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**Institutional Legitimacy, Cross-Border Trade and Institutional Voids: Insights from the
Cocoa Industry in Ghana**

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Abstract

In spite of a growing body of literature on market opportunism in emerging markets, it remains unclear how supply chain partners abuse the institutional voids emanating from weak markets and legal enforcement mechanisms. This study attempts to integrate the concept of ‘institutional voids’ with that of ‘opportunism in inter-firm relationship’ literature to examine how they create space and conditions for illegitimate activities to occur in a supply chain. Using insights from cocoa production and distribution in Ghana, we uncovered activities such as tampering, adjustment of weighing scales and smuggling as examples of illegitimate activities and abuses in the supply chain. The study revealed that these activities are manifestations of institutional voids arising from weak markets and legal enforcement mechanisms. An analysis of the supply chain partners’ activities illuminates our understanding of the underlying processes inherent in market opportunism. Taken together, the study demonstrates how smuggling and theft-to-smuggle have taken on new prominence as an escape response to the institutional voids in the country. The implications for future research are examined.

Keywords: Africa; Ghana; cocoa industry; cross-border trade; supply chain; trade.

1 Introduction

In the final third of the twentieth century, it became apparent that one of the most distinctive features of emerging economies is the existence of ‘institutional voids’ (Khanna and Palepu, 1999; Luo and Chung, 2013; North, 1990), referred to as the lack of or weak institutional facilities and regulations which support the well-functioning of an economy (Luo and Tung, 2007; see also Martin, Rieple, Chang, Boniface and Ahmed, 2015). In the subsequent years, a plethora of scholarly works has emerged on supply chain partnerships in emerging economies which articulates the ramifications of such voids and their ability to instigate partners’ opportunism (Liu, Luo, and Liu, 2009). In spite of a growing body of literature on opportunism in inter-firm relationships (Zhou and Xu, 2012) and supply chain risks in emerging economies (Liu et al., 2009), it remains unclear how supply chain partners abuse the institutional voids emanating from weak markets and legal enforcement mechanisms (see Luo and Chung, 2013; Zhou and Xu, 2012). Although some scholars have examined how partners curtail local supplier opportunism (Zhou and Xu, 2012), our understanding of how institutional voids create space for illegitimate activities to occur in the supply chain remains limited. Surprisingly enough, however, development studies and supply chain management scholars have remained silent on this important issue.

Against this backdrop, our purpose in this paper is to examine the processes and mechanisms through which institutional voids create space and conditions for illegitimate activities to occur in the supply chain. This issue is particularly important given that the governments’ ability to capture the full benefits of industrial activities is partly predicated on the ability to curtail illegitimate activities. We illustrate the theoretical arguments by focusing on the activities of the supply chain partners in the cocoa production and distribution networks in Ghana. We examine this issue in a specific context—namely, producer/farmer–buying firms/agents

channel partnership. Our focus on this specific relationship enables us to offer a more detailed analysis of the intricacies and dynamics through which illegitimate activities emerge to impact on partners. We make two key contributions to regional and development studies, operations strategy, economic geography and supply chain literatures. First, we combine the ‘institutional voids’ concept (Khanna and Palepu, 1999) with that of ‘opportunism in inter-firm relationships’ (Wathne and Heide, 2000; Zhou and Xu, 2012) to develop a novel perspective and framework of how such voids create conditions for illegal activities to occur in inter-firm relationships. Second, we provide unique insights into how the roles of agents manifest itself into opportunistic behaviour in inter-firm relationships. This goes a long way to fill the gaps in the current literature on supply chain opportunism (Tangpong, Hung and Ro, 2010).

The rest of this article is organised as follows. First, we review the literature on institutional voids and opportunism with the aim of developing a unified perspective on supply chain opportunism. We then set out the approaches to the data collection and analysis. This is followed by a presentation of the background of cocoa production and distribution system in the context of an emerging economy. This is followed by a discussion of our key findings. Finally, we set out the implications of our findings for theory and practice.

2 Institutional voids and inter-firm relationships: A integrative review

As indicated by Peng (2003); Zhou and Poppo, (2010) emerging markets are generally characterised by a lack of adequate disclosure, weak contract enforcement and weak governance regime. Many institutions such as courts and government departments are often characterised by a high degree of bureaucracy and inefficiency. In addition, market intermediaries such as financial analysts, investment bankers and venture capitalists who provide support for the function of the market are often non-existent or underdeveloped (Chung and Luo, 2008; Luo and Tung, 2007).

The absence of such market intermediaries makes it costly for firms to acquire necessary financial resources (Khanna and Palepu, 1999, 2006). A growing body of research suggests that unlike mature market economies, emerging economies are also characterised by regulatory interference from governments and limited access to credible information (Amankwah-Amoah and Debrah, 2017; Julian and Ofori-Dankwa, 2013; Luo, 2003; Luo and Chung, 2013; Ofori-Dankwa and Julian, 2013).

A critical review of the literature reveals that there are two conflicting views of the effects of institutional voids. The first school of thought argues that a lack of institutional facilities creates conditions for frugal innovation to occur while the harsh institutional environment creates conditions for low-cost and efficient producers to emerge to cater for the underserved markets (George, McGahan and Prabhu, 2012; Radjou, Prabhu and Ahuja, 2012). An important aspect of this view is that firms that are able to operate in such a harsh environment outperform rivals in an environment characterised by institutional voids (Lall, 1983). On the other hand, an emerging school of thought contends that institutional voids may create conditions for illegal activities to occur (see Wuyts and Geyskens, 2005). Opportunism provides another angle from which to view how voids can create the space for the dark side of inter-firm relationships to occur (Wathne and Heide, 2000). The notion of partner opportunism is rooted in the transaction cost economics literature (Williamson, 1975, 1985).

Opportunism in the supply chain can be defined as a situation where a partner along the chain engages in 'self-interest seeking with guile' at the expense of others (Williamson, 1975: 6). Guile can be an attempt to cheat, manipulate, 'mislead, distort, disguise, obfuscate, or otherwise confuse' (Williamson, 1985: 47). In contractual terms, opportunism can be seen as a process which leads to 'undersupply relative to an implicit or explicit contract' which often means one party to a

contract or transaction may take advantage of the voids in the marketplace ‘to supply lower levels of quality or output than was contracted for’ (Wathne and Heide, 2000: 48). The existence of institutional voids can create a space for parties along the supply chain to seek unilateral gains at the expense of other partners by manipulating, withholding and distorting information, shirking obligations and withdrawing from prior commitments (Handley and Benton, 2012; Luo, 2007). Indeed, such dysfunctional competitive behaviours are common in service industries such as insurance, transport and financial services. This often stems from one party along the supply chain holding better information or control function that enables the party to secure private gains. It has been suggested that opportunism has the potential to lead to inter-party conflicts which then undermine the basis for current and future supply chain collaborations (Luo, 2006).

Opportunism can seriously undermine trust within existing supply chain relations and for future collaboration (Wuyts and Geyskens, 2005; Kaufman, Wood and Theyel, 2000). Given the potentially devastating effects of opportunism, partners may deploy additional resources towards monitoring and controlling exchange partners’ behaviours (Wathne and Heide, 2000). In cases where, the ‘rule of law’ may lag behind societal approval of what is right or wrong, the law can be updated to reflect the modern realities but in many cases particularly in developing countries this is simply ignored. Some studies have suggested that the lack of market-supporting mechanisms often leads to reliance on informal institutions such as cultural values, attitudes and norms, historical traditions and ethnic ties as mechanisms to mitigate such risks (Acquaah,, 2007; Luo and Chung, 2013).

At another level, researchers have hinted that illegality may stem from the harsh institutional and regulatory environment such as bureaucracy, red tape and administrative delays (see Webb, Tihanyi, Ireland and Sirmon, 2009; Cuervo-Cazurra, 2008). This stream of work

suggests that for partners, lack of legal safeguards in the environment, for instance intellectual property rights, may create conditions for illegitimate activities to occur. In some cases, illegal activities may emerge to dominate and take on new dimensions in business transactions and interactions. Despite the growing body of research on institutional voids and inter-firm relationships, the issue of the mechanisms through which institutional voids create space and conditions for illegitimate activities in the supply chain remains underexplored. Thus, we seek to fill the lacuna in our understanding by focusing on cocoa supply chain partners in Ghana.

3 Research context

3.1 The cocoa industry in Ghana

Historically, Ghana has been regarded as one of the pioneers of African democracy with a resurgent economy (Amankwah-Amoah, 2016; Amankwah-Amoah and Debrah, 2010). In spite of numerous attempts to diversify the economy and the discovery of oil in recent years, the cocoa industry remains a central pillar in the country's economic development. Cocoa is the country's leading export and foreign exchange earner. Cocoa has been the dominant industry in Ghana since colonial days. The development of cocoa in the Gold Coast (Ghana) dates back to 1857 when seeds were introduced to Ghana from Surinam by Basel Missionaries who operated under the auspices of the Dutch government (Grossman-Green and Bayer, 2009). But cocoa cultivation was largely unsuccessful until 1879 when Tetteh Quarshie re-introduced seeds from Fernando Po and established a cocoa nursery in Manpong-Akwapim and the cultivation of cocoa thereafter flourished in Ghana.

In 1891 Ghana exported its first consignment of cocoa. Between 1911 and 1976 Ghana was the world's leading producer, contributing between 30- 40% of the world's total output

(Grossman-Green and Bayer, 2009). By the early 1960s, cocoa production began to decline due a sharp fall in world cocoa market prices and the government reduced the producer prices. Consequently many farmers stopped producing cocoa and by the late 1970s Cote d'Ivoire had overtaken Ghana as the world's leading producer and exporter of cocoa. By the early 1980s, the cocoa production had fallen from 591,000 tonnes in 1964 to 159,000 in 1983 (Kolavalli et al., 2012: 1). The decline in the industry threatened the sustainability as well as the quality of the Ghana produce. Ghana's cocoa sells at a premium in the international market because of its high quality hence Ghana's competitiveness on the international market is highly dependent upon maintaining and safeguarding the quality of its cocoa beans. To reverse the decline, the Ghana government with the support of the International Monetary Fund and World Bank initiated a cocoa sector stabilization programme under the Economic Recovery Programme in 1986. The stabilization programme included a substantial increase in producer prices and the supply of subsidised inputs to the cocoa farmers. The programme was managed by Ghana Cocoa Marketing Board (now COCOBOD) and it succeeded in turning around the fortunes of the industry (Kolavalli, Vigneri, Maamah and Poku, 2012). By 1990 cocoa production had risen to 300,000 tons (Grossman-Green and Bayer, 2009)

The resurgence in the industry can be attributed to the effective management of the sector by COCOBOD which plays a significant role in the cocoa supply chain in Ghana. It was established in 1939 by the colonial government as a Cocoa Marketing Board to set the producer price for farmers subject to government approval (Laan 1987) but over the years has acquired additional roles. COCOBOD is a significant player in the cocoa supply chain in Ghana. Its research and development arm –the Cocoa Research Institute is active in developing new pest resistant plants and new varieties of crop with early and higher yield. It supplies seedlings and

fertilizers to farmers and provides training to farmers on techniques for farm maintaining, inspecting and monitoring of crops (Grossman-Green and Bayer, 2009). The most significant shake-up of the supply chain system came in 1992 when the industry was liberalised and a multi-stakeholder system was introduced (Quarmin et al., 2014). Before liberalisation, only a subsidiary of COCOBOD could buy the produce from the farmers. This monopoly did not encourage efficiency and so the sector was opened up to competition. Now different buying companies and cooperatives compete fiercely in the sector. COCOBOD now plays coordinating and quality control roles.

The cocoa sector in Ghana is affected by both formal and informal institutions. The formal institutions include the laws, regulations and rules in the country in general and in the sector. They manifest themselves in terms of political decisions including the determination of producer price, administrative and political corruption in government Ministries and Departments responsible for the development of the cocoa sector and adversely impacting on the sector, in law enforcement agencies diminishing their ability to curtail crime. These issues affect the development and maintenance of physical infrastructure in the transportation sector and amenities in the rural areas. These amenities include the provision of hospitals, schools and public utilities such as water and electricity.

The post-independence period has seen both a decline in transport networks and deterioration of existing network. In particular the railways which played a significant role in freight has almost collapsed (Jedwab and Moradi, 2011; Porter, 2002). Hence logistics companies have to rely on road transport which is poor and mainly untarred. The roads are in such a deplorable state that plying them is almost impossible during the rainy season. Years of neglect due to economic mismanagement have led deterioration of both trunk and rural roads and this has adverse

consequences on the cocoa supply chain (Porter, 2002). Similarly, the lack of provision of amenities and the consequences of high fuel prices have resulted in rural poverty and mostly affecting farmers (Porter, 2002). In a weak or non-enforceable regulatory environment, political and administrative corruption have also contributed to the poor infrastructure and amenities in the cocoa producing areas as well as poverty which precipitates criminality in the supply chain. Such activities and behaviour severely threaten the quality of cocoa beans and the integrity of the supply chain. Corruption is pervasive, systemic and endemic in Ghana (Agbele, 2011). It is highly detrimental to the socio-economic development of the country in general and threatens the sustainability of the cocoa industry (Asare, 2012). Corruption permeates all the activities of the supply chain partners and relations between the partners.

A report Transparency (2011:1) noted that: 'petty corruption is persistent and there is evidence of forms of political corruption including looting of state assets...Sectors most affected by corruption include the police, political parties and public financial management'. Administrative corruption has undermined good governance and the rule of law (UNDP, 2013). Corruption weakens the authority of the law enforcement system including the judiciary and emboldens the unscrupulous to commit crimes (Agbele, 2011). In a nutshell, corruption creates an institutional void which can be exploited by the actors in the supply chain. This is possible because the informal institutions such as norms, culture and ethics face challenges in counteracting the negative consequences of the impact of the formal institutions. In an environment where there are corruptions, ethics, morality and norms tend to breakdown. We argue that the liberalised environment together with institutional void have created opportunities for some of the partners in the supply chain to abuse the system and to take advantage of others. The domestic chain of cocoa comprises a wide range of partners including farmers, input suppliers, cocoa buying companies

and their agents and the Ghana Cocoa Board. Figure 1 outlines the key players and complex processes inherent in the cocoa supply chain.

Insert Figure 1 about here

3.2 *Research design and data sources*

Given that the study sought to generate rather than test theory, we employed inductive design to help provide the in-depth understanding of the intricacies of the subject (Barratt, Choi and Li, 2011). Our approach was governed by the need to gain a better understanding of the intricate processes involved in moving produce from largely rural areas to market and the experiences of the supply chain partners. The underexplored nature of the issue under focus and the weak market-supporting mechanisms that exist in such countries, prompted us to adopt an inductive qualitative approach (Khanna and Palepu, 1999). To gain a more comprehensive picture of the nature of the supply chain and roles and effects of all partners' activities on others, we adopted the multiple-stage approach to data collection which entailed responses from the producers (farmers), logistics companies, buying agents and the COCOBOD all of whom are players in the cocoa supply chain. As shown in Table 1, key players were sampled for interviews including farmers, purchasing clerks (PCs), licensed buying-companies (LBCs) District Managers and the Commission Marketing Clerks (CMC). Each of these players was purposely selected because of their roles played in the chain that bring cocoa beans to the take-over point (that is, from the farm to the COCOBOD warehouse for subsequent local distribution to local manufacturers or for export).

Insert Table 1 about here

Our study was conducted in a dyadic way where the data is collected from the producers, buying organisations and other supply chain partners (Handley and Benton, 2012). In addition to this, logistics companies who are responsible for moving the produce to the buying organisations were also interviewed to help provide a better understanding of the nature of the supply chain and interactions between the parties. As such, representatives of each of the supply chain partners were interviewed to elicit their views on the effects of the institutional voids, opportunistic behaviours by partners and nature of inter-firm relationships. Sourcing our data from the multiple participants/partners helped to ensure the reliability of our findings (Jick, 1979). The multiple interactions of the informants helped in exploring this largely overlooked issue. They also helped us to gain a better understanding of the supply chain partners and their approaches in mitigating risks (Meredith, 1998; Barratt, Choi and Li, 2011).

3.3 Evidence/information Collection

We adopted a semi-structured interview approach for gathering evidence/information from the informants. This approach helped in providing the in-depth understanding of the effects of the formal and informal institutional environment on supply chain partners. All the informants were asked about how the harsh institutional environment (e.g. weak institutional facilities such as underdeveloped road and transport facilities, undeveloped financial transaction and support system, and weak and corrupt governance regime, etc.) has affected their activities and how they deal with environmental issues. In particular, the informants' experiences with regard to illegal activities such as smuggling, theft, bribery and corruption were also explored. Here we focused also on how such actions emerged, reasons for engaging in them and their overall effects. Following this, we also elicited their views on opportunistic behaviour, collaborative efforts and initiatives between the partners, how they have worked together, sources of tension and the nature

of their relationship with other partners. This approach helped in building some kind of an ‘event history database’ (Garud and Rappa, 1994). The fieldwork took place between January 2013 and December 2014. All interviews were handwritten and transcribed within a week of the interview. The semi-structured interviews typically lasted about an hour and the venues were workplaces for the workers and managers and farm villages/towns for the farmers.

3.4 Evidence Analysis

The evidence analysis replicated an inductive, grounded theory development process (Glaser and Strauss, 1967; Eisenhardt, 1989). Given that our evidence emerged from multiple sources, we adopted two main steps in its analysis. The first phase entailed building a story from the perspectives of each group of participants with regard to their ways of conducting the business, effects of institutional voids on the operations, inter-firm relationships, experiences of opportunism and their escape responses to institutional voids. After developing the narrative from each perspective, we began to compare and contrast the stories and linkages between them. During this stage, some informants were contacted again to help gain a better understanding of the issues. We used an iterative approach to evidence analysis, constantly moving back and forth between the literature and fieldwork evidence in an attempt to develop a theory (Glaser and Strauss, 1967). The within and cross-evidence analysis helped in developing how the pertinent issue unfolded to impact on participants. Eventually, we developed narratives which provide adequate insight with regard to responding and adapting to the ‘rules of the game’.

4 Findings

Our fieldwork evidence reveals that the institutional void pertaining to the cocoa supply chain gives birth to various actions and activities by the partners in the supply chain. These actions and activities are mainly illegitimate and criminal in nature. If unchecked these activities and actions

have the potential to undermine the sustainability of the cocoa supply chain in Ghana. These illegitimate activities and actions revolve around smuggling, theft, deceit, bribery and corruption. The fieldwork evidence highlights the dark side to the ties between the producers/farmer and buying companies. Below we explore these issues in detail thematically.

4.1 Smuggling as an escape response to institutional voids

For decades, global cocoa bean production has been dominated by small- and large-scale farmers in West Africa, a region which accounts for around 70% of the world's production (The Economist, 2007). Although Ghana and Côte d'Ivoire have been regarded as the main producers, the sector has been besieged by a range of problems stemming from the undeveloped institutional environment. Our fieldwork identified that smuggling has emerged as an escape response to institutional voids. The close geographical position between the two countries means that an increasing number of farmers are opting to smuggle their cocoa beans to neighbouring Cote d'Ivoire to sell for a number of reasons. One of the unintended consequences of the poor road network and infrastructure for cocoa transport has been the spike in smuggling as farmers closer to the border have opted to smuggle their produce to the Cote D'Ivoire. Some of these farmers are located close to the border and smuggling has emerged as a means of benefitting from the high prices in the neighbouring country. The producer price in Ghana is determined by the COCOBOD with government approval and it is usually less than what is paid in Cote D'Ivoire where price is not controlled.

Moreover, the currency in Cote d'Ivoire is CFA which is used by most Francophone West and Central African countries so is convertible in the open foreign exchange market whilst the Ghanaian currency Cedi is not. For many Ghanaian farmers smuggling the cocoa to the Cote d'Ivoire and sell it means that they can bring the CFA to Ghana and sell at the forex bureau and

get more Cedis. So there is a double advantage. First a higher price in Cote d'Ivoire and second more Cedis from the exchange of the CFA to Cedis. This shows that in spite of the existence of lower producer price in Ghana there is institutional void in stemming smuggling. In fact, in many instances the law enforcement agencies accept bribes and turn a blind eye to the illegal activity. As a farmer asserted:

'Smuggling is a common practice along the border. It has become part of life here and it is not looked upon because of the huge financial gain involved. We are able to smuggle the cocoa across the border through the bush'.

At the same time, the extremely poor road network connecting some villages to markets in Ghana relative to markets in Cote d'Ivoire often means that many farmers would rather smuggle their produce to the Ivory Coast. The main drivers appear to be the economic gains and opportunity to overcome the unpassable road network connecting them to buying depots within the country. A number of local farmers are compelled to smuggle their produce to the country in an attempt to obtain higher prices. As a result of poor road networks, farmers have to travel for hours to get their product to market. One farmer puts it this way:

'If we cannot get our beans to market here (Ghana)... then we have to move it through the woods across the border.'

In some cases, smuggling the beans to Cote d'Ivoire represents a shorter journey for the farmers and a cost-efficient option. One of the effects of undeveloped institutional and transport links has been the tendency of farmers to smuggle their produce to neighbouring countries as a means of earning a regular income in a timely manner, but also preventing their products from going bad and clearing their storage areas for the next harvest (The Graphic, 2014).

Insert Table 2 about here

One of the problems in transporting cocoa to depots for sale is that most of the road to centre are only accessible during the dry season, however, the often melt away or become unusable during the raining season. In 2014, around 200,000 bags of cocoa and foodstuff in the Western Region of Ghana were affected by the collapse of two steel bridges and bad roads, which led to delay of products to market and damaged to the produce (The Graphic, 2014). This not only delays products to market, but also slows down economic activities in the rural areas. Table 2 summaries the key findings. The above quotations and analysis of the empirical evidence indicate the desire of the farmers to exploit the institutional void. Smuggling has become a pervasive activity in the border villages and as the farmers are aware that that the law enforcement agencies will not prosecute them if caught it becomes a lucrative activity for them. There is no coercive element of the formal institutions to stop this illegal activity. The farmers perceive smuggling as fair because the state has neglected its duty to provide adequate infrastructure and amenities for the rural folks so they need as much money as possible to develop their own communities and to secure their future.

4.2 Theft-to-smuggle as an escape response to institutional voids

Our analysis also revealed that, given that cocoa is the major business at these cocoa-growing villages, the harvest season attracts the attention of most cocoa thieves and smugglers who visit the farms at night to steal and smuggle. Most farmers do not have any well-structured warehouses for storing cocoa. Most of them have built wooden sheds for drying the cocoa and the primary source for drying cocoa is sunlight. This means that the warehousing operations of these farmers are at the mercy of the weather and since most of their activities are done on a subsistence basis, unpredictable rains easily affect the cocoa in these sheds, especially when the farmers have left for their farms with their families. Coupled with the fact that the rainy season can make it very difficult

for them to dry the beans, due to the poor storage structures, heavy rains sometimes flood the cocoa beans away. The drying and storage of cocoa mostly takes place at the houses of these farmers who usually have no structured warehouses for storing the dried cocoa beans. Due to this, these farmers are exposed to all forms of theft. While they are able to control the incidence of theft during the day due to their constant presence at the cocoa sheds, the case is different at night, during which time thieves and robbers attack them. A farmer remarked that:

‘In the night, they slowly steal by cutting the thread beneath the sheds ... We do not have money to build fence or security system to protect our cocoa from robbers.’

Our data suggest that producers are often diagnosed as underweight. Over time, Ghana has enjoyed a relatively high premium due to its quality cocoa beans. Yet, there are lots of quality issues that threaten the sustainability of this premium status. A major threat is the issue of add-mixture where quality cocoa beans are sometimes mixed with poor-quality cocoa beans and/or other foreign materials. While it is known in the industry that cocoa from Cote d’Ivoire is of a relatively lower quality, some PCs buy cocoa from such countries and mix it up with that of Ghana for profit motives. As the manager at CMC depot asserts:

‘Well, some PCs buy cocoa from neighbouring countries due to the fluctuations of the currency (foreign exchange) in countries around Ghana. So where these PCs see a rise in the prices of cocoa in a particular country, then they will transport the cocoa there for trade. Especially, for farms on the border line, PCs easily go out and come into the country.’

Our analysis suggests that another dimension of this is theft-to-smuggle. While the use of third parties for the secondary evacuation of cocoa to the take-over point presents great opportunities to

most LBCs in managing enormous risks such as theft-to-smuggle, the smuggling of cocoa was revealed as a common occurrence in the cocoa industry. Smuggling of cocoa is also usually undertaken by armed robbers who attack transporters as they transport cocoa from the LBC depots to the take-over point; trucks are sometimes redirected from their intended destinations by armed robbers. There are also instances of theft by the truck operators that reduce the quantity en route. To throw more light on such occurrences, a district manager of an LBC narrated that:

‘There was a recent case of my company experiencing smuggling of cocoa during the transportation of cocoa from the district depot. These robbers sometimes have business with the CMC or other LBCs who sometimes conspire and plan such smuggling operations.’

The fieldwork uncovered the domestic cocoa chain is exposed to enormous risks, from the farmland to the take-over point. At the various stages in the chain, almost all the supply chain phases recorded various forms of risks. The most frequently occurring risks across all these actors include: spoilage, theft, shortages and poor quality. Largely due to inefficient transport systems such as poor transport infrastructure, cocoa trucks are often involved in accidents and breakdowns. The repair works often provides avenues for robbers to attack broken-down trucks. On this, a group of employees interviewed observed that:

‘Sometimes, it may not be that there has been any theft, but during the process of evacuation, if you are not careful you may overload the truck.’

The cocoa industry is well noted as an area prone to smuggling. There have been numerous cases of robbery as cocoa is being evacuated for onward export. This is worsened during cases of break-

downs where trucks must be packed along the streets for repair works. As the head of the centre puts it:

‘Because it is generally known that cocoa is cash, once cocoa is stacked on trucks and being dispatched, everybody’s eyes are on them and when it packs somewhere, robbers get to know about it quickly.’

Among the major actors in the domestic chain, LBCs bear many of these risks followed by the farmer, then the PC and finally the CMC. While the existence of risk in itself does not impact on the performance of a supply unless for the state of vulnerability, it is important to note that it does really present a major threat to the sustainability of that chain. It is only when a supply chain is vulnerable that a threat can impact on its performance. This does require that actors in the cocoa chain put in stringent measures to manage the risks that they face.

Insert Table 3 about here

While the challenges they face in managing such risks were not the focus of this paper, the interviews revealed that actors face a lot of difficulties in managing those risks. This implies that the chain players stand to improve on their competitiveness if these challenges are reduced. Often some produce also loses weight through theft. In addition, lack of or limited traceability of products from the farmer to export often means that such products are often mixed with legitimate ones and sold on the international market. Table 3 outlines illustrative quotes of these two key pillars.

4.3 Third-party opportunism

Our fieldwork indicates that the producers have been largely the victims of opportunism often due to their relatively low level of education and awareness of price changes. However, opportunism appears to occur in the various interactions (see Figure 2).

Insert Figure 2 about here

One of the main sources of opportunism stems from many farmers' inability to monitor buying companies which provides space and opportunity for self-interest-seeking behaviours. The producers have historically had difficulties monitoring the current market rate of the cocoa bean. This often leads to a situation where the buying companies are able to seize on this gap in knowledge and expertise to buy cocoa at below the recommended prices. As one farmer explained:

'The problem is that they are cheating us and depriving us the fruits of our labour.'

Interestingly, our analysis suggests that lack of quality information about current prices and inability to compare the prices in the farmers' local area with prices in other villages or cities has provided conditions for this to occur. This has created space for unscrupulous middlemen to take advantage of farmers and, in so doing, buying the cocoa beans below market rate. There is a growing realisation within wider society that the desire for self-enrichment at the expense of the producers has motivated some to engage in such behaviour. In 2007, the then Chief Executive of COCOBOD, Mr Isaac Osei noted that purchasing agents' attempt,

'to cash in on the ignorance or poverty of the innocent cocoa farmer is tantamount to jeopardizing government efforts at revamping the cocoa industry and making Ghana

regain her once enviable global status in cocoa production and export' (cited in GNA, 2007: nd)

On another occasion, this issue appears to stem from historical reliance of individuals within wider society to pay little or no attention to accurate measurement of such items. Farmers were quick to note that this, in tandem with a weak regulatory enforcement environment, has created conditions for such individuals to profiteer on the back of producers' labour.

4.4 Adjustment of weighing scales (manipulation by unscrupulous middlemen)

From the producers' perspective, another source of opportunism is the manipulation of scales (for measuring cocoa beans) used by unscrupulous purchasing agents/clerks. The situation has become increasingly prevalent as more corrupt individuals have injected themselves into the supply chain as buyers of cocoa beans. Some purchasing clerks or agents' mastery in the adjustment of weighing scales has made it very difficult for even experienced farmers to identify fake or incorrectly adjusted scales. This makes it difficult to detect and report instances fraud to the local authorities. As one farmer noted,

'You cannot tell whether they are stealing from you or not. The scales look genuine ... When I took my measurement at home it was ok but when I go to the centre they say it is underweight. Something fishy is going on there.'

This often means that something previously weighed as 64kg will be less and that the farmer would end up topping up to meet the requirement of the QCC. This is a situation where the purchasing clerks alter the scales for weighing the products in an attempt to make higher profits at the expense of farmers. As one farmer noted,

'I cannot continue to sell to them. They have been stealing my cocoa for five years. Every time I complained they say their scale is correct. I have to keep going there because it's too expensive to transport the cocoa to Kumasi (a major city).'

As a result of the falsification of the cocoa bean weighing scales, the income of farmers has been adversely affected. In some cases, farmers have lost more than half of their annual income. One farmer puts it this way,

'It was like a marriage before we found out that they were cheating on us ... they weigh the cocoa using modified scales.'

The lack of effective checks and unannounced checks at the LBCs often means that the problem is now widespread. Although the practice of adjusting weighing scales is illegal, the ineffective enforcement regime has often provided the space and opportunities for individuals and the Licensed Buying Company (LBC) to indulge in such acts. Although the COCOBOD set up a special taskforce to carry out checks on weighing scales in 2006, lack of skilled personnel and infrequency of inspections have meant that little progress has been made. The poor implementation of the strategy has left a void for illegalities to occur. Our fieldwork also indicates that, in an attempt to mitigate this fraud, the Ghana Standards Authority (GSA) has introduced certified weighing scales for buyers of cocoa beans. The lack of effective checks and balances within the supply chain by the COCOBOD and police has opened an avenue for the intermediaries to defraud largely uneducated and low-income farmers. One of the main reasons why this has become prominent is that people's tolerance limit for such opportunistic behaviour appears to have dropped drastically, largely due to improving education of farmers and general awareness of the problem. Nonetheless, the attempts made to eliminate this opportunism have been largely futile. Many

farmers have woken up to the increasing level of criminality and opportunism stemming from lack of trust. Because of the threat of opportunism, the small producers have been forced to deploy their scarce financial and human resources towards screening and monitoring the activities of partners along the supply chain. Another farmer offered a solution to the problem,

‘The basis of trust in this relationship has been undermined. The only way we can settle this is by having our own scales and witnesses at the buying depot.’

As a result, some farmers have purchased their own scales for purchasing purposes as well as for mitigating the risk of being defrauded at the buying centres. The upshot is that, by acquiring scales, some farmers are able to check the weight of the beans before transportation and upon arrival at the depot or the cocoa sheds for weighing and sale. From the Cocoa Purchasing Clerks interviewed, some suggested that adjusting of weighing scales might have been done to accommodate the loss in weight of ‘not be well dried’ cocoa beans at the time of purchase. It has been suggested that ‘cocoa beans that were not properly fermented and thoroughly dried apart from shrinking in size and losing weight, also developed a lot of defects’ (GNA, 2005: nd). One possible interpretation of this is that the weight can be adjusted to account of potential loss of weight. This has then become the norm as scales are adjusted in an attempt to maximise profit at the expense of the farmers. The weighing scales problem has dis-incentivised some farmers away from the profession and impacted their ability to reap the rewards for their labour. The lack of trust in the existing supply chain has prompted farmers to explore alternative avenues.

Our data suggest another angle from which to view the nature of the relationship between the farmers and buying companies. From the buying companies’ perspective, opportunism and illegitimate activities in the supply chain appear to stem from lack of skilled personnel and obsolete

expertise of existing employees. This also means that in a few cases farmers may actually benefit from incompetence of the buying clerk. The LBCs usually detect such incompetence only after checking the cocoa receipts from the PCs. Table 4 shows the three key dimensions and also provides illustrative evidence in these areas. In order to meet the quantity requirement, there are instances where some PCs mix the cocoa beans with other items such as poor-quality cocoa beans, etc. to make up for the required quantity per bag. The chief operating officer at one of the buying companies explained:

‘People complained that their cocoa has been stolen. We do not cheat farmers, there are unscrupulous buyers out there, they must be blamed not us.’

The adjustment of weighing scales by unscrupulous agents is merely a symptom of a poorly developed enforcement and transparency between agents and producers. Another executive of one of the buying companies summarised the implications of lack of trust between the supply chains:

‘I don't want to dismiss their (farmers) concerns. But it's not easy to work in an environment where we suspect each other of cheating ... it is not good for us and the farmers ... I feel we have to find a way to learn and rebuild trust.’

Based on the above line of reasoning, we propose a framework of illegitimate activities in supply chain management (see Figure 3).

Insert Figure 3 about here

5 Discussion and implications

The purpose of this paper was to examine the processes and mechanisms through which institutional voids create space and conditions for illegitimate activities to occur in the supply chain. We examined the issue in the context of cocoa producers and buying companies'/agents' relationship. Our works uncovered that smuggling and theft-to-smuggle have taken on new prominence as an escape response to the institutional voids in the country. In so doing, we shed light on how informal and formal institutional factors interact and jointly influence illegal activities by supply chain members. Our findings suggest that market intermediaries in the cocoa supply chain have abused the institutional voids through illegitimate actions such as tampering, adjustment of weighing scales and smuggling. These have often led to undervaluing of assets through adjustment of weighing scales. We argue that the deterioration in law and order makes it possible for actors to be involved in many of these activities. The bribery environment and the associated lack of adequate enforcement of the law the police and the judiciary emboldens the actors to engage in criminal activities as we have reported in the cocoa supply chain. It is possible to smuggle cocoa across the border because in many instances the Border Guards receive and solicit bribes from the smugglers and turn a blind eye to the practice. This sort of institutional void creates avenues for opportunistic behaviour by the actor. This is equally true of the lack of infrastructure e.g., poor roads make it difficult for transportation of the cocoa to the warehouse so the smugglers pay people to carry the cocoa manually cross the border to sell in the Cote d'Ivoire.

5.1 Contributions to theory and practice

The study makes two key contributions to the literature. First, by examining how supply chain opportunism and illegality are manifest, our study responds to the calls by operations management scholars to examine the dark sides of relational ties (Villena et al., 2011; Zhou et al., 2014).

Although prior research has examined opportunism in inter-firm relationships, the processes through which one party emerges to abuse institutional voids remains unclear. The existing stream of research, however, obscures rather than clarifies the issue and warrants further scholarly attention of institutional voids leading to illegitimate activities in the supply chain interactions. Our work moves beyond the existing literature by demonstrating how institutional voids can provide spaces for illegalities to emerge to affect and disrupt the operations of small-scale farmers/producers. Our study helps in enriching our understanding of how illegalities and risks can emerge from unusual sources in under-developed economies to affect supply chain activities. In addition, this study extends existing scholarly works by integrating supply chain literature (Braunscheidel and Suresh, 2009) and the institutional voids hypothesis (Luo and Tung, 2007) to demonstrate how voids create conditions for illegalities to occur.

From a practical standpoint, our findings indicate that skills upgrading of buying company clerks can help to update their knowledge as well as their ability to shrink waste through errors and mistakes. In addition, there is a need for an educational programme aimed at raising public awareness and adoption of accurate measurement as a means of overcoming the institutional void. In curtailing opportunism, one of the strategies adopted to overcome this institutional void is through education and awareness training of farmers to be able to detect and take advantage of price changes, as well as store their produce. Developing strong and reliable enforcement mechanisms is essential in mitigating illegalities in the supply chain. Our findings suggest that through a trust-based approach and long-term relationship with partners, opportunism by partners can be curtailed.

There is a need for greater traceability in the supply chain to the benefit of both farmers and buying companies. Indeed, information about the conditions under which the cocoa were

produced and transported would be useful to consumers. Government policy could emphasise on developing a more effective schemes to help identify the source of cocoa, farmers' adherence to standards, and certification. This can be an effective means for governments help ensure and improve cocoa safety.

5.2 Limitations and directions for future research

There are a number of limitations of the study. First, we focused on a single country with unique institutional conditions such as regulations, laws, culture and norms. These limit the generalisability of the findings to non-agricultural sectors but widely applicable to economic transactions in the non-formal sectors of economies in rural areas in developing countries. Second, we also focused on the cocoa industry with industry-specific factors such as competition, demand and industrial standards. But the findings are applicable to other agricultural commodities such as coffee and cashew nuts. But in general it is difficult to generalise the findings to other sectors. Taken together, these open a number of fruitful avenues for future research to seek cross-industry and cross-country data to assess the limitations of our conclusions.

Another logical step for future research would be to examine how partners in the supply chain can redeploy limited resources and expertise towards eliminating opportunism. Future research is needed to examine the antecedents to illegitimate activities by supply chain partners. Another promising avenue would be to examine the cascade effects of opportunism and whether opportunism by supply chain partners has a contagion effect as partners seek to mimic the actions of others. Future research can also examine opportunism from the perspective of producers in more than one country on factors that motivate them to engage in cross board supply chain opportunism.

One of the limitations of our study is that it focuses on a specific historical point in time in the history of the partners. Given that organisations/individuals change over time to adopt new routines and culture (Aldrich and Ruef, 2006), there is a need for future study that seeks to replicate our findings here. Such analysis would help to test the generalisability of the findings. Our work is a preliminary analysis of the issue which can then provide a basis for a more robust statistical analysis to be conducted. To conclude, we hope that this study helps in fostering a new discourse in this area.

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Table 1: List of informants

Informants	Number of informants interviewed	Documents
Farmers	85	<ul style="list-style-type: none"> Archival resources such as regulatory reviews, press articles and annual reports. Regulatory reviews. Archival resources such as unpublished firm histories, industry guides and reports. Government reports, industry reports, media reports, newspapers and local reports.
The Ghana Cocoa Board	21	
Purchasing agents PCs	20	
LBCs (District and Zonal Managers)	30	
CMC (Warehouse employees and Operations Managers)	26	
Total	182	

Table 2: Illustrative evidence of effects of smuggling as an escape response

Aspect	Exemplary quotations from the fieldwork
From buying companies' perspective	<p>"It is very difficult to get some of the farmers to stop smuggling and sell to us at reasonable prices..." (District manager, LBC)</p> <p>"We have had difficult time convincing farmers that it will be in the interest of their country to sell to us when they can obtain higher prices across the border." (District manager at another LBC)</p>
Smuggling across the border from producers' perspective	<p><i>"We cannot wait for road to improve before we sell our produce ... I paid some drivers to carry them across the border for me."</i> (A local farmer in western region)</p> <p><i>"Some of our friends have decided to send the cocoa across the border ... they think they can obtain higher prices."</i> (A group of leaders)</p>

Table 3: Illustrative evidence of smuggling and theft

Deliberate acts	Exemplary quotations from the fieldwork and observations
Thefts	<ul style="list-style-type: none"> <i>"We experience theft frequently. We don't catch them. Women usually steal cocoa in this village. Some steal and add to their own harvest. We leave it in God's care. Once we sleep, we sleep. We cannot carry the cocoa home."</i> (A farmer at the Apemso village)
Theft-to-smuggle across the border	<ul style="list-style-type: none"> <i>"When cocoa beans are being evacuated from the LBC district depots to the take-over point, they can be attacked by robbers and stolen to be sold on the black market or smuggled to Ivory Coast."</i> (District manager, LBC) <i>"We have caught some individuals who came to steal to smuggle ... they were paid to do this"</i> (Manager, LBC).

Table 4: Illustrative evidence and explanations for opportunism

Sources	Exemplary quotations and illustrations from the fieldwork
Lack of skilled personnel	<ul style="list-style-type: none"> • <i>“One major problem we face relates to the skills ... most of these PCs find it difficult to make the right adjustments to the scales to avoid possible quantity losses and some other PCs also lack proficiency in basic accounting and mathematics to an extent that computing the amount payable commensurate with the weight in kilos becomes a problem. In my experiences, a PC landed us into huge losses; they exploited him (PC) when they realised he did not have skills in the scaling and cost computation.”</i> (District manager, LBC Amajaro) • <i>“The primary issue is that most of these PCs lack the technical know-how to measure the weight of the cocoa with precision. Consequently, after the receipt of cocoa supplied by the PC, some of the bags may weigh above or below 64kg, which is COCOBOD’s standard weight per bag of cocoa.”</i> (District manager, LBC)
Lack of market-supporting facilities	<ul style="list-style-type: none"> • Excessive bureaucracy in dealing with purported cases of fraud often means that the practice continues even in the face of producers’ complaints. In the absence of a regulatory enforcement regime, the cocoa bean producers have been forced to rely on goodwill and trust of individuals and organisations as a means of gaining assurance.
Low-grade and high-quality mixture	<ul style="list-style-type: none"> • <i>“During the bagging of cocoa for instance, PCs sometimes put the poor-quality cocoa beans and other materials like beneath and then put quality beans on top just to get the required weight per bag of cocoa. At times during the grading of cocoa by the QCC officers, such acts are exposed.”</i> (LBC district manager)

Figure 1: The supply chain of the cocoa industry

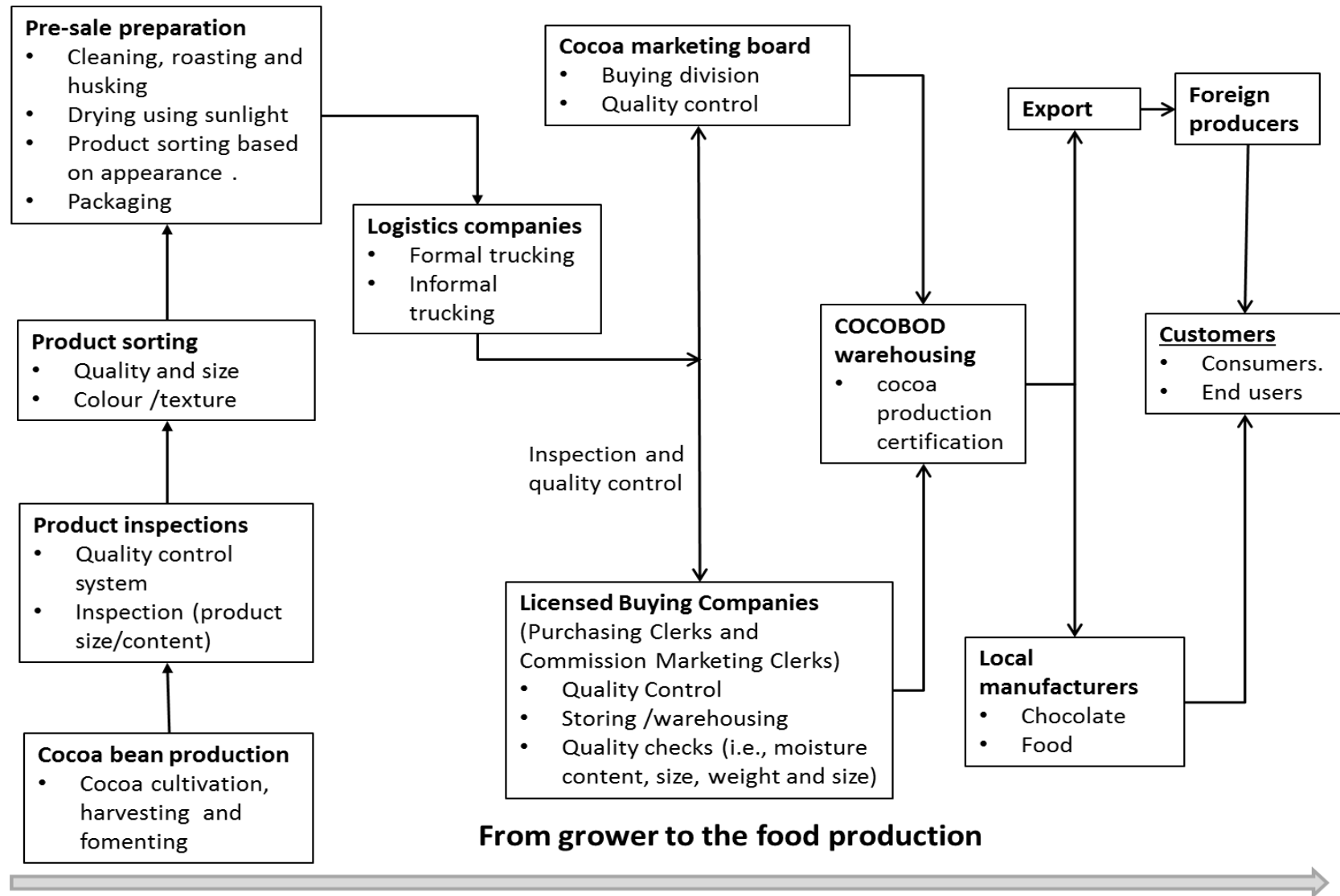


Figure 2: Inter-firm relationships and sources of opportunism.

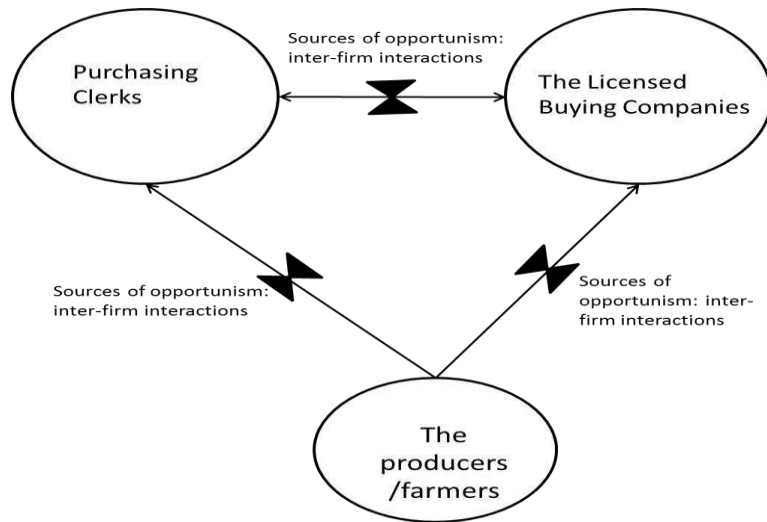


Figure 3: An integrated framework of illegitimate activities in supply chain

