior studies in Ghana. Experiences from other developing countries such as the Philippines and Indonesia where timber task forces have been used sug-

gest that accusations of corrupt practices and ineffectiveness are common (Cerutti et al., 2013; Kishor and Damania, 2007). Furthermore, the findings about the use of informants as a reactive detection strategy to mitigate the adverse impact of inadequate personnel for detection work and its associated benefits and challenges find support in earlier research in Ghana and other jurisdictions (Franc and Hansen, 2016).

On sanctions, the finding that both the FC and the courts lack sufficient legal authority to issue strong sanction, as well as issuing sanctions far below the prescribed maximum, even when it is within their authority, is consistent with existing research in Ghana (Boakye, 2018). Empirical evidence from other developing countries agrees with the present study that both administrative fines and court-determined sanctions issued to violators of logging regulations are low and non-deterrent (Eberhardt, 2013; World Bank, 2012). Again, the findings concerning various interferences ranging from political through socio-cultural to administrative undermining enforcement work are consistent with existing literature in Ghana and elsewhere (Ascher, 2000; Baldwin, 2016). There is ample evidence from existing literature to show that support from the political, socio-cultural and administrative settings is absolutely critical for effective enforcement work in every jurisdiction. (Kagan, 2004; Satterlund et al., 2009). Moreover, the finding that the low remuneration package for frontline officials adversely impact their enforcement performance is consistent with evidence from various studies in Ghana and elsewhere (Contreras-Hermosilla, 2007; World Bank, 2012). Finally, the findings about corrupt practices within the regulatory context hampering successful detection and sanctioning of illegal operators resonate with some earlier studies in Ghana and other jurisdictions (Cerutti et al., 2013; Kishor and Damania, 2007).

There are two noteworthy differences between the findings of this study and what pertains in the West. First, whilst this study found deterrence-based approach as the predominant enforcement strategy, most western studies have documented cooperative or responsive regulation as the preferred choice. Second, there is stronger media and civil society oversight within the regulatory context in the West than pertains in Ghana and other developing countries

6.4 SIGNIFICANCE OF CONTEXTUAL FACTORS TO UNDERSTANDING NONCOMPLIANCE BEHAVIOUR IN GHANA AND OTHER DEVELOPING COUNTRIES

The findings of this study confirm existing research that illegal logging is more prevalent in developing economies than in the developed world. So, what factors account for this variation or how do we explain the variations in compliance performance levels between the developed and developing economies? Many factors could account for this but the analysis of the contextual information gathered from this study provides some useful

insights in this regard. The findings suggest that variations in compliance performance could be largely explained from contextual perspectives. The contexts, as used here, denote the economic, social, political and regulatory settings of the regulated actors, and how they influence their compliance-violation decision making processes.

The economic context, in the sense of the micro and macro economy of the regulatory actors, plays a crucial role in explaining the violation behaviour in Ghana. In spite of Ghana's lower middle-income status and as one of the fastest growing economies in the world, poverty levels, particularly among, the rural population are still high. The chainsaw study reveals that most of the actors engaged in it live on between one and two dollar(s) a day. Whichever way one looks at it, these people can be described as poor and, in the absence of viable alternative livelihood options, have resorted to chainsaw operations. Also, there are some local people whose primary income source depends on their continued employment by these chainsaw operators and/or logging firms who undertake illegal logging. Again, the high demand for illegal timber products both on the local and export markets makes illegal logging lucrative business.

Moreover, in an attempt to accelerate economic development in Ghana and most developing economies, governments have tacitly accepted some levels of illegal logging or abuses in the natural resources sector so as to achieve the desired economic transformation. In most developing tropical forest dependent countries timber from the natural forests is seen as a major driving force for socio-economic transformation. As Khan and McDonald (1995) observed, every new government needs to generate its own funds to run the State machinery and for developmental projects, and timber being a readily exploitable natural resource with high demands both locally and on the international market then becomes the obvious target. This assertion largely describes the situation in Ghana where, until recently, timber was the third most important foreign exchange earner. It is now the fourth foreign exchange earner for Ghana. The economic context also leads to low salaries for those who work in the public sector, for example with the Forestry Commission; it makes them more susceptible to corrupt practices.

The social contexts of the regulated actors have a lot to teach us about why violation behaviour persists in Ghana. Social context as used here encompasses social structures and institutions at the local, regional and national levels. First, there are those local traditional and community leaders who support illegal logging so that the violators can assist them with basic infrastructural projects like construction of chief's palace, schools, borehole water and roads. Second, the chainsaw study found that some communities condoned violation behaviour by charging the violators a fixed amount of money they must pay to the community leaders either for every truck load of illegal lumber transported or trees harvested. Similarly, the logging firms study uncovered that pressure from some communities for infrastructural development forces them to violate the law. Third, the illegal timber products have high acceptance on the domestic market (partly

because they are relatively cheaper and easily available). It appears the whole nation has come to accept chainsaw lumber as normal and therefore to patronise it. Finally, the findings from this study suggest that violation behaviour attracts no social sanctions from family members or the community at large. This means there is apparent lack of peer or societal pressure to compel them to comply.

Regarding the political context, this study found that some instances of violations have been either openly or tacitly supported by local, district and regional political leadership. In the logging firms' study, a finding showed that governments appear reluctant to impose severe sanctions on violating large scale firms due mainly to their contribution to the socio-economic development of the country including job creation and foreign exchange remittances they bring into the country. Also, in the chainsaw study, the following key findings were made about political leadership support. First, some political authorities at the different levels of governance step in to bail out violators whenever they are caught. Second, the use of chainsaw lumber for government-funded projects has created a perception in the minds of the violators about governmental support for their illegal operations and has thereby incentivised them to persist in such illicit practice. Third, governments appear reluctant to enforce the ban on chainsaw operations at the various domestic lumber markets across the country where the impact obviously would have been higher. Though feasible, such an intervention could be politically costly in terms of future elections.

The regulatory contexts also help to explain the violation behaviour of both logging firms and chainsaw operators. First, sanctions for violation prescribed under the law are low and therefore have incentivized actors to break the law. This study has shown that actors, particularly the chainsaw operators, perceived the regulations that ban their operations as unfair, unreasonable and not feasible as it attempts to deny them their basic survival and livelihood needs. The logging firms on the other hand perceive the rules as harsh because of the low number of legal trees they could harvest and thus making legal operations financially prohibitive and unattractive.

Related to the regulatory contexts are enforcement actions. The study found that law enforcement has contributed little to compliance behaviour. There is limited state capacity (in terms of personnel, transport and funds) resulting in detection difficulties. Logging violations are lowly prioritized by the police and the judiciary. Regulatory officials have less freedom of action due to interferences from the socio-politico-cultural and administrative settings. Local government and communities' support have been low. There are also instances where corrupt law enforcement officials including forestry and police have suppressed or undermined strict law enforcement for various considerations of personal gain.

All these situations and circumstances show why illegal logging is accommodated in Ghana and *mutatis mutandis* in other developing countries albeit being against national and international laws and in spite of

its many adverse consequences. In summary, whilst 'perfect compliance' with logging regulations, not sure if it even exists anywhere in the world, is highly desirable, the present social, political, economic, institutional, and regulatory conditions prevailing in Ghana and most developing tropical forest countries do not make it feasible and practicable.

6.5 IMPLICATIONS OF FINDINGS FOR THEORY AND PRACTICE

The findings from this study have some implications for compliance and enforcement studies. For the logging firms' study, it was determined that economic considerations, rather than social influences and normative motivations, were the most important factors shaping actors' compliance-violation performance. For such regulated actors, voluntary compliance is unlikely unless they are subject to regulatory regimes that induce significant fear of punishment for noncompliance (Thornton et al., 2009). The present study supports this theory which is central in compliance scholarship. In other words, in the absence of strong social pressures and/or normative motivations, rational or profit-oriented regulated actors such as logging firms, require rules that counter the violation effect of low sanctions. A policy insight for Ghana and countries desiring to enhance compliance under such situation must be to impose higher sanctions that make violation unattractive.

Another finding from the logging firms' study was that, those firms who exported into the EU market and/or engaged in forest certification processes recorded a better compliance performance. Here, the study showed that, it is the informal sanctions from these non-state actors that compel those firms to better comply and not the sanctions from the state regulator. A theoretical insight from this finding is that deterrence, in the sense of fear of legal sanctions, social pressures and moral duty to comply, can originate from sources other than just the state and its sanctions (Grasmick and Bursik Jr., 1990; Rooij, 2016). In this study about logging firms in Ghana, such deterrence has been shown to emanate from the EU market actors and private international forest certification bodies. The policy implication here is for the state regulatory agency to re-examine the current regulatory design that has the state policy and law as the sole instrument category in favour of one that uses different instruments implemented by a number of non-state parties, commercial and NGOs. Such a framework, according to Gunningham (2011) helps to achieve not only better outcomes at less cost but also frees up scarce state regulatory resources, which can be redeployed in circumstances where only direct government intervention is available. In this respect, a network of both local and international actors would be desirable.

Also, the logging firms study revealed some firms, though small, who would not engage in illegal logging for reasons different from sanctions from the state such as maintaining good reputation or status in their community, religious beliefs, hope in eternal life, and the need to protect the

forest for posterity. This finding also demonstrates that compliance is possible even with limited to no deterrence from the state. This suggests that regulators can enhance compliance through non deterrent and inexpensive means including the use of simple messages or adverts that encourage actors that compliance is good and the right thing to do.

The chainsaw operators study highlighted the significance of contextual factors in shaping violation behaviour. It appears from the study that the socio-economic context of the regulated actors is crucial in driving violation behaviour. The violators have no or little formal education, mostly unemployed with no sustainable livelihood and living at the fringes of the forests they perceive as their food basket. Under such conditions of high cost of compliance, any enforcement, policy or regulatory action that fails to address their precarious economic situation is likely to achieve little success. In this respect, a way forward is for regulators to work out a more flexible, accommodative policy that seeks to balance forest resource conservation with human well-being, particularly for the rural forest dwellers (McShane et al., 2011; World Bank, 2009). This may be done in several ways. One way would be to review the existing legal framework on tree tenure in Ghana that vests all naturally occurring timber trees on farm and fallow lands in the President to allow farmers and landowners who nurture such trees to own them. This is likely to give the farmers and landowners enough motivation to protect them. Another approach would be for the regulator to actively engage the forest fringe communities and landowners in joint or co-management of the forests and equitably share the benefits that accrue with them. Such an arrangement could create a management responsibility and/or moral obligation on the part of the landowners and fringe communities to report violators and thereby help not only to induce compliance, but also to foster sustainable management of the resource.

The use of chainsaw lumber for government-funded projects had directly or indirectly created a perception among the violators of governmental or political support for their noncompliance behaviour. Already the Ministry of Lands and Natural Resources has since 2015 developed and placed before the cabinet a domestic lumber procurement policy document that requires all firms working on government-funded projects to source their lumber from a certified legal source. An immediate approval and strict implementation of the policy by the government will demonstrate, in no small measure, to the violators the highest political disapproval of the practice.

The study indicates that the Forestry Commission has a weak proactive detection capacity. For scholars who believe that detection probability is the key driver of compliance in the deterrence logic, a weak detection probability could mean that the risk associated with violation is low (Cohen, 2000; Grasmick and Bursik Jr., 1990). Such a perception has the tendency to stimulate widespread violation as actors are no longer deterred due to the reduced detection risk. A policy suggestion here would be for the state regulator to support the existing ground patrols with aerial patrols and reconnaissance surveys using drones and other modern technologies.

Another important finding is the low prioritisation of forestry-related crimes by the judiciary including the police and judges. This could suggest a general lack of appreciation and understanding about the real value of forest resource conservation in the wider society. After all, when the value of a resource is unknown, abuse or low prioritization is inevitable. In this regard, the regulatory agency would have to target them and the society generally for continuous education and awareness creation about the value of the forest so as to elicit their support and cooperation in its protection and management. Understanding that forest crimes are not just trivial wrongs against a non-entity but about undercutting our own sustainability and existence on this planet is important. The various forest certification bodies and international environmental-oriented NGOs could also assist in this regard because sustainable forest management and trade are global issues that require support from all quarters

This study also documents the importance of cooperation with third party actors in enforcement duties. The existing cooperation with the forest fringe communities, land owners and farmers could be further improved through enforcement partitioning. In this case the state/regulatory agency should completely devolve ownership and management of the forest resources in the outside reserved areas to individual farmers and/or local chiefs who own them. This will free the regulatory agency to concentrate its limited resources on the forest reserves only. Also, such an arrangement will give direct financial benefits to the farmers and/or chiefs concerned and thereby incentivise them to better protect these trees/forests.

An important issue which came forward in this study is the existence of corrupt practices within the regulatory agency. Some theorists have documented in various sectors including forestry that corrupt practices pose serious threats to compliance and enforcement actions (Cerutti et al., 2013; Kishor and Damania, 2007). This study confirms this theory and thus helps to explain how and why regulated actors are able to easily violate the law. It could be added that, unless the problem of corruption is dealt with, even sufficient resources may not necessarily result in enforcement effectiveness. A recommendation to tackle this cancer and to improve legitimacy could be for the state to ensure that there is a real risk of sanction certainty for both loggers who give and officials who accept. The sanctions should include naming and shaming those who engage in corrupt practices and the confiscation of the proceeds of their crimes.

6.6 METHODOLOGICAL REFLECTIONS

This study has used a mixed research methods approach to understand what influences loggers in Ghana in their decisions to comply with or violate logging regulations and how enforcement practices of the Forestry Commission influence the compliance behaviour of these loggers. First, the study investigated compliance-violation from the perspectives of the

regulated actors whose behaviour the law seeks to regulate. This approach is important because it is the way they perceive the regulation that influences their compliance behaviour (Gray and Silby, 2011). Second, it adopted the qualitative semi-structured interview technique instead of the direct survey type approach. The approach followed was necessary as it gave the researcher the opportunity to ask follow up questions and extract from respondents comprehensive accounts of choices they have to make in their daily work. In this study, such in-depth accounts were generally more illuminating of how the actors decide to comply or break the logging regulations and the challenges they face, which form the primary object of this study, than direct survey-type questions probably would have revealed.

In what follows, the researcher reflects on his dual role as a researcher and an employee of the Forestry Commission. The researcher's personal experience of having worked with the regulatory institution for over twenty-five years now in various capacities had both positive and negative influence on the study. The researcher joined the then Forestry Department in 1992 as an Assistant Conservator of Forests at the then School of Forestry, Sunyani, and later as a District Forest Manager, then as an Assistant Regional Manager, then moving to become Operations Manager for the Forest Services Division (Headquarters, Accra), then a Regional Manager and presently as Director, Forestry Commission Training Centre. These varied experiences at the different levels of the regulatory institution have brought with them an in-depth knowledge and understanding of both the working processes of the institution and the various actors it regulates. These positions within the FC provide access to lot of information and contacts with different stakeholders that would have proven difficult for an outsider researcher to secure. These contacts and information proved useful and beneficial throughout the data collection processes. In particular, it helped the researcher to validate or triangulate information obtained from respondents.

An example here will suffice. In an interview with a managing director of a logging firm, a question was asked whether they always harvest only the legal trees allocated to them, and if not, the number of times they have harvested more trees than were allocated to them within the last two years? Prior to this interview and unknown to the managing director, the researcher had obtained data from the district forest manager for the areas where the firm operates about the number of violations recorded against the firm. The response from the managing director was that they always harvest only the legal trees allocated to them. When confronted with the data obtained from the district forest manager, there was no denial and that opened the door for 'further and better particulars' on why firms harvest more trees than the regulators allocate to them. These explanations were more revealing of the firms' practices.

The other advantage was that respondents thought the researcher knew everything already and that encouraged them to freely and openly discuss without any inhibition whatever they knew about the subject matter of the interviews. Such a perception invariably helped to minimise any incentive

to be untruthful in their responses. Similarly, for most respondents, it was an opportunity for them to put their concerns and frustrations about the regulatory agency with someone who could help them find a solution. This also allowed respondents to openly and freely discuss and exchange views on various topics which formed the subject matter of the research. Certainly, these advantages would not have inured to researchers unfamiliar with the Ghanaian forestry terrain. They would have been regarded as outsiders and the key actors in the study would have been hesitant to deal with them. In other words, such researchers are unlikely to receive the kind of reception and open discussion afforded to me. As an insider, the researcher had a thorough understanding of the study context and could relate well with the actors.

It should also be pointed out that the researcher's position as a regulatory officer carried with it some challenges as well. There were ethical and potential conflict of interest issues. A major challenge was the perception some of the regulated actors had that the researcher was coming to create problems for them; just coming to learn about their secrets and use against them in future. It was really difficult to persuade some of them that the regulatory officer they know very well is now wearing a different cap as a researcher. As a result, some potential respondents refused to cooperate for the fear of self-incrimination. For others, it was concerns about revealing or sharing firms' trade secrets that could be leaked to their competitors. The researcher observed that firms/individuals who wanted to sound polite in refusing to be interviewed flashed the card of tight working schedule due to urgent contracts they had to satisfy.

McKenney et al., (2006) have argued that, being an outsider to a research context helps to promote a greater degree of objectivity which may not be possible for researchers who are insiders. Therefore, to improve objectivity and to deal with the challenges enumerated above, the following measures were adopted. First, the researcher assured respondents of anonymity and confidentiality of any sensitive information shared. Consequently, no firm or individual who participated in the study is identified by real name. There are also no trails for them to be easily identified and singled out for sanctions. Second, the researcher obtained prior and informed consent from each respondent. In other words, all respondents participated voluntarily and were guaranteed the freedom to decline response to questions they deemed uncomfortable. Third, findings of the study have been widely shared with colleagues, both researchers and practitioners, and some respondents for critique and feedback to deal with all ethical issues. Finally, findings of the study are published in peer-reviewed journals where editors and reviewers have had the opportunity to comment and provide feedback to deal with ethical issues and minimise biases.

A major limitation of this study is that it does not claim any statistical representativeness for the various actors studied, logging firms, chainsaw operators and forestry enforcement officials, due to the small sample sizes used. Though the small sample size may weaken the external validity of

certain findings, it allowed enough time to extract from respondents comprehensive accounts of choices they have to make in their daily work. These in-depth accounts were generally more illuminating of the various factors that influence their decisions and performances, which form the primary object of this study.

6.7 FUTURE RESEARCH DIRECTIONS

The results of this study have opened up other areas about illegal logging, law compliance and enforcement that require investigations in future.

- i. Enhancing compliance is quite a complex phenomenon and not just a straight forward calculation of increasing sanctions to achieve a higher level of compliance as deterrence theory would like us to believe. More than that, and as has been shown in the present study, compliance has other dimensions as well including social and moral or personal influences. What is important then for policymakers and practitioners to enhance compliance among various regulated actors is to understand how such actors respond to different compliance motivations either functioning independently or in their combination. Here much research is still needed.
- ii. The present study has demonstrated the significance of contextual factors particularly the socio-politico-economic and institutional settings to understanding noncompliance behaviour in Ghana besides the three main motivations documented in most of the western compliance literature. Much more research is required to ascertain how these contextual factors either directly or indirectly operate to undermine efforts to improve compliance and what proactive measures are required to address them.
- iii. As has been highlighted in the chainsaw study, compliance is not primarily a process that is driven by legal rules and/or enforcement action by regulatory authorities but can also be driven by capacity to comply, perceived reasonableness of the rule, of the legitimacy of the regulatory agencies, and of local socio-political pressures. This is particularly in cases where a deterrence strategy is unlikely to be feasible due to persistent violation and limited enforcement capacity. Here policymakers and practitioners need to understand and know what approaches are cost-effective and feasible to get such actors come into compliance.
- iv. Another area of interest for future research will be how to create a smarter mix, or strengthen the existing mix, of public and private governance; and of national and transnational governance structures/networks to tackle the problem of illegal timber harvesting and trade.

