Converting Cocoa Farms into Gold Mines – Negotiations and Compensation Outcomes for Farmers in Ghana

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Abstract

Farmland to mining land conversions have been on the rise in Africa and especially Ghana. This includes both large-scale formal land acquisitions by licensed miners and private land deals which involves mainly artisanal and small-scale miners (ASM). The tenets of prior consent, fair negotiation, and adequate compensation exist in regulatory provisions and societal norms, and are aimed at addressing humanitarian concerns for farmers who are affected by these conversions. However, in practice they are wrought with challenges. This raises important questions on the negotiation processes and factors that influence outcomes; questions which our paper pursues. Using a multi case study approach of two cases, the first involving conversions by a large-scale mine and the second involving ASM operators, we conducted 94 interviews with three levels of stakeholders including regulatory officials, opinion leaders, traditional authorities, miners and affected farmers. In our results, first, we found that the factors affecting negotiations included knowledge and information asymmetry between the negotiating parties, lack of sound financial valuations, threats and social pressures on farmers. Second, compensations paid were below recommended and standard rates for the first case while among the different financial arrangements on the second case, shared arrangements of mining proceeds yielded more favorable outcomes. Third, that investments from shared arrangements with periodic incomes were more favorable compared outright leases with lumpsum payments. We conclude that reliance on negotiations alone does not yield optimal outcomes We therefore recommend the establishment of pre-negotiated compensation frameworks rooted in realistic calculations within both national and international policies and guidelines which considers alternative compensation models such as periodic payments of shared income between miners and farmers beside the usual outright lumpsum payments.

Key words: **negotiation, compensation, farmers, miners.**

Introduction

The recent increase in world gold prices has made resource rich Africa the centre of attention once again for investments in land for mining. Acquiring lands for mining purposes include formal acquisitions of large and small-scale mining concessions, and private and informal land deals transacted between farmers and artisanal and small-scale miners (ASM) (Adu-Baffour et al., 2021; Hausermann & Ferring, 2018). Given that Ghana's gold belt i.e.: where gold is mainly found in Ghana falls along the main cocoa growing areas (Cuba et al., 2014; Merem et al., 2020; Pijpers, 2014; Siaw et al., 2023; Snapir et al., 2017) the increase in gold mining has resulted in rampant conversions of cocoa farms into mining sites. These conversions have direct consequences for cocoa farmers (Adjei, 2017; Boateng et al., 2014; Hausermann et al., 2018; Osman et al., 2022).

Cocoa farming is the primary livelihood of thousands of households in Ghana, presently 550,000 households (Ghana Statistical Service, 2019). Gockowski et al., (2011) suggests that in Ghana, more than six million people are dependent on cocoa, either directly or indirectly for their livelihood. Averagely twenty-five percent of the crop land area of Ghana has been delineated for mining reconnaissance, prospecting or production (Cuba et al., 2014), which thus implies a huge number of landowners, cocoa farmers and cocoa workers (generally referred to as farmers in this paper except when important distinctions are needed), who stand to be affected by mining activities. Recent statistics also indicate that cocoa farm conversions for mining has affected over 19,000 hectares (Siaw et al., 2023).

Cocoa farmers in Ghana are typically smallholders who grapple with low socio-economic status (Fountain & Huetz-Adams, 2020). They are thus of prime concern as part of efforts to reduce poverty (Abraham & Pingali, 2020). In recognition of this, international guidelines and national policies stipulate negotiations between farmers and investors (miners) for prompt payment of adequate compensation to bridge the livelihood gap of farmers pre- and post-conversion. These include international guidelines such as the United Nations (UN) Guiding Principles on Business and Human Rights and Food and Agriculture Organization (FAO) Guidelines for Sustainable Large-Scale Land Deals in Africa. The national legislations comprise the Ghanaian Constitution of 1992 Article 20, 2a, Legislative Instrument (L.I.) 2175 on Compensation and Resettlement under the Minerals and Mining Act, 2006 (Act 703), and the Land Act 2020 (Act 1036).

Negotiation as a transaction is expected to bring about an efficient solution if property rights are clear, there are no transaction costs and actors have complete information (Coase 1960), however, the question remains if that is indeed the case. Formal land deals which are regulated under the above instruments have been fairly well studied, and the outcomes are mostly negative for farmers, a situation which is blamed on lop-sided negotiations and often inadequate compensations (Africa Mining Vision African Union, 2009; Amponsah et al., 2023; Worlanyo et al., 2022). In private, informal land deals, that fall outside the remit of these regulations, some form of negotiations is still recorded (Adjei, 2017; Hausermann et al., 2018; Mkodzongi & Spiegel, 2019; Siaw et al., 2023; Van Bockstael, 2019) with evidence that results are mixed at best. We hypothesise that in informal negotiations there seems to be a level playing field between the parties, and therefore results in better deals for farmers. To test this hypothesis, we first examine the outcomes of negotiations in both formal and informal deals, and second the factors that influence negotiations to bring about those outcomes. The richness of our contribution stems from the comparison of both formal and informal private land deals, which are not well understood in the existing literature. This will make a meaningful contribution to the literature by deepening our understanding of the nature of negotiation processes that inform outcomes.

Background

Regulations on Negotiations for compensation

In recognition of the right of autochthones, provisions are made for negotiations between parties (investors and landowners) as a means of determining a fair and adequate compensation for land acquisitions. In the case of mining, observing the poor outcomes of negotiations, the African Mining Vision (AMV) document which was developed by the African Union in 2009 proposed that negotiations should be between a group of experts assembled by the state government to match the expertise of mining investors. Corroborating this, the FAO Guidelines for sustainable large-scale land deals in Africa propose that for successful outcomes of negotiations, the host nation needs a skilled negotiation team of five to seven professionals comprising specialists in economics, environment, law, finance, and sociology (FAO, 2017). Additionally, the UN Guiding Principles on Business and Human Rights state that remedies which include compensation may be sought through mechanisms that involves the affected farmers directly or intermediaries. These processes, they state, should be devoid of corruption or negative political influence.

In Ghana, the constitutions under section 20 make provision for the fair, prompt and adequate payment of compensation for persons deprived of their property, including land. Means of remedying complaints concerning fundamental rights such as land expropriations under section 216 may be made through fair, proper and effective means such as negotiations. The Mining Act, 2006 (Act 703) L.I 2175 as well as the Land Act, 2020 (Act 1036) specifically on land acquisitions for mining makes provision for negotiations for compensation and further mentions that negotiations may be made on behalf of the farmer where the latter is unable to negotiate on their own. The composition of the negotiation team and what needs to be negotiated is further detailed. Regulation 2 (2) of L. I. 2175 stipulates negotiation between the miner and the farmer for the determination of compensation. Sub section three gives the provision for a committee to be set up to negotiate on behalf of the parties which under sub-section 4 may include

(a) a qualified person who represents the claimants;
(b) a qualified person who represents the holder of the mineral right;
(c) a representative of the government agency responsible for valuation;
(d) three representatives of the affected persons being farmers and affected communities;
(e) a representative of the traditional authorities in the project area;
(f) a representative of the relevant District Assembly; and

(g) other members mutually agreed on by the parties.

Informal deals fall outside the remit of these regulations; however, some form of negotiations is still recorded (Adjei, 2017; Hausermann, 2018; Mkodzongi & Spiegel, 2019; Siaw et al., 2023; Van Bockstael, 2019). They note that ASM operators believe that in order to mine successfully and avert conflict and misfortune, it is best to negotiate with and compensate farmers. According to Petrescu et al. (2020), negotiations essentially occur at some point in the process of every land transaction.

Land acquisitions for mining

Research on land acquisitions for mining largely records sub-optimal results which range from under-payment of compensations to blatant disregard of the rights of farmers. For example, in a study of a formal mine land acquisition in the Wassa West District of Ghana**,** the farmers expressed dissatisfaction with the compensation, asserting that their standard of living had worsened (Adonteng-Kissi, 2017). Akabzaa & Darimani (2001) recorded overt disregard for concerns of farmers in Iduaprem in the Western Region of Ghana. Similarly, in the Asutifi-North district in the Ahafo Region, Bugri and Kumi (2018) had a similar report of inadequate compensations. Their findings were corroborated by findings of Worlanyo et al. (2022) and Owusu-Koranteng (2008) in their study in the same district where compensations fell short of farmers' expectations as they were paid what the mining company could afford and not what they suffered as loss. Amponsah et al. (2023) studied two large-scale mine acquisitions and found that the lack of prescription on which means of calculating compensations influenced outcomes negatively. Similar findings all over the continent informed the report of the AMV which decries the abysmal outcomes of large-scale mining deals for African countries, and calls for improved outcomes. These reports go beyond Africa as seen in several studies including that of Vandergeten et al. (2016) who conducted a meta-analysis of land deals across Africa, Latin America and Asia, and concluded that such deals may end in loss for farmers.

Across board, reasons for these outcomes cite lop-sided negotiations found within permeable regulatory regimes which lead to inadequate compensation with no consequences for large-scale mines (Kidido et al, 2015, Larbi et al., 2004). The AMV described the negotiations as 'extremely asymmetrical', stating that the absence of a neutral institution overseeing compensation negotiations entrenches the mining companies' limited motivation to adequately compensate.

Lacunas in the regulations such as identification of rightful entitlements to compensation (Kidido et al., 2015) and the means of calculating compensation values (Amponsah et al., 2023; Adonteng-Kissi 2017 and Ofori et al, 2023,) exacerbates these challenges.

Land deals between small-scale miners or ASM operators and farmers have not received such in-depth studying. This bias of under-studying these negotiations may be due to their highly informal nature or possibly because of the complexities involved, compared to formal land deals (Hilson & McQuilken, 2014; McQuilken & Hilson, 2016). Works done by Bach (2014) in the Amansie West District, seems to suggest that these arrangements are problematic as small-scale mining companies do not integrate sound compensation practices into their operations. Donkor et al (2022) equally reported that in the same district, though a majority of the farmers and landowners who had given out their lands for mining mentioned that there were arrangements between them and the miners prior to mining, others claimed that the contrary was true. Abbiw (2020) in the Western North Region of Ghana and Hausermann et al (2018) in the Eastern Region described instances where certain farmers were firm and able to obtain their desired compensations while others were short changed. In general, these informal arrangements have recorded mixed outcomes in Ghana and Africa (Geenen, 2012; Kamlongera, 2011; Teschner, 2014; Van Bockstael, 2019).

Factors affecting negotiations

Researchers generally call for enhanced policies, regulations and improved governance in order to avert the negative consequences (Alias and Nasir Daud 2006; Deininger and Byerlee 2011; Mugisha 2015; Ogedengbe 2007; Vandergeten et al 2016). A deepened understanding of the factors that actually influence negotiation outcomes would undoubtedly enhance policy decisions. The seminal work of Fischer and Ury (1992) on principled negotiations enshrined that the achievement of a fair outcome requires a consideration of the interests of both parties. While their work received criticism for neglecting the significance of power dynamics in negotiations, Fischer's response acknowledged the role of power in the negotiation process, however they contended that the misuse of power is detrimental to both parties involved (Woodard 2015). In later studies in Australia, O'Faircheallaigh, (2008, 2013) made important contributions to the understanding of negotiations between community and mining companies, highlighting community cohesion, access to information, experience in negotiations, socio-economic factors and quality of leadership as the factors affecting outcomes. Similarly, in their study in Queensland, Curnow et al. (2017) identified time, venue, availability and appropriateness of information, composition of the negotiation team, and community perceptions as the factors that influenced the unsatisfactory outcomes.

Theoretical and Conceptual Framework

Negotiation encompasses a wide array of applications which leads to the absence of an integrated theory to encapsulate its complexity (Curnow et al., 2017). However, negotiation as a market mechanism of transaction is expected to bring about efficient solutions if property rights are clear, there are no transaction costs and actors have complete information (Coase 1960). The transaction costs theory developed by Olivier Williamson in furtherance to the theorem proposed by Ronald Coase in 1937 studies transaction as an analytical unit. Williamson (1979) however theorized that concepts like Bounded Rationality and Opportunism affect efficient solutions in transactions. Bounded rationality means that individuals or economic units in a transaction are limited because of factors such as inadequate information, cognitive limitations or time constraints (Williamson 1979).

We combine Williamson's perspective on transactions with Amartya Sen's perspective on bargaining. This enriches our conceptual framework, as both emphasize different aspects. Whereas Williamson points to bounded rationality and opportunistic behaviour affecting efficient transactions and the need for appropriate contract design, Sen includes a broader range of factors beyond self-interest, including notions of fairness, equity, perceptions on wellbeing, agency and capability.

Amartya Sen describes such influencing factors as; the notion of wellbeing, perception, agency and capability (Sen, 1987). Ideally, decisions and choices made in bargaining would have the end goal of enhancing one's wellbeing. Yet, the indicators of wellbeing may be affected by personal perceptions which include life experiences and societal expectations (Sen 1987). He indicated that perception has a significant effect on outcomes. An individual might deem an outcome as optimal based on their perceptions, even if in reality, it represents a suboptimal scenario. For instance, an extended experience of poverty may result in individuals perceiving it as the norm.

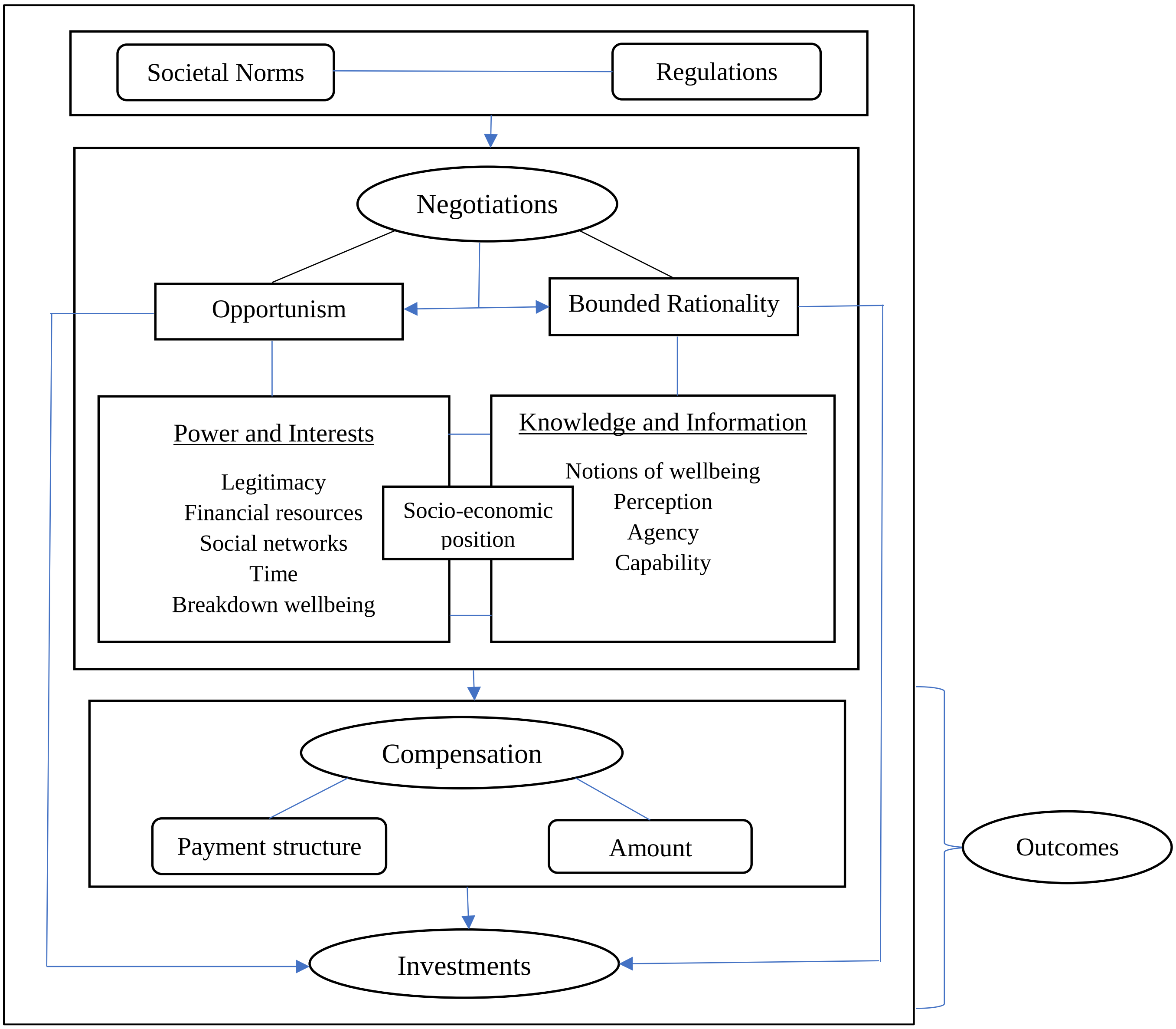
This is linked to the factor of agency, which refers to the ability of individuals to make choices and take actions that shape their lives according to their values and preferences. In this case, the party does not seek his or her own good, but has goals for the good of the family or society. For example, in Ghana, land holds more than an economic value; it also embodies spiritual and cultural significance with a right of ownership held by the living, the dead and even the unborn (Abubakari et al., 2016). Therefore, decisions taken on land by farmers and landowners do not only influence their own wellbeing but may for example take into consideration the wellbeing of the entire family, and of past and future generations.

Capability represents the ability to decide on what constitutes wellbeing. When factors such as health or literacy makes the individual unable to decide on what is right, the measure of wellbeing must not only be by desire, but by what the individual is able to do or to be (Sen, 1987).Vermeulen & Cotula, (2010) assert that illiteracy and naivety affects the ability of farmers, landowners and chiefs to negotiate for fair deals.

Opportunism refers to individuals or economic entities' selfish desire to increase their personal gains and to reduce their total cost as much as possible (Williamson 1979). In effect it is the tendency of one party to seek to exploit the other (Curnow et al., 2017), especially with the focus on profit maximization (Samsura et al., 2015). In this vein, each party in the transaction would select from a list of outcome options, that which best suits his personal interests (Klein & Shelanski, 1996).

Sen (1987) refers to these possible list of outcomes as collusive arrangements. If bargaining fails, each party falls back to the status quo or breakdown position unless there was a change in this position during bargaining, for example, threat from one party against the other. The breakdown position influences the outcome of the bargaining. The ability to secure an advantageous position in negotiations is influenced by both power dynamics and vested interests. The negotiator's power to steer discussions and outcomes toward their desired objectives even in the face of opposing interests *may* emanate from various sources which include legitimacy from regulations and norms, financial resources, influential connections, access to information, temporal advantages, socio-economic attributes and the breakdown wellbeing position (Adonteng Kissi 2017; Petrescu et al., 2020; Samsura et al. 2015).

Figure 1: Conceptual Framework - Negotiation and Compensation



Source: Authors, 2024

Research Design and Methodology

We employed a qualitative research methodology, using a multi-case study approach. This is useful to gain in-depth understanding of a complex phenomenon (Creswell et al 2007; Eisenhardt & Graebner, 2007; Lune & Berg, 2017), which in our case is the negotiations process and factors affecting outcomes. We purposefully selected two neighbouring communities within the Ashanti Region of Ghana with distinct land conversion scenarios. In line with ethical and data protection considerations in the Social Sciences (Lune & Berg, 2017), the names of the communities will be preplaced with pseudonyms. One community, hereafter with pseudonym Tetteh, underwent negotiations and conversions with a large-scale mining company, hereafter referred to as the mining company. The other community, with pseudonym Quarshie, had negotiations and conversions with artisanal and small-scale miners. Both communities have similar socio-economic characteristics and are also important cocoa cultivating areas. They thus present different perspectives of the issue under study (Creswell 2007).

We triangulated data in various ways. Creswell and Miller (2000) state that triangulation enables researchers to establish credibility through the search for convergence of evidence from the different data sources which in our case included interviews, non-participant observations and records. Studies show that non-probability sampling techniques are considered appropriate for case study research (Saunders et al., 2018). For this reason and coupled with the sensitive nature of the research, we used purposive sampling by means of the snowball procedure to reach respondents (Etikan, 2016). It also helped to identify those affected by land conversion since not everyone had that experience. Respondents included three groups of actors: 1) officials of nine regulatory institutions (see Table 1); 2) local and traditional authorities, and 3) farmers, representatives of the mining company and ASM operators (see Table 2). We did not make a distinction between licensed and unlicensed small-scale miners, however key informant interviews revealed that miners in Quarshie were mostly unlicensed. We went back to the field multiple times to fact check some of the issues raised in initial interview with participants. The field data collection process spanned a period of nine months. This involved an exploratory visit to key informants in Accra and to the selected communities. These initial interviews helped to give a preliminary view of the situation, to select cases and to establish trust. It also led to a review of the interview guide. There was then a follow-up visit to interview the respondents within the communities. The institutional interviews were to determine their roles in land-based negotiations and the particular instances pertaining to the two communities. Interviews with respondents in the community focused on factors that influenced land conversion decisions and negotiations, processes involved, actors involved, their roles and importance, the amount received and investment decisions taken.

Table 1 – List of institutions visited for key-informant interviews

Type	**Sector**	**Institution**
State	Cocoa	Ghana Cocoa Board (COCOBOB)
	Gold	Minerals Commission (MC)
	Land and Environment	Land Use and Spatial Planning Authority (LUSPA)
		The Environmental Protection Agency (EPA)
		Forestry Commission (FC)
		Lands Commission (LC)
Local Government		District Assembly (DA)
		Cocoa Health Extension Division (CHED)
		Member of Parliament

Table 2 – List of respondents - Communities

Case	**Type of Respondent**	**Number of Respondents**
Quarshie	Farmers	33 individual interviews, and 2 focus group discussions
	Miners	8 individual interviews and 2 group interviews
	Chief	1
	Total	57
Tetteh	Farmers	27 individual interviews and 1 focus group discussion
	Large Scale Mining company	3 representatives
	Queen Mother	1
	Total	28

In line with methods of collecting data in case studies proposed by (Yin 2003) data collection was through in-depth interviews with the help of interview guides, observations of visual outcomes of land conversion and review of records where available. Our interviews were semi-structured, which allowed respondents to be as detailed as possible with their descriptions and narrations. It also helped to overcome the difficulty associated with unearthing information related to decisions on land conversions (Oya, 2013; Vermeulen & Cotula, 2010). Each interview lasted an average of an hour. When allowed, the interviews were recorded, otherwise, detailed notes were taken.

Prolonged observation and engagement were used to increase credibility (Bitsch, 2005). Interviews were conducted in the language that respondents were most comfortable with, this included Twi and English. Further interviews were conducted until saturation was reached (Saunders et al., 2018).

All interviews were transcribed. Following this, codes were developed as a first stage of highlighting common points raised. In addition to predefined codes from literature and thus, deductive principles, we also undertook open coding in line with inductive analysis to allow new insights and pertinent issues raised by respondents to emerge. Based on discussions among the authors, insights from the observations and documents and back and forth movement from the data to relevant literature, we developed relevant interpretations from the data.

Findings

In this section, we present at findings from our analysis, which are incentives for conversion and factors affecting negotiations, compensation payments and decisions on investments and alternative livelihoods.

Negotiation process at Tetteh

In Tetteh, land conversions involved a large-scale mining company which has a concession covering twelve communities within the district.

Process of acquisition: Prospecting started in 2014 under a different company name and mining started in 2019. The mining company had gone through the procedure laid down by the Minerals and Mining Act which included acquisition of license, community sensitization and formal negotiations. The community was formally informed of the impending activities of the mining company and its implications in 2014 through a public forum. Farmers were aware of the constitutional provision that all minerals are vested in the state and that they had right to compensation. Formal negotiations started in 2016.

Composition of negotiation team: A Compensation Negotiation Committee, was constituted in Tetteh per the Minerals and Mining Act as follows:

- Representatives from the Compensation Committee which is a subcommittee of the Community Consultative Committee of the mining company
- Representatives of the Traditional Authorities
- Representatives from each of the affected villages
- Chief farmers from the affected communities
- Representatives of the Unit Committee of each community
- A representative from all churches
- Representatives of District Assembly
- Representatives from relevant state institutions such as LVB, Office of the Administrator of Stool Lands, Ministry of Food and Agriculture, Commission on Human Right and Administrative Justice were called upon when needed.

The negotiating team comprised seventy-eight members, who established sub-committees as needed. Meetings, convened by the mining company every six weeks on average, were communicated to members via letters. These meetings were facilitated by a moderator and a secretary. Notably, the farmers lacked a valuer to represent their interests. Aware of their constitutional rights, the farmers engaged the services of a valuer, however, the mining company discredited this valuer on the basis of not being a member of the Ghana Institute of Surveyors, despite the expertise of their team.

During the negotiation process, significant changes occurred within the team. Some mining company representatives, previously sympathetic to the farmers' position, were replaced. Conversely, on the farmers' side, one leading negotiator reported a cessation of invitation letters for meetings, while another resigned due to a tarnished reputation following the failed deal with a valuer. Additionally, several team members switched allegiances through collusive tactics.

The mining company singled out the quantity surveyor from the valuer's team to represent the community in the negotiations and subsequently employed her, compromising her ability to impartially represent the community's interests. Furthermore, despite the replacement of the chief farmer by the farmers, the mining company persisted in refusing to acknowledge the new chief farmer. Notably, a few community leaders, known for their strong negotiation stance, purportedly accepted employment with the company, leading to their silence on pertinent issues.

The district chief executive as at the time of the negotiations was from Tetteh. Additionally, an influential notary hailed from the same community. Respondents indicated that they sought assistance from these influential individuals when they felt cheated but they received little help. A respondent described the situation as such:

'Look at all these important people from this town, if they could not say something for us, then who else can help us?'

Intimidation: Three opinion leaders who were influencing the negotiations were arrested on false charges and detained for a couple of days, an incident that most respondents referred to as the breaking point for many farmers. Despite feeling cheated, respondents constantly made the following comment:

'Do you have money or clout to litigate with the government or the mining company?'

This question was rhetorically phrased to make the point that it was impossible to challenge or litigate with the government or mining companies. Conversely, there were reports of farmers who used threats to try to influence the negotiations. An employee of the mining company and a community member recounted an incident where a farmer injured the company's surveyor with a cutlass.

Knowledge and information asymmetry: Meetings were moderated and minutes were taken, however community members subsequently did not get copies of the minutes. Farmers were not informed about discussions until decisions were concluded and signed, at which point, they were no longer open for discussion. Adding up to this, a misunderstanding of the valuer's terms of payment raised suspicions which created scepticism about the valuer and led to a broken front concerning the representation arrangement. The terms of payment were a choice between 30% of the additional negotiated sum or 10% of the total sum obtained after negotiations. Respondents disclosed that they had not understood the terms and believed representatives of the mining company who calculated the amount that the valuer would get from each of them and convinced them not to deal with a valuer but negotiate directly. Furthermore, farmers grew wary of the negotiation team when the negotiations lingered beyond a year, suspecting that their representatives were benefitting financially and therefore had an incentive to extend the negotiations. Almost 60% of the respondents had at least secondary education. Yet, they indicated their lack of exposure to relevant information. This quote from a community leader summed it up:

'Knowledge determines ability to negotiate. If you look at a community like this, definitely our knowledge will not match those up there (mining company representatives) so our contribution will be less.'

Negotiation process at Quarshie

In Quarshie, the conversions mainly included ASM operators who engaged in direct negotiations with smallholders, mostly cocoa farmers and landowners.

Process of Acquisition*:* Access to land was through informal connections either through friends, and neighbours who had already mined their farms or directly by the miner or his agent. Arrangements to mine was preceded by some form of prospecting to determine viability of the venture. Some miners inferred from gold obtained in neighboring lands while others dwelt on their experience and the characteristics of land. Others took samples for testing to ascertain gold bearing lands. Negotiations were mostly informal with duration anywhere between a couple of days to several months.

Composition of negotiating team*:* Fifty-eight percent (58%) of the interviewed farmers engaged in negotiations with the help of some family members while 12% indicated they negotiated in the company of close acquaintances. Choice of members of the negotiation team was based on trust and vested interests in the process. Twenty-one percent (21%) preferred to negotiate alone. In the case of three respondents, external parties such as experienced miners or the chief were consulted. Their role was to give advice or serve as witnesses. Despite this arrangement, respondents generally agreed that it was in the best interest of the miner to pay some royalties to the chief before mining, especially in cases where it involved a first-time miner. Some reasons for not engaging experts was to avoid problems with the law. Two cases involved cocoa-farming sharecroppers; one received 10% of the proceeds, while the other, who had acted as an agent for the miner, received 50%.

Social networks: Family members who were not farming but had interests in the land were influential in deciding outcomes because it was an avenue to benefit financially from the income generated whereas previously, only the farmer benefited directly from the land. Society also served as a significant influence in the negotiations. Farmers who persistently refused to convert despite the suitability of their land for mining were tagged as non-progressive. This was reason enough for some farmers to give in.

Intimidation/enticement: In some cases, financial needs for an investment pressurized farmers to quickly accept compensation amounts or arrangements. Several miners mentioned that they leveraged cocoa lean seasons as an opportunity in negotiations. In other cases, the mention of the sheer amount to be gained from the deal and the possibilities to invest in other ventures convinced farmers. According to other miners, each time they visited to negotiate, they would hand out cash gifts to members of the household in order to entice them. Fear of loss constituted another form of pressure. Respondents alluded to the fact that a farmer who persistently refused to convert had their farms mined in the night without their consent. Other clandestine tactics by miners, included, deliberately causing mining tailings to flood farms, which compelled farmers to finally negotiate from a weakened position.

Knowledge and information asymmetry: Eighty percent (80%) of the respondents in Quarshie believed that they and their team had the ability to negotiate due to their age and experience in life. The average age of respondents was fifty-two. Respondents did not use their educational level or financial literacy as indicators of their ability to negotiate. Eleven percent (11%) of the respondents were illiterate while about 64% had at least secondary school education. Only in two cases did farmers involve experienced miners for advice, otherwise, they referenced amounts received by neighbors and friends to satisfy themselves that they had obtained a good outcome. In most shared arrangements, each party hired a 'secretary' at the mine site to record output in order not to be cheated and these served as an information and knowledge base for other negotiators.

Outcomes of negotiations

This section examines the outcomes of the negotiations for both case studies.

Amount expected: Tetteh negotiators benchmarked their expectations to industry best practices in Ghana. The amounts they requested was either based on their financial requirements, or consideration of their challenges in farming. The quote below sums this up:

'Some farmers were initially asking for even more than 20,000. They don't do any calculation. They just mention that amount. Before they come to the farm with you, they plan that if they get about GHC 50,000, it would be ok to build a house and get a car so looking at that, GHC 60,000 would be ok. Sometimes, they see that someone had GHC 80,000. In the communities, there is nothing like confidentiality because of the communal life and so they hear that someone had this amount and my farm is even nicer than that, so, I won't accept this amount. It is one out of hundred who can explain that 'you see, my child is in training college and this one is here so this money, how am I going to take care of them in the next four years'. In our situation, about 50% would say that look, you are taking this farm forever, how am I going to take care of myself and my children?' - A director of the mining company - Tetteh

Quarshie negotiators benchmarked the expectations against prevailing rates in the community. As in the case of Tetteh, they also requested the amounts based on their financial requirements, or judged that they simply had to be paid more due to their struggles in establishing and maintaining their farms. Below are some quotes to put this in perspective.

'It seemed good to get that money and then farm again after 5 years when the agreement is over.' Respondent Quarshie

'My brother thought it was good investment and we needed money to start a business at that time' - Respondent, Quarshie

'I accepted the amount because compared to what my friend got, I had a better deal.' - Respondent, Quarshie

'But imagine, starting a farm. You weed, burn and plant. One time I burnt and it didn't burn down well. One man passing by, when he saw this asked me if I don't have a husband. Then I asked why and he said this job is for men and I said well, I don't have any man so I have to do it bit by bit with my own strength.

So, imagine with all this, if you cut it down and pay GHC 12,000, is it enough? But if he says that all they can give you, what can you say?' - A female respondent in Quarshie

Agreements*:* In Tetteh, compensation was in the form of outright cash payments which represented the value of the crops lost. Eighty-five percent (85%) of the compensation payment was to compensate for the cocoa while the remaining 15% was for other crops such as plantain, yam and cassava found on the farm. The initial amount quoted was GHC 8,400 per acre of cocoa at maturity and full saturation, but farmers disagreed with the amount. Eventually, the amount was increased to GHC 11,600 with a clause for two yearly review. In 2021, compensation was GHC 20,160. All farmers, (regardless of land ownership arrangements) received the same amount directly.

In Quarshie, arrangements involved outright leases while others entered a share arrangement where profit was split 50/50 or the income from the gold sales were shared ranging from 20% to 40% for the farmer. In some cases, the land was given on rental basis and the farmer received daily or weekly sales from the miners. The duration of agreements ranged between three to fifteen years, after which the ownership of the land reverts to the farmer. The duration appears to be influenced by the type of mining done. Reclamation efforts were shared between the farmer and the miner. Tables 3 summarizes these arrangements among the respondents.

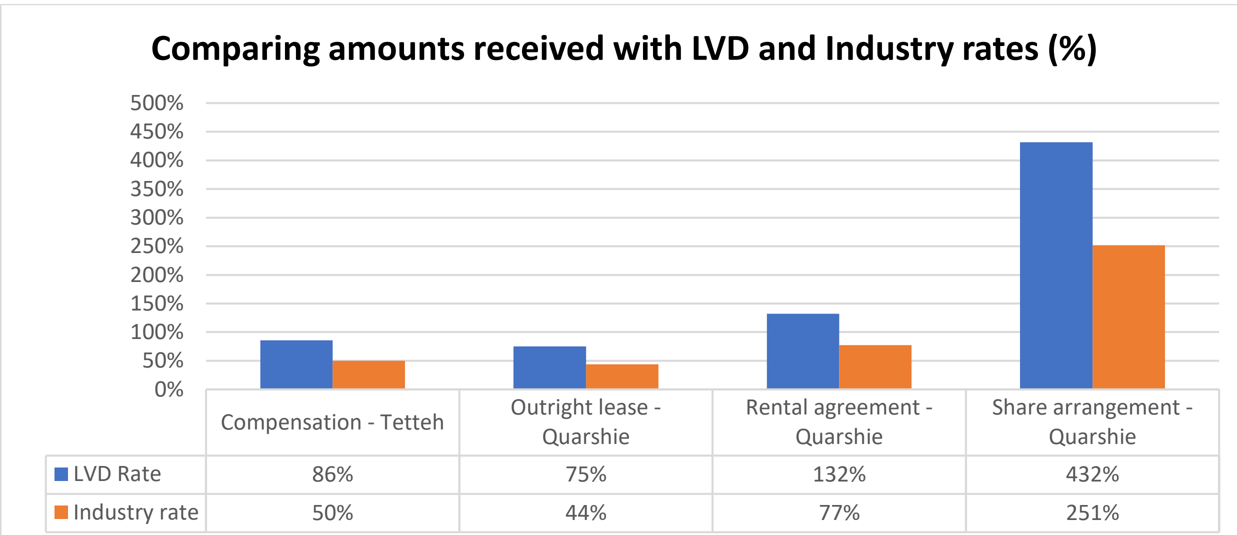
Table 3: Types of financial arrangements in Quarshie

Financial arrangements			**Shared income arrangements**		
Type of Arrangement	**Frequency**	**Percentage**	**Shared arrangements**	**Frequency**	**Percentage**
Shared arrangements	19	63%	Profit share 50/50	3	16%
Outright lease	10	33%	Proceeds share 20%	3	16%
Rental	1	3%	Proceeds share 30%	3	16%
			Proceeds share 35%	5	26%
			Proceeds share 40%	5	26%
Total	30	100%		19	100%

Source: Field Data

Adequacy of amount received: Figure 2 below depicts a comparative analysis of compensation received in both cases alongside the LVD rates and existing industry best practice in Ghana. The graph illustrates that compensation in Tetteh fell below both reference rates, mirroring the situation observed with outright leases in Quarshie. Conversely, shared arrangements and rental income demonstrated a favourable comparison with these established rates.

Figure 2: Comparing compensation received with LVD and industry rates



Source: Field data

Investments **of compensation money – Options**

Respondents had invested their compensation in buying plots of land and building houses, in commercial ventures and in education of their children. Table 4 contains summary of these investments.

Table 4: Summary of choice investments

Investments	Tetteh	Quarshie
Business Ventures	17%	51%
Buildings (including uncompleted)	13%	24%
Plots of land for residential purposes	17%	6%
Education of children	10%	11%
Spent	17%	2%
Bank	9%	-
House improvements	17%	-
Private cars	-	6%
	100%	100%

Source: Field data

Evidence within Quarshie indicates wealth creation from periodic income from shared arrangements, reflected in the construction of many new buildings, a hotel, a surge in private transportation like motorbikes and a general upsurge in economic activities. However, with limited knowledge of the transition into a money-based economy came the challenge of cash flow management. It was not uncommon to encounter a farmer who had used his compensation to construct buildings and other assets, only to express dissatisfaction with the newfound reality of having to buy food on a daily basis. A second aspect to this was inability of some farmers to manage alternative businesses, for example transportation and real estate businesses.

Discussion

Essentially, comparable challenges albeit in varying degrees, significantly impacted negotiations in both scenarios, leading to compromised outcomes for farmers. These were improper composition of the negotiation team, intimidation from miners, social pressures on farmers and a knowledge and information asymmetry between the negotiating parties. The divergence observed in the two cases was basically in the compensation arrangements. First of all, Quarshie experienced substantially higher compensation amounts resulting from shared income arrangements with miners from private negotiations compared to the lumpsum compensation payments disbursed in Tetteh and to similar arrangements in Quarshie involving outright leases. Additionally, shared income arrangements with periodic payments also presented positive investments. The underlying inquiry revolves around the reasons behind this disparity with a look at the regulatory environment and role of factors that influenced the negotiations These aspects would be discussed within the conceptual framework.

Societal norms and regulations

In Quarshie, societal norms mandated fair price negotiation and compensation for farmers. The prevailing community conventions of shared arrangements provided an avenue to negotiate terms more favourably than in outright lease scenarios. Central to these negotiations therefore were considerations surrounding the percentage share. Within these established community conventions, share arrangements in general fared better compared to cases involving outright leases. In Tetteh, where formal negotiations took place under state regulations, reference made to LVD and industry rates yielded lower outcomes. Owing to similar challenges observed in their studies in Nigeria, Ogedengbe (2007) and Kakulu (2008) recommended that compensation practices need to be revised and predetermined rates reviewed since they were inadequate. The case is therefore made that, established conventions that are favourable would tend towards favourable outcomes and vice versa.

Opportunism

Important factors observed under opportunistic behaviour were exacerbated by legitimacy and threats and intimidation.

Power imbalance, intimidation and threats: Strong social networks or the lack of it, financial resources and the breakdown position of both parties affected the outcomes significantly in Tetteh. Intimidation and brazen threats were utilized to weaken the breakdown position and thus undermine the bargaining power of farmers. These coercive tactics were facilitated by the financial resources wielded by the mining company. Moreover, the community's inability to garner assistance from law enforcement agencies and people of influence further eroded their position. Farmers had knowledge of their constitutional rights to compensation however, knowledge of a right is not enough if one does not know how to exercise that right (Adonteng-Kissi, 2017). The non-insistence of the land owners to pursue legal means of dispute resolutions stemmed out of financial constraints and a low socio-economic status. Additionally, the recognition that the mining activity was inevitable due to the constitutional provisions contributed to the acquiescence of land owners, similar to the situation observed by Samsura et al., (2015). In this case, according to Curnow et al. (2017), where one party seems to have no choice than to accept the outcomes, it cannot be described as a negotiation.

Legitimacy: In Tetteh, the miners had a valid concession to mine and operated within the law which gave room for compensating the farmers. By the nature of the law itself, the 1992 Constitution which vests all minerals in the state, farmers and landowners have the right to outright compensation. The legal and constitutional framework currently restricts landowners from engaging in negotiated share deals with miners. However, despite this limitation, there exists compelling evidence to suggest that if communities participate in fair negotiations on the share of mining proceeds, they stand to achieve more advantageous outcomes as seen above and in other examples of different arrangements in Indonesia, China, Columbia Brazil and Ghana (Cernea 2008; Danso et al., 2016; Sholihah and Chen, 2020;).

Additionally, as mentioned earlier, section 74 of Minerals and Mining Act 703 does not encourage compensation for losses or damages that could not be assessed in monetary terms (Cotula 2004), and excuses miners from paying compensation for the loss of other ecosystem services besides the cultivated crops. Further, the absence of a prescribed means of calculating compensations also meant that the mining company adopted its own methods. This was a common practice in other large-scale mines which did not favour the farmers (Adonteng-Kissi, 2017; Amponsah et al, 2023; Ofori et al, 2023). Asante et al (2021) and Eves (2005) demonstrated how much productivity could significantly differ from farm to farm depending on the management practices, thus a fair compensation would necessitate an individual assessment of each farm. However, as was the case in our research, the valuations overlooked important determinants such as farm investments, land characteristics, accessibility, among others and offered blanket payments. Their position was instead backed by their legitimacy of operating within the confines of the law. In this case, farmers negotiated with a perceived low contribution to the outcomes, making them entitled to only small portions of the benefits. Kariuki and Ng'etich (2016) corroborated a similar situation in Kenya where the laws disempowered farmers in acquisitions fostered by the state. Seeing that the beginning of any mining venture requires land, this position ought to be challenged.

In shared arrangements in Quarshie, illegal miners were not able to claim the legitimate rights under the eminent domain and so farmers were able to negotiate from a position of higher contribution with beneficial outcomes.

Bounded Rationality

The main factors under bounded rationality were the knowledge and information gaps that existed between the negotiating parties. The perception of well-being, agency and capability influenced the choice of investments.

Knowledge and information: The very starting point of negotiations requires knowledge of the negotiators' anticipated outcomes (Samsura et al. 2015). In both cases, this important position was compromised. In the case of outright leases - both in Tetteh and Quarshie, the requested amounts lacked a robust foundation rooted in accurate assessments of the actual value of the farms. Similar findings resonate with Adonteng-Kissi (2017), Bugri and Kumi, (2008) and Macintyre and Foale (2004). Without adequate information on real values of their farmland, on what it meant to be transitioned into a money-based economy, farmers were unable to make adequate demands. Second was the composition of the negotiation team. Knowledge and information were imbalanced for both parties in the two negotiation scenarios which played out to the disadvantage of the farmers. For the latter, negotiating without expertise led to undesirable outcomes. In Tetteh, this was the absence of a qualified valuer and in Quarshie, farmers seldom sought advice from a qualified person.

Further, while the mining company had such information of crop values by the LVD and were privy to the farm sizes and incomes of farmers, the latter did not have information on the incomes or budget of the mining company in Tetteh. The most information the farmers got was recorded in the response of one respondent who reported that the mining company had stated that they cannot pay standard prices like large-scale mining companies because they are fairly young in business. Samsura et al., (2015) argues that such information asymmetry played an important role in the outcomes of the negotiation simulations and thus proposed an 'open book' negotiation, in other words, full financial disclosure as a means to achieve equitable outcomes for both parties. This proves true in Quarshie where farmers had some knowledge of mining income.

The imbalance in the negotiation teams, in the case of Tetteh, was pronounced by the lack of cohesion within the group. Olson and Olson (2009) explain that small groups consolidate more swiftly than relatively huge ones, making big numbers sometimes a liability. De Dreu et al., (2007) and Loschelder and Trötschel (2010) demonstrated that tensions exist within members of negotiating groups (in-group) and these tensions can reflect in interactions with the external negotiating group. The tension within the negotiating team in Tetteh which led to withdrawal and apathy created the conducive environment for a suboptimal outcome for farmers. Again, negotiating as a group in Tetteh proved disadvantageous compared to individual negotiations in Quarshie. According to O'Faircheallaigh (2013), group cohesion is an important factor that determines outcomes in negotiations. Some respondents in Tetteh expressed the opinion that the negotiating team did not do a good job, they were of the view that if they negotiated individually, they would probably have had a higher amount. In Quarshie, while some managed to push for as much as 40% profit share and for fewer years, others accepted a lower share of 20% and also for longer durations, highlighting that significantly different results may be obtained in individual negotiations.

Well-being perception and agency: While the pursuit of a means of livelihood remained a primary concern in both cases, it is evident that notions of wellbeing were intricately linked to the perception that possession of property was an evidence of one's contributions or value in life. This extended to the desire to pass down such property to their children or ensure their children's education, setting them on a prosperous path for their future. Notably, factors like leisure activities, health insurance, personal security, or pension plans did not feature prominently in their concept of wellbeing.

Choice of investments: Choice of investments also affected overall outcomes for respondents. Evidence within Quarshie indicates wealth creation from shared arrangements, reflected in the construction of many new buildings, a hotel, a surge in private transportation like motorbikes and a general upsurge in economic activities. However, with limited knowledge of the transition into a money-based economy came the challenge of cash flow management. It was not uncommon to encounter a farmer who had used his compensation to construct buildings and other assets, only to express dissatisfaction with the newfound reality of having to buy food on a daily basis. A second aspect to this was inability of some farmers to manage alternative businesses, for example transportation and real estate businesses. It stands to reason that the inability to manage other businesses apart from farming was simply due to a lack of business acumen and exposure (Barrett et al., 2001).

Bulk funds management: Indeed, the shared proceeds often arrived as periodical income, enabling farmers to effectively manage these funds for investments in building projects or businesses. Instances of mismanagement and frivolous spending occurred mostly within the framework of outright lease arrangements with lumpsum payments. Actually, there existed a prevailing consensus within the farming community regarding the nature of money acquired from gold mining activities: it was perceived as volatile or "hot money" that tended to dissipate quickly if not promptly utilized. Reports indicated that individuals who did not swiftly put the money obtained from gold mining to use struggled to account for any meaningful investment. Ofosu and Sarpong (2022) had similar findings in their research. Again, this simply stemmed from inexperience in handling bulk money and lack of education in proper investment practices.

Limitations

One significant limitation of this study is the lack of collected Net Present Values (NPVs) specifically related to cocoa farms. Although we have thoroughly examined different aspects of cocoa farming, the absence of NPV data specifically tied to cocoa farms hampers our ability to fully evaluate the financial feasibility and long-term profitability of cocoa cultivation within the scope of this research in order to determine an optimal compensation value; a contribution which would have been valuable to the results.

Policy Recommendations

Established crop rates, regulations and societal norms certainly influenced the outcomes of compensation negotiations in both scenarios. Thus, when these established guides are insufficient or lacunas exist in the regulations, it leads to exploitation. It is therefore recommended that pre-negotiated rates, if necessary, should be realistic, taking into cognizance detailed land and farm characteristics and factors such as recommended by international and national best practice. Policies should also give specific guidelines on valuation methods to be used to avoid ambiguity.

It has been recommended that negotiation teams should be balanced. Our findings add to this call for state to ensure a well constituted negotiation team in every transaction. We go further to suggest that having an independent valuer who would negotiate on behalf of the farmers should be an inflexible, fixed condition for every negotiation. In order to avoid compromise, the valuer should be paid by the state. Further, to maintain an environment conducive to mining investment without compromising the rights and well-being of affected communities, it is imperative for the government to navigate such circumstances with sensitivity. Where there exists the difficult duality of government performing conflicting roles as both referees and stakeholders, an impartial third party, such as a non-governmental organization (NGO), would offer a more equitable platform for mediating disputes and introducing some balance in such negotiations. It could be considered that such negotiations do not have to always have a distributive lens, because it has been proven that an integrative approach of 'sharing the pie' would yield more beneficial outcomes.

In that vein, empirical evidence shows that share arrangement yielded much better outcomes for farmers compared to the compensation scheme which was replicated in outright lease arrangements. Negotiating for shared arrangement in farmland-mine conversions is therefore recommended. Likewise, having a periodic share of the mining proceeds instead of receiving a one-time payment appears to be a more advantageous and sustainable approach. Logistically, this might be achieved by establishing a mining fund for affected communities. Farmers would then be paid monthly or annually from this fund. Additionally, it is equally imperative that sound investment education should precede conversion of farmland and the payment of compensation. Post-conversion education has the challenge of falling on deaf ears when bulk sums have been paid to farmers, however, pre-conversion advice may have better success in preparing farmers to make sound investment decisions.

Conclusions

The conversions from cocoa farms to mining sites have sparked considerable concern due to, among other things, their effects on previous land users. The tenets of compensation are touted to bridge the gap between pre- and post-conversion. Howbeit, factors bordering on information and knowledge asymmetry, imbalances in negotiation team's composition, threats and intimidation, financial inadequacies, socio-economic status and perceptions influenced the outcomes of the negotiations. Though these were present in each case, an important divergence in the outcomes of the two communities studied was in the nature of financial arrangements reached. In outright leases and lumpsum payments the amounts were lower whereas share income arrangements amount compared favourably with LVD and industry best practice. Similarly, investments of proceeds from the latter appeared more beneficial than in the former. We conclude that benefit sharing and periodic payments holds promise of giving a better outcome for farmers, however, currently, this is not enshrined in law. Secondly, the heavy reliance on negotiations for equitable outcomes should be treated with caution. Lacunas within the law which allows for exploitation should be addressed and a stringent position on alternative livelihood education should be adopted. While government ought to protect the heavy investments put in by mining companies, it is definitely probable that the current state of low compensations can be improved with the exploration of different compensation models. The involvement of independent third parties, such as CSOs, to assist in such endeavours could be beneficial to help steer win-win outcomes for both parties.

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