Mapping sustainable production in Ghanaian cocoa

Report to Cadbury
Institute of Development Studies and the University of Ghana
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Disclaimer
This report presents findings from an independent study commissioned by Cadbury Schweppes, carried out jointly by researchers from the Institute of Development Studies, University of Sussex and the Department of Agricultural Economics and Agribusiness, University of Ghana. The authors alone are responsible for all information and views expressed in this report, which do not represent Cadbury.
Ghana is renowned for the quality of its cocoa production and the crop plays a major role in the economy in terms of employment, incomes and foreign exchange earnings. However, Ghana’s cocoa producers face many opportunities and challenges in sustaining their position in a changing global market. This report presents the findings of independent research carried out for Cadbury. It aims to enhance understanding of the position of Ghana’s cocoa farmers and their communities with respect to their livelihood in the context of a dynamic chocolate value chain. We hope the report contributes to addressing the future sustainability of cocoa production in Ghana and provides evidence for improving the livelihoods of the farmers.

One of the key findings of the study is that, due to several reasons, productivity in cocoa farming is low and declines as the farmers get older. Yet many of the youth, on whom viability of the sector depends, do not aspire to take up cocoa farming as a vocation and they look for better opportunities elsewhere. Cocoa farming needs support if it is to modernise, improve productivity, enhance incomes and reputation sufficiently to attract and retain the educated youth to ensure a sustainable future.

Chocolate manufacturers play a central role in the chocolate value chain given their central commercial position. The research team welcomes the Cadbury Cocoa Partnership as an important contribution to future sustainability of the sector. Involving partners across the value chain in supporting cocoa farmers and their communities helps to create a more inclusive and broad approach to addressing the challenges facing Ghana’s cocoa farmers. Extending such an initiative across cocoa producing countries helps in promoting cocoa farmers and their communities globally.

Foreword by David Croft, Conformance and Sustainability Director, Cadbury
This research by the Institute of Development Studies and the University of Ghana has provided a better understanding of the needs of cocoa farmers and their communities in Ghana. We incorporated the report’s findings into our thinking as we established the Cadbury Cocoa Partnership (CCP) – an investment programme in Ghana, worth £30 million over a ten-year period – aiming to transform the lives and livelihoods of more than half a million cocoa farmers. The CCP is part of £45 million global cocoa investment programme, covering India, Indonesia and the Caribbean. We believe this new type of social and business investment model, led from the grass roots, will create conditions to enable Ghanaian cocoa farmers to increase their productivity, improve their income and improve life in cocoa farming communities through community centred development.

Community empowerment is at the heart of our programme. Working with our partners in Ghana we are helping cocoa farming communities to set their vision and action plan for the future, and then to deliver that vision. Programmes will include providing microfinance to farmers, education and enterprise programmes, and delivering training and technical support for more efficient cocoa farming, in addition to developing new income streams for rural communities from new crops such as mangos or peppers, or even snail and fish farming. We will also continue existing programmes such as “4Well a Day”, which will have built over 850 wells by the end of 2008. We believe that the CCP will help Ghana meet its Millennium Development Goals and its goal of reaching middle income status by 2015. More importantly, it will make a real difference in rural communities, to farmers and their families, helping support their sustainable future.

Our sincere thanks to Stephanie Barrientos, the Institute of Development Studies and the University of Ghana for providing this thorough independent input into establishing our programme.
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Mapping Sustainable Production in Ghanaian Cocoa

EXECUTIVE SUMMARY

Cocoa plays a key role in the development of Ghanaian economy. Growth in cocoa output can contribute to overall economic prosperity and reduction of poverty. There are now an estimated 720,000 cocoa farmers, but they have low productivity and are highly vulnerable to poverty. To support sustainable expansion of the cocoa sector, Ghana needs to position itself in a chocolate confectionery industry that has undergone a significant process of change during the past decade.

The Ghana Cocoa Board (COCOBOD) has played a pivotal role in positioning Ghana within the global market, and ensuring the quality of its cocoa exports. However, the Ghanaian cocoa sector faces a number of challenges, both internal and external, that need to be addressed to ensure the future sustainability of its production and position in the global cocoa-chocolate market.

This is a brief summary of key findings from an independent research study carried out by a team from the Institute of Development Studies, University of Sussex and the Department of Agricultural Economics and Policy Analysis, University of Ghana. The study was commissioned by Cadbury, but all information and views in the report are those of the authors alone. The research is based on a case study, which is not statistically representative of the whole sector, but aims to contribute to a better understanding of the challenges to enhancing sustainable cocoa production in the context of a changing global chocolate-confectionery market.

The aim of the study was to examine the factors that make up sustainable production for cocoa farmers in Ghana, focusing on the socio-economic dimensions of sustainability. The study mapped the value chain linking chocolate manufacturers and processors to cocoa farmers in Ghana in order to assess:

- The criteria for sustainable production from the perspective of cocoa farmers.
- The incomes and social support currently going to cocoa farmers and the gap between current and sustainable production, suggesting factors that would enhance farmer livelihoods and contribute towards sustainable production.
- How chocolate manufacturers can support Ghana’s cocoa value chain, to assess the contributions they can make to improve sustainable production for small producers in Ghana.

The research combined two analytical approaches: (a) value chain mapping, which traces linkages from production through to final consumption of a good, including initial inputs, production, distribution, marketing, retailing and consumption; and (b) a stakeholder and livelihood approach, which examines income, production capacity and wider wellbeing now and in the future in the context of the wider social and institutional environment in which production takes place.

Consumer markets

Consumer markets for chocolate confectionery have also been rapidly changing. Markets are now more differentiated, with some consumers focusing on price, but others becoming more sensitive to factors such as quality and social and environmental processes of production for which they are prepared to pay a premium. Three market segments are emerging: (i) high-quality ‘niche’ chocolate (including single origin, Fairtrade and organic); (ii) mainstream quality chocolate; and (iii) bulk low-value chocolate. Aggregate growth in chocolate confectionery has averaged 2.5% per annum over the past decade. However, growth in the high-quality niche end of the market has been much higher, for example an average 22% annual growth rate in Fairtrade cocoa, albeit from a low base. Manufacturers and processors within the cocoa-chocolate value chain are having to be increasingly responsive to trends in this differentiated consumer market. This presents challenges for cocoa producers who need to respond to the requirements of processors and manufacturers.
Across the global cocoa-chocolate value chain, changes in the chocolate confectionery manufacture segment appear out of balance with those at the cocoa production end of the chain. There has been a growing concentration amongst manufacturers and processors, with a sharp decline in the number of specialized traders. Ten chocolate manufacturing companies now account for 43% of global sales. Manufacturers and processors have developed strategies to expand higher value activities, particularly in relation to the high-value niche and mainstream quality segments of the market. They have become attuned to growing consumer concerns with social and environmental issues. Many companies have introduced corporate social responsibility (CSR) initiatives, both in response to adverse media pressure (such as over the use of child labour in Lüderitz, Namibia), and increasing challenges to the future sustainability of the cocoa sector. There is an increasing demand from manufacturers for the sustainable availability of high-quality cocoa that is produced in accordance with international social and environmental standards. Production
In contrast production remains characterised by small-scale farming in many countries, particularly in Africa. In most producer countries dismantling of marketing boards under economic liberalisation has increased fragmentation within the sector. New supplier countries have expanded production, particularly in Asia. Over the past decade there has been a secular decline in prices, with average world market prices for cocoa 13% lower in 2005/6 than in 1999/2000. The share of final price of an average UK bar of milk chocolate going to cocoa farmers is estimated at 4%. There has also been a decline in overall quality of cocoa beans, through short-cutting of more costly production methods. This runs counter to the increased demand for high-quality cocoa beans.
Ghana has not been immune from international trends. However, it has benefited from the continued role of the Ghana Cocoa Board (CCOBOD), despite pressure to fully liberalise the sector in the 1980s and later. CCOBOD has provided support to farmers and coordinated the marketing of Ghanaian cocoa on international markets. This has helped to maintain the quality of Ghanaian cocoa which earns an international price premium. More importantly, Ghana’s high quality cocoa has meant that it has been able to sell more of its cocoa than other producer countries on forward markets (up to 70%). Crucially, this enables domestic producer prices to be set in a manner which protects farmers from seasonal volatility in the markets. Ghana is in a position to expand within the mainstream quality segment of the cocoa market. It is an important exporter of Fairtrade cocoa through Huwaei Kokoos Ltd and has potential to expand origin and organic cocoa production – niche markets where the highest premiums can be earned.
However, despite this, Ghana faces significant challenges in maintaining the future sustainability of its cocoa production. Threats to this potential capacity with productivity (output per hectare) at 40% of its estimated potential. It has an ageing farmer population, and faces an exodus of youth from the sector. The challenges it faces are both internal and external, in the context of a transforming global chocolate value chain. These include:
(i) Production challenges – expanding production and productivity to sustain farmer income and export growth within maintaining quality
(ii) Social challenges – meeting the ongoing expectations of farmers and their communities that currently suggest cocoa farming will not be a choice for future generations. This has been fuelled by rural-urban migration, the communications revolution and rising socio-economic expectations. This is coupled with greater social awareness by consumers in external markets leading to an increasing market expectation that cocoa is farmed without the worst forms of child labour and a rapid growth in the demand for fair-trade and organic chocolate
(iii) Reputation challenge – ensuring that Ghana sustains its high reputation in the cocoa industry in the face of mounting competitive and social challenges and is able to promote itself as a progressive producer.
best option, but not for their children. The study found that there are significant differences in productivity by age of farmers, with older farmers producing lower yields per acre than younger farmers. The profile of an ageing farmer population and lack of interest in cocoa farming by youth presents a major challenge to increasing growth and ensuring the future sustainability of the cocoa sector.

The study noted the importance of attracting youth and reducing the average age of farmers. Young and more educated persons were found to work on farms that were more productive than those of older farmers, and were more likely to introduce innovative production methods. Attracting and retaining young farmers into the sector is thus essential for the long-term sustainability and growth of the cocoa sector.

Many farmers interviewed did not want their children to work in the cocoa sector, and young people with some education were likely to leave cocoa for better paid work elsewhere. When focus groups members were asked why cocoa farming was such an undesirable vocation for their children, they answered that it was low-status work with little prospects, and that it was dangerous and backbreaking work without commensurate rewards.

The young people interviewed suggested they would be willing to undertake cocoa farming if conditions were better than those endured by their parents. Cocoa prices and profitability of cocoa production would also have to increase. An improvement in the support currently given to farmers, and a recognition of their contributions, would help young people think more highly about cocoa farming, and be at least willing to consider it as a livelihood activity.

The study yielded evidence that young people do not completely discount cocoa farming, but that their preferred model is of a commercialised enterprise that does not require as much physical labour, and does not have to be a full-time occupation. If these new systems of cocoa production can be explored and supported, cocoa will continue to feature in people’s aspirations, and will continue to promote local and national development.

A workshop held with key stakeholders identified key issues that need addressing. The following is a brief summary of the issues highlighted:

**Credit and Finance:**
- Enhanced credit facilities and Rural Banking infrastructure.

**Production:**
- More farmer education and access to fertiliser.
- Extended programme of mass production and distribution of cocoa hybrid seeds and seedlings to ensure availability to farmers, with continued research to develop these.
- Further investigation of the effectiveness of the mass-spraying programme and further evaluation of how to improve its implementation.
- A comprehensive study of extension services. Re-establishing Farmer Training Centres to enhance farmer participation and facilitate adoption of innovations to improve productivity and meet international quality standards.
- Support and better information to enhance crop diversification by cocoa farmers.

**Labour and Land:**
- More efficient use of labour through changing production methods and a reduction in the element of drudgery.
- Support for multi-stakeholder initiatives involving politicians and civil society organisations that work with farmers to address the use of child labour.
- In Ghana, a land reform project is currently underway. The issue of cocoa farm land should be given specific attention to see how systems of land tenure can open up access to land for cocoa farming.

**Market Access:**
- Enhance market access through improvements to roads, transport and communication systems in cocoa-growing regions.

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1. OVERVIEW OF PROJECT

1.1 Introduction

Ghana is the second largest exporter of cocoa in the world after Cote d’Ivoire. It has a reputation for producing some of the highest-quality cocoa anywhere. Cocoa plays a key role in the development of Ghanaian economy. It is the second largest export out of Ghana, with export earnings of US$911 million in 2006 from cocoa (GHEF 2008). The significant growth in cocoa output in recent years is contributing to the reduction of poverty in Ghana, and helping the country to achieve its Millennium Development Goals (MDGs) (Coulomb and Wilkinson 2003). To maintain this momentum, Ghana needs to sustain and expand its position within world cocoa markets.

However, there are a number of long-term challenges facing the Ghanaian cocoa sector. Prominent amongst these are:

Sustainability of production: Questions over the sustainability of cocoa production. This is required both to maintain output of the current consistent high quality, and to ensure farmers and their households a decent livelihood enabling them to continue farming effectively in the medium-to-long term. A particular challenge for the future is the low level of interest expressed by many young Ghanaians from cocoa-growing areas in becoming cocoa farmers.

Social standards: European and North American consumers are requiring rising social and environmental standards. These include attainment of internationally recognised labour standards (including elimination of the worst forms of child labour) and ensuring fairer participation by farmers in the cocoa value chain.

The history of Cadbury is steeped in a philanthropic tradition. The firm has a long history of sourcing cocoa from Ghana dating back to the early 1900s. It played an important part in the original development of the cocoa sector in the country. Cadbury sources all its cocoa for the UK market from Ghana and this accounts for approximately 10% of Ghana’s total cocoa exports. Ghana is seen as the main source of supply because its cocoa is of high quality; ensuring the flavour of Cadbury’s chocolate. Cadbury is actively engaged in corporate social responsibility (CSR) initiatives in the cocoa and confectionery sectors. It has a long record of providing social support to cocoa farmers and their communities in Ghana (Cadbury Schweppes CSR Report 2006). Its aim is to support the Ghanaian cocoa sector to attain sustainable production and meet the social standards increasingly demanded in northern markets.

Both the Ghanaian cocoa industry and Cadbury have a strong interest in promoting the development of a cocoa sector able to produce high-quality and differentiated cocoa. There are therefore mutual benefits to both parties in pursuing shared objectives of enhancing sustainable production.
1.2 Rims and objectives
This report presents findings from an independent study commissioned by Cadbury Schweppes, carried out jointly by researchers from the Institute of Development Studies, University of Sussex and the Department of Agricultural Economics and Agribusiness, University of Ghana.

The aim of the report is to examine the factors that make up sustainable production for cocoa farmers in Ghana, with a focus on the socio-economic dimensions of sustainability. Other studies have examined the institutional, economic, technical and environmental dimensions of the cocoa sector in more depth. The focus of this study was to map the global value chain linking chocolate manufacturers and processors to cocoa producers in Ghana in order to assess:

- The criteria for sustainable production from the perspective of cocoa farmers;
- The incomes and social support currently going to cocoa farmers and the gap between current and sustainable production, suggesting factors that would enhance farmer livelihoods and contribute towards sustainable production;
- How chocolate manufacturers can support Ghana’s cocoa value chain, to ascertain how they can help improve sustainable production for small producers in Ghana.

This study mapped the global value chain (with a focus on Cadbury chocolate and the UK market) in order to provide a holistic view of the position of Ghanaian cocoa farmers within the contemporary chocolate-confectionery sector. It is based on a case study, which is not statistically representative of the whole sector, but provides in-depth examination of the challenges to ensuring the sustainability of cocoa production. This provides the basis for recommendations relevant to both Cadbury Schweppes, and the wider industry, to help support the attainment of sustainable production and accepted social standards in Ghanaian cocoa.

1.3 Analytical framework
There is no single conceptual framework that allows us to capture all dimensions of this study. We therefore drew on a combination of approaches:

i. Global value chain analysis

These approaches combined facilitate an analysis of the relationships between the global chocolate industry, the national-level cocoa sector within Ghana, and district/farm-level production of cocoa. Combined with a mapping of the different actors involved in the global cocoa value chain to Ghana, it helped to assess interventions that could support the attainment of sustainable production and social standards.

1.3.1 Global value chain analysis
Value chain analysis traces all the linkages in the production process through to final consumption of a commodity, including initial inputs, production, distribution, manufacturing, retailing and consumption. It is premised on the perspective that these activities are increasingly undertaken by inter-connected commercial actors, rather than through more remote market operations. Global buyers are able to exert increasing governance of value chains through their dominant commercial position, without formal ownership of production or distribution. Value chain analysis can be extended to include the wider socio-economic actors linked to a chain, including government, trade bodies, trade unions, and civil society organisations.

Value chain analysis is an important component of this investigative process, and provides three key insights:

1. By mapping the accrual of value added through the chain, it provides a tool for assessing the changes and interventions necessary to provide sustainable incomes to Ghanaian cocoa farmers.

2. Producing high-quality cocoa requires interaction between chain participants and a drive to systematise efficiency and quality standards. These inter-linkages can be revealed through analysis of the value chain.

3. It facilitates assessment of the forms of chain governance required to meet these aspirations, including standard-setting, provision of extension services, decisions affecting incorporation of suppliers, and so on.

1.3.2 Sustainable production/livelihoods
Mapping the value chain through to producer level helps to capture the diverse ways in which cocoa production affects livelihoods of cocoa growers, and those further along the value chain, notably input suppliers, as well as so-called multiplier or knock-on effects through cocoa growers’ communities and local economies.

At its broadest, sustainable livelihoods are based on sustainable development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition has been adopted by the International Cocoa Organization (ICCO) Council, drawing on the Brundtland Commission in 1987. ICCO believes its members should be working collectively towards a world cocoa economy that is “economically stable, ecologically sound and socially acceptable” (ICCO CB/11/2 2007).

At a more specific level, a sustainable production/livelihoods approach involves:

- Resources: how people combine physical, natural, financial, human and social capital in their livelihood strategies;
- Institutions: organisations and social relations mediating access to those resources;
- Strategies: the choice of production and livelihood strategies;
- Context: variables such as trends, shocks, the broader economic and political factors that affect cocoa production and distribution.

The value of using a sustainable production/livelihoods lens is that it is comprehensive enough to allow us to develop a checklist of important issues for cocoa farmers and sketch out the way they link to each other. It recognises that, different strategies may be pursued simultaneously, including on- and off-farm work. Livelihood outcomes include:

- Greater income and wellbeing
- Reduced vulnerability to poverty
- Improved security
- More sustainable use of natural resource base

1.3.3 Linking value chain and sustainable livelihoods
Combined, these approaches draw attention to core influences and processes, emphasising multiple interactions between the various factors affecting livelihoods. Importantly, the approach allows us to examine how policies, institutions and environments interact to shape choice of strategies, which in turn shape outcomes and feedback into the asset base. It helps assess which actors (commercial, governmental and social) can help enhance sustainable production/livelihoods, and what interventions are likely to be more effective.

The value chain and sustainable livelihoods approaches can be linked by (a) highlighting farmer livelihoods as central to the long-term sustainability of the value chain itself; (b) exploring how commercial inter-linkages within the value chain could better enhance the sustainability of production; and (c) exploring how different governmental, commercial and social actors linked to the chain could better support farmers.
Mapping Sustainable Production in Ghanaian Cocoa

Context and trends in cocoa sector

2. CONTEXT AND TRENDS IN COCOA SECTOR

2.1 Consumer trends

Growth in demand for cocoa as measured by grindings of cocoa beans grew by an average 2–3% in the period 1996/7 to 2005/6, rising from 2.7 to 3.4 million tonnes in that period (ICCO MC/64 2006), and is expected to grow at an average rate of 2.4% during the 2006/7 and 2007/8 seasons (ICCO MC/93 2007). Cocoa butter, liquor and powder are used as ingredients in chocolate confectionery, food and drinks (as well as in personal care products and cosmetics on a small scale). In this study we have focused on chocolate confectionery alone.

The total consumption of chocolate confectionery was estimated to be 5,299,000 tonnes in 2004, with 29% consumed in the US and 10.5% in the UK (ICCO website June 2007, www.icco.org). The chocolate market is highly competitive globally, and companies are constantly striving for product innovation and novelty to differentiate themselves and their products. They are also compelled to respond to a market that is changing, and becoming increasingly differentiated. It is possible to identify three market segments:

(i) High-quality ‘niche’ chocolate: Within Japan, North America and Europe, demographic changes are taking place through the ageing of the population; smaller household composition with a higher adult ratio, and rising income inequality. Some consumers are becoming more health-conscious, and have greater access to information through the internet and long-haul travel about the origins of the food they buy. The ‘niche’ end of the chocolate market is expanding at a faster rate than average growth of consumption. For example, ‘fine or flavoured’ grades with a known origin were estimated to have grown by a third from 60,000 tonnes in 2000/1 to 80,000 tonnes in 2004/5. This figure is much higher (estimated 30,000 tonnes) when organic and Fairtrade chocolates are included (industry source).

(ii) Mainstream-quality chocolate: Below these niches, there is a growing consumer demand that brands should provide broader assurance of product quality that also satisfies health, environmental and social concerns.

(iii) Bulk low-value chocolate: At the other end of the spectrum there has been a growing volume market for cheaper lower-quality chocolate, both in Northern markets, but particularly in some developing countries such as China, India and Brazil. These tend to be cocoa powder based, manufactured with low-cost non-cocoa fats (Fold 2002, 2005). There is also some evidence that the shell of cocoa beans (normally regarded as a waste product whose presence is legally controlled in many markets) is being used in some low-value products.

2.2 Global value chain in chocolate and confectionery

The global cocoa value chain has undergone a rapid process of centralisation and integration over the past two decades. Most notable developments have been increased concentration and control at the retail end by supermarkets, and growing concentration amongst manufacturers and processors (grinders or processers), with a sharp decline in the number of specialised traders. This has contributed to increased integration of the cocoa value chain, which is depicted in Figure 2.1.
At the retail end of the chocolate value chain, there has been an increasing concentration of and dominance by supermarkets. This is part of a general trend in global supermarket expansion, where companies such as Unilever, Carrefour, Ahold and Tesco are now amongst the largest global multiple retailers. The trend to increased concentration in supermarket outlets has been pronounced in the UK where four supermarkets (Tesco, Asda, Unilever, and Sainsbury’s) now have 74% of the multiple grocery market. In the chocolate confectionery sector there has been a growth in supermarkets ‘own-brand’ labelled lines alongside those of traditional chocolate-manufacturing brands. Supermarkets are now key commercial players at the retail end, selling approximately 55% of all chocolate confectionery retail in Great Britain (trade source).

Supermarkets work through centralised distribution systems, in which they exercise increasing control over their suppliers in relation to price, promotional costs and marketing. Supermarkets are demanding traceability in their value chains to ensure food hygiene and quality standards are met, as well as standards related to environmental and social issues (Vorley 2004). But there has been increasing criticism from civil society organisations (non-governmental organisations [NGOs] and trade unions) that the commercial pressures supermarkets exert on suppliers in relation to price, costs and ordering have had adverse effects on smaller producers and workers at the lower end of the value chain (ActionAid 2005).

Concentration is also occurring on the manufacturing side of the industry. The top ten manufacturers account for 43% of world sales in 2005 (ICCO MC/10/6 2007). These companies include Nestlé, Ferrero, Cadbury Schweppes, Mars, Hennessy, Kraft Foods. Each company sells a range of brands, targeted at different sections of the consumer market. Increasingly in Europe their products are distributed through supermarkets, as they have come to dominate the food retail sector. A declining number of manufacturers, but including Cadbury Schweppes, are involved in some markets in both the processing (grinding) of cocoa beans as well as the production of chocolate. However there has been a trend to increasing outsourcing of processing to specialised processors by manufacturers (Fold 2002; 2005). Barry Callebaut is particularly prominent in this, mostly producing chocolate for moulding by the branded manufacturers such as Nestlé, Hennessy and Cadbury, as well as supplying to food groups such as Kraft, Kellogg and Unilever (Financial Times 13/9/07).

Over the past two decades, there has been a notable consolidation of the cocoa-processing industry. Four firms – Archer Daniels Midland (ADM), Cargill, Barry Callebaut, and Blommer – accounted for 42% of the market in 2003/4. Processors in particular have increased their upstream integration in many cocoa-producing countries. This has been more predominant where liberalisation led to the decline of state marketing boards in Ringhoffer countries and stabilisation funds in francophone countries. It has been less predominant in Ghana where the Ghana Cocoa Board (CCOBOD) retains control of the sector. Firmajeno and Olim are the only two international trading houses currently licensed to operate as buyers within Ghana. Grinding is also geographically concentrated. The Netherlands, UK and Cote d’Ivoire account for 50% of total global capacity (Kaplinsky 2004; Fold 2002, 2005). The local cocoa-grinding capacity in Ghana is increasing as ADM and Cargill bring plants on stream to join the 60,000 tonne-capacity plant operated by Barry Callebaut and the other smaller locally owned operations.

At the same time, the number of specialised cocoa traders, who used to maintain cocoa beans and products as a traded commodity on both the forward and spot markets, has declined. The number of specialised traders fell significantly from the 50 who operated in 1983, with some traders having expanded into grinding (predominantly ADM, Cargill and later Firmajeno). Consolidation in the cocoa-processing industry, combined with developments in chain logistics (bulk transportation, information technology and communications) and liberalisation within producer countries, has allowed companies to reduce the size of cocoa stocks they hold. As a result there has been a reduction in the amount of cocoa bought through forward purchases, with cocoa becoming more predominantly a spot market operation (CCOBOD 2002; 2005).

Processors thus provide a more centralised and integrated link between manufacturing and production within the cocoa value chain. The contemporary cocoa chain has been described as featuring ‘bi-polar governance’. One pole is composed of the concentrated group of processors, who increasingly have operations in both producing and consuming countries.
The second pole is composed of the large chocolate manufactures, although their operations along the chain are much more limited (Kaplinsky 2004; Fold 2002). Integration potentially facilitates responsiveness to changing consumer trends at the retail end of the cocoa-chocolate value chain, but may disadvantage cocoa producers in some countries.

### 2.3 Cocoa production

In contrast to the process of consolidation and integration amongst cocoa processors and chocolate manufacturers, production remains characterised by small-scale farming in many countries, particularly West Africa. In most producer countries (with the exception of Ghana), dismantling of marketing boards under liberalisation has increased fragmentation within the sector.

The three largest cocoa-producing countries are Côte d’Ivoire, Ghana and Indonesia, accounting for approximately 76% of total production. Côte d’Ivoire was the largest producer, exporting 46% of the world total and Ghana ranked second, exporting 17% of the total in 2004 (ICCO MC/9/2 2007). In both countries the cocoa sector is characterised by large-scale farming. In Ghana, there were estimated to be approximately 720,000 farmers in 2007 (COCOBOD sources), with an average productive cocoa area per household of approximately 5 acres (or 2 hectares). Indonesia is characterised by large-scale farming. Over the past five years, there has been an increase in production from smaller exporters in Latin America and Asia.

### Table 2.1: Net export of cocoa by top 5 countries, annual average 2000–5

<table>
<thead>
<tr>
<th>Country</th>
<th>Tonnes 000s</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Côte d’Ivoire</td>
<td>1294.69</td>
<td>46.15</td>
</tr>
<tr>
<td>Ghana</td>
<td>485.38</td>
<td>17.29</td>
</tr>
<tr>
<td>Indonesia</td>
<td>407.29</td>
<td>14.52</td>
</tr>
<tr>
<td>Nigeria</td>
<td>177.07</td>
<td>6.39</td>
</tr>
<tr>
<td>Cameroon</td>
<td>150.77</td>
<td>5.37</td>
</tr>
<tr>
<td>World Total</td>
<td>2805</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: ICCO MC/9/2 2007

During the post-Second World War period, the traditional cocoa-producing countries had marketing boards or stabilisation funds that controlled or supported the cocoa export sector. In the 1980s/90s, under pressure from the International Monetary Fund (IMF) and World Bank, many countries dismantled their boards and liberalised the cocoa sector. Ghana was the exception, with liberalisation only in the domestic market under the Ghana Cocoa Marketing Board (Shepherd and Onumah 1997).

Full liberalisation, farmer prices in most countries have thus been set by international markets. This has had two impacts. On the one hand, it has meant that farmers have been able to obtain a greater share in the free-on-board (fob) price (although some countries have set high levels of tax on cocoa growers). However, over the period since the mid-1980s, a downward trend in world prices, reaching a trough in the late 1990s. Although there was a partial recovery after 2000/1 (see Figure 2.2), in real terms average world market prices for cocoa were 12% lower in 2005/6 than in 1993/4 (ICCO MC/9/2 2007). On the other hand, without protection, farmers have been subject to greater price fluctuations, reflecting changes in international cocoa prices and variations in international values of dominant currency (ICCO MC/6/4 2006). In Ghana, COCOBOD has been able to protect farmers from annual seasonable price volatility, and ensure a price higher than the prevailing international average, but prices have been subject to annual variations and international trends.

"...Ghanaian cocoa has been able to command a premium of up to US$200 – 250 per tonne over the prevailing international cocoa price..."
work which when performed is likely to harm the health, safety or morals of the child (as determined by national authorities). In effect, whereas all activities in which the child might be involved (including those activities useful for the child’s total development such as normal household chores or light work on a family cocoa farm at the weekends, or attending school) may be classified as child work, not all forms of child work fall into the category classified as child labour.

Media exposure of the use of child labour in West African cocoa farming prompted the Harkin-Engel Protocol in the US (Tulane University 2007). This was agreed under the threat to introduce legislation to force the labelling of bars of chocolate in the US as being slave-free. A number of initiatives have since been set up in the cocoa sector to address the issue of child labour. These include the International Cocoa Initiative (ICI), which provides the basis for cooperation between the global chocolate industry, concerned politicians, members of the labour movement, and civil society actors engaged in the fight against child labour. Its mission is to oversee and sustain efforts to eliminate the worst forms of child labour and forced labour in the growing and processing of cocoa beans and their derivative products (www.cocoaassembly.org). Within Ghana, the Ministry of Manpower, Youth and Employment has developed a National Plan for the Elimination of Child Labour and is playing a key role in a collaborative programme with COCOCOBD and the industry on addressing labour issues – particularly child labour and forced adult labour – in Ghana’s cocoa production. This involves especially the commitment to design and implement ‘standards of public certification’ in the cocoa sector of Ghana. It has been decided that work under Ghana’s National Plan will be started with actions in the cocoa sector.

Monitoring and certification of labour standards including the use of child labour have proved challenging in large-scale manufacturing industries. Achieving this is a particular challenge in the cocoa sector where production is dominated by small-scale farming, with a long tradition in the use of family labour. Some observers believe that downpayment pressures on cocoa prices, and the rising cost of labour, contribute to the use of unpaid family labour (including children).

2.4.2 Fairtrade and organic chocolate

An increasing number of consumers have expressed concern for the conditions faced by farmers and their communities through the rapid growth of sales of organic and Fairtrade-certified chocolate. Both schemes set standards for production and distribution, but also provide a price premium to participating producers. Other certification schemes also exist, with less strict certification conditions, such as Rainforest Alliance. Whilst they are starting from a low base, in Europe and the US there has been a rapid growth in Fairtrade and organic chocolate, in contrast to slower growth in the conventional cocoa/chocolate market.

Definitions of organic production vary, but a general definition in the Codex Alimentarius is that ‘organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, productivity and biodiversity, biological diversity, and ecosystem stability, while producing food and fibre products using natural substances and farming methods that are safe for the environment and human health. This system of agriculture is founded on the principles of ecological health, biological diversity, and self-regulating cycles and systems’ (Codex Alimentarius 2006). During 2006–7 the premium for organic cocoa has on occasion gone as high as US$1,800 per tonne (industry source).

All organic cocoa production has to be certified, and the cocoa traceable back to the individual farm. Approximately 70% of certified organic cocoa beans are also Fairtrade-certified. The company Green & Black’s, acquired by Cadbury Schweppes in 2005, is the UK’s leading organic chocolate maker. It sources its cocoa from Belaia and the Dominican Republic, and in 2004 it had a turnover of £92.4 million (a growth rate of 65%).

2.4.3 Child labour

A prominent issue was the exposure of the use of child labour in West Africa in the UK in 2000 and US media in 2001 (particularly Cote d’Ivoire). This included allegations of the use of forced and bonded child labour and of children engaged in hazardous work. According to the International Labour Organisation (ILO), child labour refers to work that is (i) mentally, physically, socially and morally dangerous and harmful to children; and (ii) interferes with their schooling by depriving them of the opportunity to attend school, by obliging them to leave school prematurely, or by requiring them to attempt to combine school attendance with excessively long and heavy work. The worst forms of child labour (WFCL) as defined by ILO Convention 182 include: all forms of slavery or practices similar to slavery (the sale and trafficking of children, debt bondage and serfdom, forced or compulsory labour including recruitment for use in armed conflict); the use or offering of a child for prostitution and/or pornography; and illicit activities including the production and trafficking of drugs, as well as

Figure 2.2: Cocoa production and daily price (‘000 tonnes and $/tonne)


As a result of these trends, there is an intensified dual quality in cocoa production between:
(i) higher-quality cocoa based on origin and better production which commands a price premium as well as greater price stability; and (ii) lower-quality cocoa, with mixed quality of beans, based on lower cost and lower price (Fold 2005). This dual-quality production helps to service the differentiated consumer market, discussed above, based on high-quality niche, mainstream-quality and bulk low-value chocolate.

However, there is a particular challenge for the niche and mainstream-quality ranges. Global demand for cocoa is on average expanding at approximately 2–3% per annum, with growth being sustained by increased production of lower-quality beans. The rate of growth in demand, however, is much higher in the high-quality niche and mainstream-quality segments of the market. Therefore a potential disequilibrium is emerging in the supply and demand of quality cocoa beans. Ghana is in an unenviable position to help fill this gap, but has to ensure that it can expand its production of high-quality cocoa to do so.

2.4 Social dimensions of cocoa production

There has been a strong rise in consumer awareness of the socio-economic conditions of cocoa production since 2000. This has partly arisen in the context of changing consumer demographics and tastes discussed above. It has also partly been fuelled by civil society pressure on branded manufacturers. Consumption within the value chain has exposed broader brand names to intensified reputation risk if adverse media publicity highlights poor practices. Given a highly competitive and integrated chocolate confectionery sector, where small shifts in market share can affect stock price, larger and branded chocolate manufacturers are increasingly under the need to ensure at least minimum social and environmental standards are observed within their value chains. This has underpinned a rapid increase in CSR initiatives amongst confectionery manufacturers, and across the industry.

Global demand for cocoa is on average expanding at approximately 2.3% per annum...
Mapping Sustainable Production in Ghanaian Cocoa

3. CADBURY VALUE CHAIN

3.1 Company profile

Cadbury is one of the oldest and largest chocolate confectionery manufacturers. It is a multi-national company based in the UK serving a global market. Cadbury first opened in Birmingham selling cocoa and chocolate in 1824. It later merged with Schweppes in 1969. The company employs 50,000 employees globally, and had reported sales of £74 billion in 2006 (Cadbury Schweppes 2006b). It incorporates a number of well-known brands (including Cadbury, Häls and Bassetts). Cadbury sources a portion of its chocolate from specialist manufacturers such as Barry Callebaut, but also undertakes processing itself. Its global value chain is composed of some 40,000 direct suppliers, and 150 factories spread across the world.

Chocolate is only 40% of total business, and beverages another 40%.

Cadbury is positioned within the mainstream-quality chocolate segment of the consumer market. In the UK and other Commonwealth countries it differentiates itself from other brands through the specific flavour and quality of its chocolate. Source all its cocoa beans for these markets from Ghana helps to ensure quality. The company started sourcing from Ghana (then known as the Gold Coast) in 1908, and developed a long-standing commercial relationship with the country. Today, Ghana remains a key source of cocoa supply for the company.

Cadbury purchases most of its cocoa from Ghana through cocoa traders, but a small amount is purchased directly from the Cocoa Marketing Company (CMC) by Cadbury. The price Cadbury pays for its Ghanaian cocoa is relatively fixed, and is paid in cash immediately. The premium helps to maintain farmer prices, and has to be used to provide a social fund for community investment.

3.2 Cadbury value chain

During the process of restructuring within the chocolate confectionery sector globally, Cadbury has to date maintained a strong commercial relationship with Ghana. Cadbury thus controls the links in its value chain from COCOBOD through to the retail sector. Cadbury’s Dairy Milk (CDM) is one of Cadbury Schweppes’ main product lines. A CDM bar normally retails in supermarkets at £0.40 for a 40 gram bar (£1.69 for a large bar). It contains 23% cocoa sourced from Ghana, and the potential contribution of chocolate manufacturers and processors.

Table 2.2: Price premia in global cocoa markets (2007)

<table>
<thead>
<tr>
<th>Quality</th>
<th>Premium (US$ per tonne)</th>
<th>Main producers</th>
<th>Share of global cocoa market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>200-200</td>
<td>Ghana</td>
<td>17%</td>
</tr>
<tr>
<td>Organic</td>
<td>1,800</td>
<td>Belize, Dominican Republic, Tanzania</td>
<td>0.5%</td>
</tr>
<tr>
<td>Fairtrade</td>
<td>300</td>
<td>Dominican Republic, Ghana</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Fairtrade-labelled cocoa only represents approximately 0.2% of world cocoa. But it is also experiencing high rates of growth, with an annual average growth of 23% between 1996–2006 (ICCO/MC/2, 2001; ICCO/MC/200, 2007), in contrast to the conventional market. In 2005 the UK was the largest buyer in quantity purchased (2,328 tonnes) with Fairtrade cocoa representing 10.2% of market share of its cocoa consumption. The two largest exporters of Fairtrade cocoa are the Dominican Republic sourced from CONAGRODO (40% of total) and Ghana (45% of total) sourced from Kuapa Kokoo. Some European supermarkets have adopted ‘own-brand’ Fairtrade chocolate lines, particularly in the UK, which are sold alongside branded Fairtrade branded lines, and conventional branded chocolate ranges (Bamettos and Dolan 2006). In summary (see Table 2.2) there are a variety of price premia available to cocoa producers.

The ICCO is developing a programme of ‘Supply Chain Management for Total Quality Cocoa’. This includes all aspects of physical quality as well as ethical and environmental aspects of production (ICCO EX/19/2/9 2007). This raises issues of how to ensure quality standards are observed, and the need for traceability of cocoa to its origin to guarantee that total quality criteria have been met. Whistle standards and traceability are used in Fairtrade and organic production, they are only beginning to be considered within the mainstream conventional cocoa sector.

Larger-volume chocolate manufacturers have so far not gone down the Fairtrade-certified route, although some now sell organic and organic Fairtrade chocolate (including Green & Black’s owned by Cadbury Schweppes). However, the trend towards more socially and environmentally aware consumption in the middle and upper segments of the chocolate market has promoted the advance of corporate social responsibility amongst some larger-volume chocolate manufacturers. Commercially they are vulnerable to the risk of adverse publicity due to poor social conditions in producing countries. Greater concentration and integration within the cocoa value chain has facilitated their ability to target positive support on the producers or farmer integration schemes that supply them. A number of large chocolate manufacturers now report on their CSR initiatives, and participate in industry and multi-stakeholder alliances such as the International Cocoa Initiative (ICI) and the Sustainable Tree Crops Programme (STCP). Some are individually pursuing initiatives to support cocoa farmers in sourcing countries. A key challenge is how they can do this in a way that is effective in promoting longer-term sustainability of cocoa farmers that both ensures product quality required by the mainstream quality segment of the consumer market, and meets social and environmental standards.

Fairtrade has been defined as a trading partnership, based on dialogue, transparency and respect that seeks greater equity in international trade. By working with well organised co-operatives, it contributes to sustainable development by offering better trading conditions to, and securing the rights of, disadvantaged producers and workers – especially in the South (FINE 2002).

To acquire the Fairtrade Labelling Organisation (FLO) Fairtrade label, producers have to be certified as meeting FLO standards, which include free and fair-co operation, and ILO Conventions on conditions of work (including the use of child labour). Fairtrade guarantees producers a minimum price, plus a premium above market price if it rises over the minimum. Fairtrade-certified cocoa commands a premium of US$300 per tonne, and is sold at a minimum price of US$1,750 per tonne including the premium (ICCO CB/5/03/1 2005). The premium helps to maintain farmer prices, and has to be used to provide a social fund for community investment.

The functioning of the cocoa value chain within Ghana, and percentage of fob (free on board) price going to cocoa farmers is overseen by COCOBOD...
4. GHANA COCOA VALUE CHAIN

4.1 COCOBOD

Cocoa is the second largest export commodity of Ghana after gold, accounting for 52.2% of export earnings and 9.5% of GDP in 2006. Cocoa inputs in cocoa production are locally sourced, and because of the labour intensity of cocoa production, its importance to the economy is probably much greater than these summary figures suggest. Cocoa provides important support for the economic and social development of the rural sector, and plays a key role in the economic growth of the country.

COCOBOD, the Cocoa Development Board, is the government agency responsible for the regulation and promotion of the cocoa sector. It was founded to sell chocolate as an alternative to alcohol, and originally established a socially sustainable cocoa chain for its workers at its Bonsu site near Accra. Cadbury produces a regular CSR report, and is one of the few FTSE 100 companies listed on the London Stock Exchange to have a main board committee overseeing CSR (The Observer, 24/06/07). Building on its philanthropic tradition, Cadbury has a CSR programme within Ghana, which provides support for farmers and the wider cocoa sector. This includes:

- **Well-building programme**: ‘Ghana for the Source’ is a well-building programme, run since September 2000 with Kuapa Kokoo. Cadbury provides donations to a Trust Fund run by Kuapa, which oversees the building of wells within villages. It started working with WaterAid (London-based NGO) in 2004. The company, together with a number of employee initiatives and some individual donations, had provided €600,000 to the project by 2006, with further expansion planned.

- **Farmers’ newspaper**: The Cocoa Farmers’ Newspaper was established by Cadbury Schweppes in 2006. It had been recognised that there was a problem within the sector of poor information flows to farmers about good production practices. The concept behind the newspaper is to provide information pictorially, in cartoons which are easily understood by farmers of all literacy levels. The aim is to produce the paper twice a year, before the main crop and mid-crop. Each department of the Cocoa Research Institute of Ghana (CRI) – the main cocoa research institute – was allocated two pages to provide information on a topic and its activities. The first print in 2006 was 70,000 copies (5 per 9 farmers). The newspaper was funded by Cadbury, supplemented by advertising revenue and small contributions from some licensed buying companies (LBCs) who were acknowledged in the publication.

Earthshare

Cadbury also runs the Earthshare programme with Earthwatch, which is a 3-year research programme on the biodiversity on various types of cocoa farms. Cadbury’s international staff members are able to apply to visit the programme for two weeks at a time to participate in the research programme. Cadbury also supports a research and development programme in Ghana through a trust fund created by the late John Cadbury. This supports research on various topics to improve cocoa production in Ghana.

Cadbury participates in a number of other sector initiatives, including the cocoa research initiatives of BCCCI, the International Cocoa Initiative (ICI) programme working to address child labour and the Sustainable Tree Crop Programme (STCP), and Cadbury aims to continue developing its support for the Ghana cocoa sector.

As we have seen above, Ghana is an important source of quality cocoa for Cadbury, and helps to distinguish it as a brand in the mainstream-quality segment of the chocolate market. As demand for quality cocoa increases, Ghana could face a number of challenges in increasing its output, and maintaining the sustainability of its quality cocoa. Cadbury is in a position to support the Ghanaian cocoa sector in enhancing its longer-term economic, social and environmental sustainability. This study was commissioned to better inform that process.

3.3 Corporate social responsibility

Cadbury as a company has an embedded tradition of corporate philanthropy and producer support, dating back to its Quaker origins. It was founded to sell chocolate as an alternative to alcohol, and originally established a socially sustainable cocoa chain for its workers at its Bonsu site near Accra. Cadbury produces a regular CSR report, and is one of the few FTSE 100 companies listed on the London Stock Exchange to have a main board committee overseeing CSR (The Observer, 24/06/07). Building on its philanthropic tradition, Cadbury has a CSR programme within Ghana, which provides support for farmers and the wider cocoa sector. This includes:

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The proportion of the fob price going to farmers has increased over the years...

By 2005/06 the producer price paid by COCOBOD remained at just over 9,000,000 cedis per tonne, and the fob price paid to farmers had increased to 73% (industry sources). This amount is put aside before other actors in the market get their share based on their business costs. The proportion of the fob price going to farmers has been increased over the years from a low of 40% in 1983, when many farmers replaced cocoa trees with other more profitable crops. If the actual fob price falls below the projected price, the government absorbs the difference. When the actual price turns out to be above the projected price then there is a windfall, and a bonus payment is given to farmers at the end of the year. All initial and bonus payments are distributed by the LBCs, to those farmers who were paid by cheque by the individual LBCs.

Most processors and manufacturers of cocoa prefer beans of a similar size, as they are easier for processing. In Ghana, there are two crops. The main crop runs from October to May and the light crop runs from May to August. Light crop beans are smaller than the main crop beans. COCOBOD categorises bean size according to weight (see Box 4.1). The main crop, with beans weighing 1 g or more, constitutes 91%, other crops 5% of production. The light crop, which has a lower percentage fat content, is sold through special contracts, mainly to local processors. Domestic cocoa processors are able to negotiate a lower price then that of exported cocoa.

Box 4.1: COCOBOD bean size categories

| Main crop beans weighing 1 g each | 100 beans = 100 grams |
| Light crop beans weighing <1 g each | 100 beans = 100 grams |
| Small beans beans weighing <1 g each | 120 beans = 100 grams |
| Type 4 beans beans weighing <1 g each | 150 beans = 100 grams |
| Remnants | 250 beans = 100 grams |

COCOBOD is sending an increasing amount of cocoa in bulk shipments (not bags) to designated buyers. The key buyers that ship cocoa in bulk are RDM, Cadbury and Cargill. Bulk shipment is cheaper than bags, can be loaded and unloaded mechanically (using a large vacuum-type machine that deposits beans and collects them from the hold of a ship). This greatly reduces labour costs, but the beans have to be of an assured high quality before being loaded to ensure arrival in a similar good condition.

4.3 Licensed buying companies

A degree of competition has been introduced through the LBC system, with the aim of increasing efficiency in the value chain. Initially six LBCs, including PBC, were given licences. By 1997 this had increased to 19 LBCs, with 10 of them buying substantial quantities of cocoa. In 2006 there were 24 LBCs, with 36-18 estimated to be active. These included two international companies, Olam (which is Singapore-based) and Firmarco, a cocoa trading house based in the UK. Kupa Kokos is the only producers’ cooperative operating as an LBC, and is also the only Fairtrade-accredited LBC operating in Ghana. COCOBOD (Cocoa Sector Marketing Committee) recommends LBCs for licensing to COCOBOD, monitors their performance and recommends either renewal or withdrawal of licences.

Cocoa is purchased by LBCs under the auspices of COCOBOD. The Board raises money either internally or offshore for the purchase of cocoa. In 2005/2006, US$550 million were raised (at an interest rate of 5.5% above LIBOR) from an international consortium of banks for cocoa purchases and for 2006/2007 US$800 million has been raised for that purpose (COCOBOD Research Department). The monies are lent to the LBCs, at interest rates lower than the prevailing Ghana commercial rate, to pay farmers who sell their cocoa to them.

Cocoa farmers sell their cocoa to one of the LBCs operating in their area. The LBCs buy the cocoa at the local society buying sheds at village level, where the cocoa is weighed.

The cocoa is then moved to the larger District level sheds of LBCs, where the Quality Control Division (QCD) tests and seals the beans in sacks. The LBC is then responsible for organising the haulage of the cocoa to one of three Takeover Points (Kasse, Tema or Takoradi). After arrival, CMC pays the LBC. The LBC retains its margin, which has been reduced over the years from 12% to 8%. Given they operate on tight margins, LBCs do not normally pay a premium over and above the minimum price, even though that was one of the objectives of the liberalisation of the internal marketing of cocoa. However they may give a number of inducements to attract and retain farmers, such as credit facilities, extension services or gifts (such as boots or equipment). Nevertheless, some LBCs try to pay a bonus at the end of year to farmers in addition to any bonus paid by COCOBOD (Firmarco), which is an international company, can pay because of its higher efficiency and different financing structure. Kupa Kokos can pay a premium because of its Fairtrade advantage. It also provides community support (such as umbil) because of its connection to Fairtrade and the CSR activities of companies such as Cadbury Schweppes, PBC, which continues to be the largest LBC, has an obligation to buy everywhere and so buys from some of the more remote cocoa growing areas. It offers support to farmers including the repair of roads and bridges, provision of water and electricity poles. The LBCs are reliant on fast turnaround and cost efficiency to ensure their margins are realised; those unable to achieve this are likely to experience financial pressure.

LBCs face a number of constraints:

• Turnaround time to COCOBOD: LBCs face delays between buying cocoa from farmers and delivery to CMC. There were complaints from within the sector that COCOBOD would not allow cocoa into the Takeover Points until it had received the cocoa from the LBC or hauliers. The time between purchase of cocoa and time of surrender should be six weeks but it often took much longer.

• Cost of financing: COCOBOD advances seed money to LBCs for purchases. The money is obtained with a guarantee which also comes at a cost – increasing the cost of financing. Borrowing from the commercial banks would cost LIBOs 3%-plus other costs, so COCOBOD provides the lowest cost of financing at 19%. However, it could take up to 12 weeks to get money from CMC after surrendering cocoa at the Takeover Point. LBCs say that almost half of the margin could go on interest payments.

COCOBOD requires 250,000 tons of warehouse space for efficient handling of cocoa at the ports. The current inadequate warehouse space is posing a major constraint which COCOBOD is trying to address. The Board has put, up a 50,000 tonne capacity warehouse at Takoradi. In the meantime, LBCs often use vehicles as mobile warehouses waiting to get their cocoa into the port.

4.4 Quality assurance

COCOBOD oversees quality assurance through its Quality Control Division (QCD). QCD is involved in pre-buying activities, particularly training LBC staff and increasing awareness amongst farmers regarding quality issues. A separate section of COCOBOD used to be involved in the provision of extension services, but this role was passed over to the Ministry of Food and Agriculture (see next section). LBCs do initial quality checks when farmers deliver fermented and dried cocoa beans to them. LBCs can clean beans to remove bad beans and waste which raises the standard. Once LBCs are ready, they put in an application to QCD for a quality check. The QCD district officers do the next check, determine grades and then seal the bags. The cocoa is then ready for transport to one of the three Takeover Points. Here QCD does a further sample quality check prior to taking over control of the beans for storage and shipping. There are no foreign quality control officers in Ghana, the EU and US rely on QCD to do it. The QCD arranges shipment and documentation, and passes cocoa beans direct to the shipping agents. The first foreign quality control, if required, takes place at the destination.
Ghana mainly exports Grade 1 beans. Whilst there used to be only two grades, quality problems with purple beans (discussed below) led to the introduction by QCD two years ago of a multiple grade system.

The maintenance of quality cocoa exports has been one of the key advantages of Ghanaian cocoa in international markets. Quality attracts the price premium, and allows Ghana to sell more of its cocoa forward thus providing greater export stability and information on the likely revenue expected. On this basis COCOBOD is able to set the minimum producer price, protecting farmers from seasonal volatility.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Specification (i.e. % purple bean allowed)</th>
<th>Estimated % of exports, all beans including with PB</th>
<th>Estimated % of exports without PB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td>Up to 20% PB allowed</td>
<td>2%</td>
<td>98%</td>
</tr>
<tr>
<td>Grade 2</td>
<td>21–30% PB allowed</td>
<td>9%</td>
<td>91%</td>
</tr>
<tr>
<td>Grade 2 dot</td>
<td>31–40% PB allowed</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>Grade 3</td>
<td>41% plus PB</td>
<td>1%</td>
<td>99%</td>
</tr>
</tbody>
</table>

Note: PB = purple bean discussed in section 4.6 below.

Source: QCD Division, COCOBOD

One means of ensuring quality is through traceability. This exists in many other export crops, particularly fresh produce such as pineapples and mangos. Traceability has come about following liberalisation as larger monopoly buyers seek to enforce private sector standards over the produce they source (Dulan and Humphrey 2004; Kaplin and Morris 2003).

Traceability should ideally allow specified producers to be supported to meet designated standards, and receive a premium for the additional value added to the product as a result. However, in reality, the costs of traceability have generally been passed down the chain to producers. This has been facilitated by the increased concentration and dominance of retailers and branded manufacturers within global food and agricultural-value chains, who are able to dictate terms to their suppliers.

Traceability has not generally been used in cocoa production, except for designated lines of certified cocoa (organic, Fairtrade and single origin). There is a possibility this could change in the near future. IOCO has recently introduced a traceability pilot in Côte d’Ivoire to help combat declining cocoa quality, and support farmers to improve their production methods. COCOBOD has effectively long had a system internally which could be used for traceability. On every bag of cocoa beans sealed by QCD, there is a tag which identifies the village/location, purchasing clerk/LBC, or QCD Officer who passed the bag as being of acceptable quality, and the week of the season in which that cocoa was graded by QCD. COCOBOD knows via the society list of farmers virtually the individual farm where a bag was sourced. Up until now COCOBOD has kept this information to itself, with data contained on the identification tag kept at the Ghana end, and not shared with the buyers. Although buyers can see the tag, the information has no meaning for them.

However, this is changing. Some buyers are beginning to request traceability back to the grower and COCOBOD has had to respond to changes in the global market. In 2007, it engaged in a pilot project with Armajani Ghana, which also involved Cadbury Schweppes. The pilot specified 1500 tonnes to be passed through the chain on a traceability basis from the growers who initially sold to Armajani Ghana through to the ultimate users. This cocoa is being warehoused separately to keep it away from other cocoa beans, and to ensure it can be traced back from the end user to the farms of origin.

The idea in the long run is that it would be possible to insert a bar code on the bags when they are packed, so they can be scanned, with all the information contained in the bar code easily transferable for computerised monitoring. OMC’s charging Armajani Ghana and other participating companies an extra premium per tonne to cover the costs of providing traceability. Two-thirds of the premium is being passed back to the farmers involved (with a small deduction by the LBC), with COCOBOD retaining a portion to cover the costs of keeping the cocoa separately. If there are any problems/effects in the cocoa, in principle they can be traced back to the farmer. The premium will give the farmers an additional sum, even though as part of the pilot they have not committed to extra expense in cultivating their cocoa. The Japanese buyers of cocoa seem to be particularly interested in the concept of traceability. The pilot was initiated in early 2007 with plans to review it later in the year.

COCOBOD’s aim at this stage is to establish whether it is workable logically, and estimate the costs involved. In the long term it could be used to support and demonstrate that quality standards are met by designated farmers, allowing Ghana to take advantage of additional price premium in global markets. On the other hand, if other countries move rapidly to improve quality, traced through traceability, and/or introduce organic and Fairtrade standards, then Ghana might need to implement traceability in order to avoid slipping into the lower-price segments of the cocoa market. COCOBOD thus needs to consider what system of incentives will be required to achieve the traceability back to the grower which might become a requirement in the future. For example, it might be possible to introduce a multi-price system, in which producers of higher-quality cocoa (or perhaps conforming to other criteria) receive a ‘super grade’ premium for meeting certain standards, using traceability as a means of identifying those farmers (industry source). In contrast to other commodities/countries, where the costs of traceability have been passed down the value chain to fragmented suppliers, COCOBOD is in a good position to negotiate with big buyers, and capture some of the gains of improving quality (in both product and process standards) and implementing traceability. Therefore COCOBOD could be in a position to push up prices due to the increased costs of production, and could earn the premium for meeting certain standards, using traceability as a means of identifying those farmers (industry source).

In contrast to other commodities/countries, where the costs of traceability have been passed down the value chain to fragmented suppliers, COCOBOD is in a good position to negotiate with big buyers, and capture some of the gains of improving quality (in both product and process standards) and implementing traceability. Therefore COCOBOD could be in a position to push up prices due to the increased costs of production, and could earn the premium for meeting certain standards, using traceability as a means of identifying those farmers (industry source).

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Ghana has also long been at the forefront of Fairtrade exports in West Africa through Kuapa Kokoa. However, Ghana has not until very recently begun to move into organic production. It could also better promote quality Ghanaian cocoa within the Origin segment of the niche market. As avenues COCOBOD could be developing further if it is to better position itself in the rapidly growing niche market.

• Reputation challenge: ensuring that Ghana sustains its high reputation in the cocoa industry in the face of the combination of mounting competitive and social challenges. Insofar as a price premium exists in substantial volumes, Ghana is the lead producer of high-quality cocoa in the world. It accounts for 17% of global trade and most of this is for a higher-quality product. But, as in the case of many other food products, the final market is fragmenting rapidly, with a growing number of niche segments, which yield higher margins. These niche markets are characterised by two major attributes. In the first case, they are very demanding of standards and this requires traceability, almost always to the individual crop of an individual farm. Second, as Starbucks has found to its cost, in the coffee industry the extent to which standards are being met is subject to public scrutiny and sometimes poorly investigated 'splash journalism'. Hence producers are required to rigorously determine and implement standards throughout the value chain. This creates greater vulnerability and even Fairtrade producers are vulnerable to exposure in the press for poor practices (The Guardian 03/06/01, Financial Times 03/06/01). Therefore, even socially progressive producer cooperatives which aspire to high standards are potentially vulnerable if they are unable to ensure traceability to the farm level. As producer cooperatives in other countries have found to their cost, only one single press exposé of poor practice can damage the reputation of their producers as a whole.

Ghana has not until very recently begun to move into organic production. It could also better promote quality Ghanaian cocoa within the Origin segment of the niche market. As avenues COCOBOD needs to develop further if it is to better position itself in the rapidly growing niche market. The highest premiums are for cocoa that combine fair-trade and organic certification, and are identifiable by origin, all of which Ghana is well positioned to exploit.

4.6 External challenges

As consumer markets for chocolate confectionery become more diversified between niche, middle- and low-range bulk cocoa beans, quality allows Ghana to be positioned in the mainstream-quality and niche ends, where growth is higher and rewards can be greater. However, in a rapidly changing international market Ghana faces a number of challenges in sustaining its position. These challenges include:

• Production challenges: expanding production and productivity to meet export growth whilst maintaining quality. The quality of its cocoa allows Ghana to be positioned in the middle and upper ranges of the market. However, it needs to expand output if it is to meet expanding demand and maintain cocoa as a key source of export earnings. Currently it faces a significant production constraint. The availability of labour in which there is sufficient forest canopy cover is limited, and therefore extending production areas is not a real option, unless farmers could be encouraged to replant once-used cocoa lands, preferably with a hybrid variety. However, productivity in the Ghanaian cocoa sector is low compared to other countries. Average cocoa yields in Ghana are currently estimated at 400 kg per hectare, and it is thought that this could be increased to 1,000 kg per hectare. Therefore it should be possible to increase output substantially to meet demand. The key is to do this in a way that ensures quality, sustainable production and meets the aspirations of current and future farmers.

• Quality challenges: ensuring quality levels required by external markets are maintained in the face of counter pressures. Maintaining quality in the face of a changing commercial environment represents a significant challenge. Three years ago COCOBOD received increasing complaints from buyers over purple beans. This occurs when there is an insufficient fermentation period of the harvested beans. Purple bean is not classified as a defect in terms of the purchase contract between CMC and its buyers, but higher numbers of purple beans increases the sourness note in the final chocolate, and more sugar may be needed to compensate, making it undesirable to cocoa processors and manufacturers. Farmers and LBCs attribute declining fermentation to poor prices and tight margins. QCD is providing information and education to farmers to increase awareness of the issue, and the need to address it. If farmers ferment properly that would reduce the levels of purple beans. Introducing systems of traceability could help to address this, but only if costs are not transferred to farmers and they receive incentives to ensure quality.

• Social challenges: meeting the social requirements of external consumers for cocoa that is produced without the worst forms of child labour or the use of forced labour and filling niche demand for Fairtrade and organic cocoa.

Within the past decade Ghana has been affected by the growing concern amongst cocoa-consuming countries, cocoa buyers and international organisations about labour standards within farming and the unacceptable use of child labour in cocoa-producing countries. The signing of the Harkin-Engel Protocol in 2001 called for governments of cocoa-producing countries to establish certification programmes that would document the state of child labour in their cocoa-growing areas. In response, Ghana’s Ministry of Manpower, Youth and Employment (MMYE) prepared the National Plan for the Elimination of Child Labour in Cocoa and in April 2007 published a report of a pilot study made available on COCOBOD’s website and has initiated studies to identify sources, types and periods of labour needs in Ghana’s cocoa production.

Average cocoa yields in Ghana are currently estimated at 400 kg per hectare, and it is thought that this could be increased to 1,000 kg per hectare.
5. Sustainable Production in Ghana: Cocoa Sector Case Study

We have examined the external context and global value chain in which cocoa is exported from Ghana. In this section, mapping is taken down to the producer level. The aim is to examine the factors that constitute sustainable production for cocoa farmers in Ghana to help assess:

- criteria for sustainable production from the perspective of cocoa farmers;
- incomes and social support currently going to cocoa farmers and the gap between current and sustainable production.

5.1 Overview of Cocoa Production within Ghana

COCOBOD has demarcated the cocoa-growing areas in Ghana into 7 “cocoa regions” (Eastern, Ashanti, Brong-Ahafo, Central, Volta, Western North and Western South) comprising 67 “cocoa districts.” This is more for convenience of its operations than for any economic reason. However, it is worth noting the historical antecedents of the cocoa regions. Cocoa production began in the Eastern Region, moved to the Ashanti Region, then to Brong-Ahafo Region, on to the Central and Volta Regions and later to the Western Region. The cocoa regions and districts may not necessarily coincide with the national administrative regions and districts of the country. Cocoa production in Ghana is confined more to the forest belt of the country where the vegetation has relatively high humidity and rainfall is adequate. Cocoa cultivation is a smallholder enterprise involving about 700,000 farmers.

The Western Region is seen as the last frontier for cocoa in Ghana because the soils there are not suitable for long-term cocoa production. Initially, the virgin forests guaranteed high yields, but over time yields have declined and farmers have been striving to move to new forest lands. The move to the Western Region is therefore seen as unsustainable.

Cocoa farm ownership should be differentiated from cocoa farm operation. The farm owner may not necessarily be the farm operator. A cocoa farm may be operated by the owner (male or female) of the farm or a caretaker (usually male) who works on behalf of the owner. The owner-farmers may be indigenes or migrants in the cocoa-producing areas, who use family land or purchase land from local chiefs or individuals to cultivate cocoa.

Even though a few women farmers purchase land on their own to cultivate cocoa, most of them initially work together with their spouses to cultivate the cocoa farms, and at maturity they are given their own portions to operate. Women may also own cocoa farms through inheritance. Caretakers, on the other hand, are usually migrant farmers (even though some indigenes are also caretakers) who contract matured cocoa farms to operate on behalf of the farm owners under well-defined terms, which may be abusa, or abunu systems.

Cocoa farm owners usually engage caretakers because of old age or ownership of multiple farms or engagement in non-farm activities and they do the supervision. The caretakers stay on the farm, most of the time with their families. Under the abusa system where the caretaker assumes responsibility for a farm already established, the owner takes two parts and the caretaker takes one part of the output sold.
5.2 Case study methodology

5.2.1 Sampling procedure

The sample frame for the survey used a purposive and multi-stage sampling procedure to select cocoa regions, and then random sampling to select districts within the cocoa-growing regions, and finally farm households.

The seven cocoa regions in Ghana (Ashanti, Brong-Ahafo, Central, Eastern, Volta, Western North and Western South) were classified in terms of production levels as (a) high, (b) medium, and (c) low, and then three of them purposively selected. By cluster, the Western North and Western South are high-production regions; the Ashanti and Brong-Ahafo Regions are medium-production areas, and the Eastern and Central Regions are low-production areas. The Volta Region was not considered because of its low level of cocoa production. An initial demographic analysis undertaken by the team from the University of Ghana found that Brong-Ahafo and Ashanti Regions could be considered as homogeneous, and the Volta Region was selected for study. The Eastern and Central Regions were also found to be broadly similar and the Eastern Region was selected for study. Of the two high cocoa-growing regions, Western North and Western South, Western South was selected for study on the basis of its relatively better road infrastructure and therefore accessibility to markets compared to the Western North. Following the selection, the three cocoa-growing areas in Ghana sampled were:

Region 1 Western South
Region 2 Ashanti
Region 3 Eastern

Using similar cocoa production-based indicators (high and low outputs) as well as good road access to markets within each of the selected regions, two districts each were selected per region. The selection of the communities within the districts was random but guided by the fact that some communities have received support from Cadbury CSR and community support activities. These communities, which have either (a) a well-provided by Cadbury, or (b) a link to ICI pilot projects relating to child labour, or both, were eliminated from the sample. The aim in this project was to capture a picture of production where no CSR initiatives were undertaken in order to assess prevailing conditions under which cocoa farmers normally produce (although in future a separate comparative study could then examine the differences in communities that have benefited from CSR). Again, the selection of the communities was guided by a listing of LBCs who source their purchases from these communities and have a listing of them and a list of farmers who sell to these LBCs. The major LBCs were the Produce Buying Company (FBC) which buys about 40% of Ghana’s cocoa annually, and Kupaa Kikolo, whose annual purchase is about 10% per annum.

5.2.2 Study areas

Following the sampling procedure explained above, a total of 12 communities were selected for field data collection, which was conducted during the months of October and November 2006. The sampled districts and communities are summarised in Table 5.1.

Table 5.1: Sampled cocoa districts and communities for field data collection

<table>
<thead>
<tr>
<th>Region</th>
<th>Districts</th>
<th>Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashanti</td>
<td>New Edubiase</td>
<td>Menang</td>
</tr>
<tr>
<td></td>
<td>Agona Mampong</td>
<td>Biromtase</td>
</tr>
<tr>
<td></td>
<td>Western South</td>
<td>Kete Kyekyewre</td>
</tr>
<tr>
<td></td>
<td>Dunkwa</td>
<td>Nsuaem</td>
</tr>
<tr>
<td></td>
<td>Eastern</td>
<td>Akim Oda</td>
</tr>
<tr>
<td></td>
<td>Akim Tafo</td>
<td>Amansie</td>
</tr>
<tr>
<td></td>
<td>Western North</td>
<td>Duruase</td>
</tr>
<tr>
<td></td>
<td>Western South</td>
<td>Mofram</td>
</tr>
<tr>
<td></td>
<td>Manso Amenfi</td>
<td>Akim Nkwanta</td>
</tr>
</tbody>
</table>

5.2.3 Sample size

Within each community, the target was 50 randomly selected farm operator households, making a total of 100 farm operator households per district. The farm operator households comprised a mix of owner and caretaker farmers, and the person interviewed was the head of that household. Ultilin each community, 10 farm workers were randomly selected and interviewed, for a total of 60 farm workers. There were no targets set for the number of children to be interviewed, as they were not a major focus of the research. The target and actual sample size for the research is indicated in Table 5.2. It should be noted that this study was not able to capture a large enough number of respondents to be a statistically representative sample of the cocoa sector, which would have required a larger project.

Table 5.2: Target and actual returns of respondents

<table>
<thead>
<tr>
<th>Cocoa region</th>
<th>Cocoa district selected</th>
<th>Household (farm operator)</th>
<th>Adult workers</th>
<th>Children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Target</td>
<td>Actual</td>
<td>Target</td>
<td>Actual</td>
</tr>
<tr>
<td>Ashanti</td>
<td>New Edubiase</td>
<td>50</td>
<td>37</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Agona Mampong</td>
<td>50</td>
<td>37</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>District Total</td>
<td>100</td>
<td>74</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Western South</td>
<td>50</td>
<td>29</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Eastern</td>
<td>50</td>
<td>39</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>District Total</td>
<td>100</td>
<td>68</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Grand Total</td>
<td>300</td>
<td>237</td>
<td>60</td>
</tr>
</tbody>
</table>
5.2.4 Research instruments

Data for the study were collected from both primary and secondary sources. Two main instruments for data collection were used in this research. The first instrument was a structured household survey that comprised (a) a farm operator household survey, (b) an adult farm labourer (worker) survey, and (c) a child labour survey. The second instrument was qualitative and involved (a) focus group discussions (FGDs) including key informant interviews, (b) in-depth interviews of selected household members, and (c) oral life histories. Different questionnaires were developed, pre-tested, reviewed and finalised for the data collection exercise, including:

1. Farm operator questionnaire
2. Child questionnaire
3. Adult worker questionnaire
4. Community questionnaire (key informants)
5. Focus group discussion guide
6. Oral life history guide

The team of researchers undertook initial reconnaissance/preparatory visits to all the selected districts and communities before the start of the field exercise. Enumerators were recruited from Graduate/Research Assistants from the University of Ghana and trained for the field exercise. The enumerators, together with the team of researchers, administered the questionnaires in each of the communities.

In each community there were six FGDs structured as follows:

- Owner operators (male and female) 
- Owner operators (male and female) aged 40+ (one group)
- Caretaker operators
- Caretaker operators aged 40+ (one group)
- Women owner operators only
- Youth (male and female) 

Hence there were a total of 12 FGDs with women, 12 FGDs with the youth, and 45 FGDs with owner operators and caretaker operators. The key informants of each community were engaged in a discussion to answer the community questionnaire, so there were 12 such interviews. There were a total of 24 life histories or 4 per district.

The key informant interviews, focus group discussions and life history accounts were recorded on audio tape recorder, which were later, transcribed and analysed.

5.3 Profile of study districts/communities

5.3.1 Socio-economic profile

The cocoa farm household questionnaire had responses from a total of 217 owner operators and caretaker operators. The mean age for all respondents was 51 years. However, the mean age for males (50 years) was relatively lower than that for the females (55 years).

**Table 5.3: Educational level of household head**

<table>
<thead>
<tr>
<th>Educational attainment</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>162</td>
<td>74.7</td>
</tr>
<tr>
<td>Post-basic</td>
<td>25</td>
<td>11.5</td>
</tr>
<tr>
<td>Uneducated</td>
<td>28</td>
<td>12.9</td>
</tr>
<tr>
<td>Post-basic</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>100.0</td>
</tr>
</tbody>
</table>

In the study, 77% of the respondents were male, 23% female. The distribution of the sexes by cocoa district is shown in Figure 5.1. The largest proportion of women respondents was 43% in the Agona Mampong district, followed by New Tafo district with 33%. The lowest proportion of women representation is in the Mfantsimina district in the Western South cocoa region with 9%. Most of the respondents (79%) were married.

Examining the educational levels of the respondents, it was found that most (75%) had basic (primary and junior secondary school) education. The proportion of respondents who had post-basic (secondary, vocational or tertiary level) education was 12% (Table 5.3).
Of the 215 respondents who indicated their main activity, 86% were owner operators with only 10% being caretaker operators (Figure 5.2). There were slightly more females that male owner operators, while there were more male caretaker operators (23%) than female caretaker operators (4%). The proportion of waged farm workers was only 1% of the respondents.

By cocoa district, more than 75% of respondents in all the districts visited were owner operators. The largest proportion of owner operators in the sample was in the Akim Oda district (93%), while the lowest was 75%, in the Afiga Mampong district. The highest proportion (66%) of caretaker operators in the sample was in the Mango Amenfi district.

The average household size of the respondents was seven (7). The maximum household size in the sample was eighteen (18) and the minimum, one (1). The modal household size for both owner and caretaker operators was 4-6. The maximum household size (18) occurred with the owner operators. Comparatively there were more household members in owner-operated households than in caretaker operator households. Table 5.4a summarises the household size by main activity of head of household and by cocoa region and Table 5.4b summarises it by cocoa district.

The study helped to highlight the migration status of cocoa farmers. Figure 5.3 summarises the aggregate characteristics of the respondents in terms of their migration status. In general, the proportion of migrants (46%) compares favourably with that of indigenes (54%). About 36% of the respondents had migrated from outside the region in which they currently reside.

Figure 5.3: Migration status of respondents (summary statistics)

Figure 5.4 presents the sex distribution of respondents by migration status. Of the male respondents, 54% had migrated from somewhere else to their present locations, compared with 20% of females. This is not unexpected since males tend to move more often from one place to another to work.

Figure 5.4: Migration status of respondents by sex

---

### Table 5.4a: Distribution of household size by cocoa region

<table>
<thead>
<tr>
<th>Household size by ranges (persons)</th>
<th>Region</th>
<th>1-3</th>
<th>4-6</th>
<th>7-9</th>
<th>10 and above</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashanti</td>
<td>10 (13.5%)</td>
<td>33 (44.6%)</td>
<td>25 (33.8%)</td>
<td>6 (8.1%)</td>
<td>74 (100%)</td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td>35 (21.6%)</td>
<td>25 (15.4%)</td>
<td>29 (16.9%)</td>
<td>4 (2.4%)</td>
<td>69 (100%)</td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td>9 (12.0%)</td>
<td>31 (41.3%)</td>
<td>21 (28.0%)</td>
<td>14 (18.7%)</td>
<td>75 (100%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>34 (15.7%)</td>
<td>89 (41.0%)</td>
<td>63 (29.0%)</td>
<td>31 (14.3%)</td>
<td>217 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

### Table 5.4b: Distribution of household size by cocoa district

<table>
<thead>
<tr>
<th>Household size in ranges</th>
<th>District</th>
<th>1-3</th>
<th>4-6</th>
<th>7-9</th>
<th>&gt;10</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afiga Mampong</td>
<td>5 (13.5%)</td>
<td>21 (55.6%)</td>
<td>7 (18.9%)</td>
<td>4 (10.8%)</td>
<td>37 (100%)</td>
<td></td>
</tr>
<tr>
<td>New Edubiase</td>
<td>5 (13.5%)</td>
<td>12 (32.4%)</td>
<td>18 (48.6%)</td>
<td>2 (5.4%)</td>
<td>37 (100%)</td>
<td></td>
</tr>
<tr>
<td>Akim Oda</td>
<td>6 (20.7%)</td>
<td>13 (44.6%)</td>
<td>5 (17.2%)</td>
<td>5 (17.2%)</td>
<td>29 (100%)</td>
<td></td>
</tr>
<tr>
<td>New Tano</td>
<td>9 (23.1%)</td>
<td>12 (30.8%)</td>
<td>12 (30.8%)</td>
<td>6 (15.4%)</td>
<td>39 (100%)</td>
<td></td>
</tr>
<tr>
<td>Dunkwa</td>
<td>5 (12.2%)</td>
<td>17 (40.5%)</td>
<td>11 (26.8%)</td>
<td>8 (19.5%)</td>
<td>41 (100%)</td>
<td></td>
</tr>
<tr>
<td>Mango Amenfi</td>
<td>4 (8.1%)</td>
<td>14 (26.4%)</td>
<td>16 (31.4%)</td>
<td>6 (11.8%)</td>
<td>34 (100%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>34 (15.7%)</td>
<td>89 (41.0%)</td>
<td>63 (29.0%)</td>
<td>31 (14.3%)</td>
<td>217 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

The study helped to highlight the migration status of cocoa farmers. Figure 5.3 summarises the aggregate characteristics of the respondents in terms of their migration status. In general, the proportion of migrants (46%) compares favourably with that of indigenes (54%). About 36% of the respondents had migrated from outside the region in which they currently reside.

Figure 5.3: Migration status of respondents (summary statistics)

Figure 5.4 presents the sex distribution of respondents by migration status. Of the male respondents, 54% had migrated from somewhere else to their present locations, compared with 20% of females. This is not unexpected since males tend to move more often from one place to another to work.

Figure 5.4: Migration status of respondents by sex
5.4 Production/productivity and income of cocoa farmers in the study area

Cocoa farmers derive the major part of their income from the cocoa farm. Therefore the livelihood of the household of the cocoa farmer largely depends upon how well his or her cocoa farm is doing. In this section, information is provided on the size of cocoa farms, production levels, land and labour productivity and incomes of the cocoa farm operators interviewed. First, some indicators of cocoa farmer well-being (wellfare) and cocoa production performance in the sampled data are discussed. Cocoa farmer performance indicators include net income from cocoa (or net total household income including cocoa) and farm productivity and welfare indicators of total household expenditures or per capita household expenditures. This is followed by an analysis of the factors that underpin the well-being and performance of the cocoa farmers.

Table 5.5: Cocoa farm size by district (acres)\(^1\)

<table>
<thead>
<tr>
<th>District</th>
<th>1.0–3.0</th>
<th>3.01–6.0</th>
<th>6.01–9.0</th>
<th>9.01–12.0</th>
<th>12.0</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agona Mampong</td>
<td>9 (21.0%)</td>
<td>34 (44.9%)</td>
<td>6 (16.7%)</td>
<td>2 (5.6%)</td>
<td>3 (8.3%)</td>
<td>36 (100.0%)</td>
</tr>
<tr>
<td>New Edubiase</td>
<td>3 (8.6%)</td>
<td>11 (24.4%)</td>
<td>7 (16.7%)</td>
<td>5 (12.8%)</td>
<td>9 (22.2%)</td>
<td>35 (100.0%)</td>
</tr>
<tr>
<td>Akim Oda</td>
<td>3 (11.1%)</td>
<td>8 (29.6%)</td>
<td>6 (22.2%)</td>
<td>2 (7.4%)</td>
<td>8 (29.6%)</td>
<td>27 (100.0%)</td>
</tr>
<tr>
<td>New Tafo</td>
<td>3 (7.9%)</td>
<td>13 (34.2%)</td>
<td>8 (21.1%)</td>
<td>2 (5.3%)</td>
<td>12 (31.6%)</td>
<td>38 (100.0%)</td>
</tr>
<tr>
<td>Dunkwa</td>
<td>4 (9.8%)</td>
<td>9 (22.0%)</td>
<td>8 (19.5%)</td>
<td>5 (12.2%)</td>
<td>15 (36.6%)</td>
<td>41 (100.0%)</td>
</tr>
<tr>
<td>Manso Amenfi</td>
<td>4 (12.9%)</td>
<td>7 (22.6%)</td>
<td>4 (12.9%)</td>
<td>4 (12.9%)</td>
<td>12 (38.7%)</td>
<td>31 (100.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>26 (12.5%)</td>
<td>66 (30.8%)</td>
<td>39 (18.8%)</td>
<td>20 (9.6%)</td>
<td>59 (28.4%)</td>
<td>208 (100.0%)</td>
</tr>
</tbody>
</table>

There were two clusters of farm size in the sample – those of 3–6 acres (1.4-2.7 ha), which typifies the smallholder nature of Ghanaian cocoa farming, and those of more than 12 acres (5.5 ha), representing larger types of farm. However, in the Western Region (Dunkwa and Manso Amenfi) where availability of land had been better than in other regions most of the farms were more than 12 acres in size (Table 5.5). The small farm sizes in Ghana may be due to cocoa establishment arrangements where sometimes the farm is split into two between the landowner and the caretaker. Another reason is the inheritance system where a farm may be bequeathed to siblings and they decide to share and operate farms separately.

Table 5.6: Cocoa output by district, 2005/06 season

<table>
<thead>
<tr>
<th>District</th>
<th>1.0</th>
<th>1.01–2.0</th>
<th>2.01–3.0</th>
<th>3.01–4.0</th>
<th>&gt;4.00</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agona Mampong</td>
<td>10 (24.5%)</td>
<td>7 (17.1%)</td>
<td>6 (15.8%)</td>
<td>3 (8.3%)</td>
<td>29 (70.0%)</td>
<td></td>
</tr>
<tr>
<td>New Edubiase</td>
<td>8 (24.2%)</td>
<td>9 (26.5%)</td>
<td>2 (6.3%)</td>
<td>2 (6.3%)</td>
<td>20 (59.4%)</td>
<td></td>
</tr>
<tr>
<td>Akim Oda</td>
<td>10 (26.3%)</td>
<td>9 (24.3%)</td>
<td>4 (10.8%)</td>
<td>0 (%)</td>
<td>23 (61.9%)</td>
<td></td>
</tr>
<tr>
<td>New Tafo</td>
<td>12 (26.0%)</td>
<td>7 (15.2%)</td>
<td>4 (9.2%)</td>
<td>1 (2.2%)</td>
<td>25 (55.3%)</td>
<td></td>
</tr>
<tr>
<td>Dunkwa</td>
<td>6 (15.8%)</td>
<td>13 (35.1%)</td>
<td>6 (16.2%)</td>
<td>3 (8.3%)</td>
<td>28 (73.7%)</td>
<td></td>
</tr>
<tr>
<td>Manso Amenfi</td>
<td>2 (5.2%)</td>
<td>11 (29.5%)</td>
<td>7 (18.4%)</td>
<td>4 (10.8%)</td>
<td>25 (65.6%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>51 (21.3%)</td>
<td>55 (23.7%)</td>
<td>34 (20.9%)</td>
<td>18 (8.0%)</td>
<td>165 (70.0%)</td>
<td></td>
</tr>
</tbody>
</table>

About one-quarter of the farms in the surveyed area registered cocoa output of less than 6 bags, 23.2% had 5-10 bags, 12.8% had 10-15 bags, and 15.2% had 15-20 bags during the 2005/2006 seasons.

\(^{1}\) Field work undertaken from June 2005 to May 2006. Data collected from 251 farms (1,610 farmers) in 163 villages across 11 districts.
Table 5.10: Different sources of household income

<table>
<thead>
<tr>
<th>District</th>
<th>Number of households</th>
<th>Percentage share of cocoa income in total household income (mean proportion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agona Mampong</td>
<td>34</td>
<td>58.9</td>
</tr>
<tr>
<td>New Edubiase</td>
<td>35</td>
<td>59.8</td>
</tr>
<tr>
<td>Akim Oda</td>
<td>27</td>
<td>67.3</td>
</tr>
<tr>
<td>New Tafo</td>
<td>30</td>
<td>58.7</td>
</tr>
<tr>
<td>Dunkwa</td>
<td>37</td>
<td>76.5</td>
</tr>
<tr>
<td>Manso Amenfi</td>
<td>34</td>
<td>74.9</td>
</tr>
<tr>
<td>All Districts</td>
<td>197</td>
<td>68.2</td>
</tr>
</tbody>
</table>

** The average exchange rate used is cedi 9200 to 1USD.

Across the board, cocoa farming is the most important livelihood activity in the sample in terms of proportion of income, accounting for 66% of household income across all districts (Table 5.10). The next important livelihood activities are either growing other crops or off-farm incomes, which jointly account for 26% of household income across all districts. Wage labour and remittances only account for 8% of household income across all regions. However, as shown in Table 5.10 there are clear variations in the different sources of household income depending on location.

We can therefore conclude that cocoa farming alone cannot sustain the farmers, unless something is done to improve yields and farm-holdings so that earnings from cocoa go up.
Unlike producer price, which does not differ so much across production areas, the costs of inputs for cocoa production (seed pods, seedlings, insecticides, fungicides and fertilisers) differed markedly in the districts surveyed. The difference in input costs may be due to differences in the types and characteristics of the inputs.

One major input into cocoa production is labour. Due to scarcity of labour in the rural areas, farm labour costs are quite high, and often higher than the minimum wage announced by the government. As Table 5.13 shows, the average daily wage for weeding on a cocoa farm was 24 cedis, although most people paid 26 cedis. These rates, which included provision of lunch, were higher than the official minimum wage of 25 cedis. High farm labour costs are therefore a major problem facing farmers and can deter them from carrying out optimal husbandry practices on their farms.

5.5.1 Producer price

As previously indicated, producer price is announced by the COCOBOD every cocoa season. This price is a floor (minimum) price for purchasing cocoa. However the licensed buying companies are free to add any incentives they wish. In some isolated cases, cocoa is purchased at a price lower than the minimum guaranteed price when farmers need money. This practice often occurs during the off-season when purchasing has closed but farmers need money for some transactions. Table 5.13 summarises descriptive statistics of price indicators in the cocoa survey. The maximum cocoa price per bag (25 kg) in the sample was 562,844.8 in the 2005/2006 cocoa season, when the study was carried out. The minimum price indicated per bag was 290,000. Most of the farmers received the minimum guaranteed price of 562,850 per bag during the 2005/06 season.

<table>
<thead>
<tr>
<th>N</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Mode</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price per bag (Cedis)</td>
<td>250</td>
<td>562,850.0</td>
<td>562,844.8</td>
<td>562,845.0</td>
<td>562,500.0</td>
</tr>
<tr>
<td>Premium from the LBC (Cedis/bag)</td>
<td>2</td>
<td>2,000.0</td>
<td>5,000.0</td>
<td>5,000.0</td>
<td>2,000.0</td>
</tr>
<tr>
<td>Cash bonus from the LBC (Cedis/bag)</td>
<td>25</td>
<td>500.0</td>
<td>1,000.0</td>
<td>840,000.0</td>
<td>136,991.0</td>
</tr>
<tr>
<td>Premium per unit of seed pod (Cedis)</td>
<td>36</td>
<td>12,000.0</td>
<td>550,000.0</td>
<td>229,500.0</td>
<td>230,000.0</td>
</tr>
<tr>
<td>Cost per unit of fertilizer (Cedis/can)</td>
<td>36</td>
<td>12,000.0</td>
<td>550,000.0</td>
<td>229,500.0</td>
<td>230,000.0</td>
</tr>
<tr>
<td>Daily wage for casual labour for weeding (Cedis)</td>
<td>36</td>
<td>80,000.0</td>
<td>367,720</td>
<td>25,000.0</td>
<td>41,265.0</td>
</tr>
</tbody>
</table>

Unlike producer price, which does not differ so much across production areas, the costs of inputs for cocoa production (seed pods, seedlings, insecticides, fungicides and fertilisers) differed markedly in the districts surveyed. The difference in input costs may be due to differences in the types and characteristics of the inputs.

One major input into cocoa production is labour. Due to scarcity of labour in the rural areas, farm labour costs are quite high, and often higher than the minimum wage announced by the government. As Table 5.13 shows, the average daily wage for weeding on a cocoa farm was 24 cedis, although most people paid 26 cedis. These rates, which included provision of lunch, were higher than the official minimum wage of 25 cedis. High farm labour costs are therefore a major problem facing farmers and can deter them from carrying out optimal husbandry practices on their farms.

5.5.2 Producer price

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5.5.2 Producer price

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### Table 5.14: Access to credit by main activity of head of household

<table>
<thead>
<tr>
<th>Activity of Head of Household</th>
<th>If you needed to borrow some money</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Owner operator</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>124</td>
</tr>
<tr>
<td>No</td>
<td>36</td>
</tr>
<tr>
<td>Caretaker operator</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>17</td>
</tr>
<tr>
<td>No</td>
<td>22</td>
</tr>
<tr>
<td>Wage farm worker</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Business operator</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>7</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
</tr>
</tbody>
</table>

The extent of access to credit, either in kind or as cash, for the production process in the surveyed area is presented in Table 5.15. Some farmers indicated that they did receive credit in the form of inputs (mainly fertiliser) and cash through their LBCs. The practice, however, does not appear to be widespread as the number of respondents who benefited is rather small compared to the total sample.

In Table 5.16, LBC purchasing clerks are ranked as the major source of credit for both owner and caretaker operators. Importantly, formal banks feature prominently in the possible sources of access to credit by both owner operators and caretaker operators. Borrowing from farm owners by caretaker operators ranked low among the possible sources. Susu schemes and Solidarity associations were less prominent as possible sources of credit.

In relative terms female respondents indicated that the banks and financial institutions were more likely to lend to them (Table 5.17). This however contrasts with the men who saw the LBCs as their best possible source of credit. Again Susu schemes and Solidarity were discounted as possible sources to borrow from.

### Table 5.15: Summary statistics of credit from LBC

<table>
<thead>
<tr>
<th>Source of borrowing</th>
<th>Amount of credit received from the first LBC you sold your cocoa to? (Cedis)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Moneylender</td>
<td>22</td>
</tr>
<tr>
<td>Owner operator</td>
<td>56</td>
</tr>
<tr>
<td>Caretaker operator</td>
<td>56</td>
</tr>
</tbody>
</table>

### Table 5.16: Sources of potential credit by main activity of respondent

<table>
<thead>
<tr>
<th>Source of borrowing</th>
<th>Main activity of respondent</th>
<th>Total of owner and caretaker operators</th>
<th>Total number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moneylender</td>
<td>Owner operator</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Owner operator</td>
<td>Yes</td>
<td>24</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Caretaker operator</td>
<td>Yes</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>60</td>
<td>99</td>
</tr>
</tbody>
</table>

### Table 5.17: Sources of potential credit by main activity of respondent

<table>
<thead>
<tr>
<th>Source of borrowing</th>
<th>Owner operator</th>
<th>No</th>
<th>Total number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moneylender</td>
<td>Yes</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Owner operator</td>
<td>Yes</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Caretaker operator</td>
<td>Yes</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

### 5.5.3 Credit provision

Financing is important for an enterprising cocoa sector. Apart from purchasing inputs, credit has been used by farmers to support their households during the off-season when they cannot sell cocoa. The need for credit and/or loans was a theme in ten of the twelve focus groups. As with the women’s groups, the youth stated that credits and loans would greatly improve farmers’ production of cocoa as it enables the purchase of agricultural inputs and tools such as pesticides, fertilisers, and outlays.

Before liberalizing domestic purchasing of cocoa, the Produce Buying Company could make cash advances to cocoa farmers and these were deducted when cocoa was sold. While multiple buyers it has become difficult to operate a loan scheme by the LBCs because of the possibility of ‘drifting’. Through this practice a farmer who had obtained a loan from one buying agent would clandestinely take his/her cocoa to another buying agent in the community or even to another community to sell. The creditor agent would therefore not be able to receive repayment for the loan advanced. However in an era of keen competition in cocoa purchasing advancing credit is one way of obtaining the allegiance of cocoa farmers for the sale of their produce. Therefore some buying clerks have advanced small loans to those farmers they trust to come back to them.

One good thing about cocoa production is that many people are willing to lend money to cocoa farmers in the confident expectation of being repaid once the cocoa has been sold. However, loans from moneylenders tend to carry high interest rates (200% or more). It was measuring to creditors that even if the farmer did not pay back the loan, the farm, which was usually used as collateral, could be sold to recoup the loan. Some farmers who were unable to make the repayment have lost their farms through such loans. In general, about 75% of the owner operators and 78% of caretaker operators reported that they would be able to borrow money if they needed to (Table 5.14).

Although farmers seemed to be unhappy about the producer price, there had been considerable improvement in the price over the last 10 years or so. The producer price of cocoa in nominal terms moved from 2.5 million cedis per tonne in 2000 to 9.0 million cedis per tonne in 2004 and to 9.5 million cedis per tonne in 2005/06/07, an increase of about 260% in 4 years. In terms of proportion of float price of cocoa paid to farmers as determined by COCObOD, the producer price was 73% of the float price in 2004 and 70% in 2005 as compared with 42% in 1995.

The producer price of cocoa is announced at the beginning of the main season and it is used throughout the season irrespective of world market conditions and any price fluctuations that ensue. To compensate farmers for any gains that would result from exchange rate depreciation or increase in the total fob sales revenue received, COCObOD introduced a bonus which is paid at the end of the cocoa season on each bag of cocoa sold in that season. When there are adverse world market conditions, the farmers are not penalized and the government absorbs the losses. Farmers have built this bonus into their expectations and they get disappointed when a bonus is not announced. During the survey farmers complained that they were not happy that a bonus had not been paid for the past two years. Although a bonus was announced with the price increase in October 2006, many farmers were sure they would get it. The actual bonus payment process is one of the problems with paying for cocoa purchased with cash, rather than by cheque and use of the farmer’s passbooks. Many of the LBCs do not use passbooks to record sales of farmers so when the time comes to pay a bonus there are no records to refer back to.

In the youth FGD, they were also of the opinion that cocoa prices were too low. When they were asked to suggest price ranges they believed would be fairer to farmers, the young men quoted higher figures than the young women.

Sources of credit from LBC: 21 Susu schemes are informal savings and loan associations to which members contribute an agreed fixed sum of money on a periodic basis as savings. They can then withdraw a proportion of these savings according to a pre-set schedule. The money withdrawn is intended to cater for specific needs, such as a funeral association which assists members financially when a bereavement occurs. The organisation may have a specific objective, such as a funeral association which assists members financially when a bereavement occurs.
5.5.4 Agricultural extension services

In Ghana, agricultural extension delivery is mainly a public sector activity. COCOBOD used to have its own extension service through its Cocoa Services Division. Under pressure from the World Bank, the Government of Ghana decided to combine cocoa extension and general agricultural extension under a unified extension service in 2001. This unification has caused two problems: expertise and numbers. During the unification exercise many COCOBOD extension staff did not join the Ministry of Food and Agriculture (MOFA) Extension Service, and those who were in MOFA and those who were newly recruited did not receive adequate training in cocoa production techniques. Cocoa extension has therefore fallen short of what is needed to bring knowledge and innovation to the farmers to increase productivity. This may be one of the reasons why productivity is very low in Ghana’s cocoa sector.

Table 5.18 summaries responses from cocoa operator households about visits from an extension officer during the 2005/2006 season. Out of the sample of 217 respondents, only 21.2% could confirm that an extension officer visited them during season. Of those who were visited, about 46% received only one visit from an extension officer during the season.

5.6 Performance and welfare indicators

In section 5.3.2, indicators of cocoa farmer performance and welfare were discussed. Cocoa farmer socio-economic characteristics, farmer location (market access) and cocoa production indicators (productivity, production costs, cooperation, access to extension, access to credit, labour availability and cost, among others) affect farmer performance (net income from cocoa (or net total household income including cocoa) either per capita or per unit farm area) and welfare (per capita household expenditures).

Appendix 1 presents estimated equations that, in aggregate attempt to explain factors that could account for changes in the performance indicator of net income from cocoa and the welfare indicator of per capita household expenditures in the sampled cocoa districts.

The most significant factors that influenced net income from cocoa in the 2005/2006 cocoa season were productivity, access to extension services and the age of the cocoa farmer. Other factors such as being a member of a farmer collective, access to input market and access to credit were not significant. Being a member of a farmer collective and having access to the input market impacts positively on the performance indicator. This implies that cocoa farmers could increase their incomes from cocoa significantly if they belonged to an effective farmer collective, and were able to use the leverage provided by cooperatives to source farm inputs.

In terms of the sign of the estimated coefficients, the estimated sign on the coefficient on age-squared implies that as the cocoa farmer grows older, income from cocoa falls. The land productivity variable exhibits a non-linear relationship with income from cocoa, with an inflection point at a productivity of 0.25 kg/bag.

Access to productivity-enhancing facilities appeared to be a key factor in increasing cocoa farm incomes. Access to extension services and input markets are paramount. These findings stress the importance of research, extension and access to inputs in cocoa production. Amongst other considerations, the provision of roads to connect these cocoa communities to market towns and centres requires attention. An effective organisation of the farmers could help to both enhance their social capital and increase their incomes.
The survey analyses indicate that there are significant differences in cocoa productivity by cocoa district. Similarly, there are significant differences in income per capita. The districts in the Western South Region, which are the new cocoa frontiers in the country, tend to have larger per capita incomes. Net incomes from cocoa are largely determined by productivity and extension service provision. On the other hand, the older cocoa districts in the Eastern Region have the largest production costs per acre relative to the other sampled districts. The analyses also indicate that expenditures on food, healthcare and transportation rank highest in the welfare indicator.

### 6.1 Wider perspectives from the cocoa sector

To support the survey results and focus group discussions, key informant interviews were conducted with people knowledgeable about Ghanaian cocoa. Although virgin land for cocoa cultivation is difficult to obtain, with determination it is possible to get secondary forest in the cocoa-growing areas. The small cocoa farm sizes in Ghana are more a result of the inheritance system than shortage of land. Most people that wish to can obtain large tracts of land for cocoa and develop it as time goes on. These farms could be large but in the end they may be split up due to operational arrangements, or to form gifts to a spouse or family member, or through inheritance on death. Therefore as cocoa farms become older they may have multiple owners operating various parts of them.

Cocoa production is labour-intensive. In the past, a farm was operated by the farm operator with his family (wife and children). That was why many landowners preferred to give their farms to male caretakers so that they would operate the farm with their wife and children. To increase the farm labour supply some of the caretakers took one or more wives as the farm size increased. The practice of using family members in cocoa production is dying out alongside both the growing awareness of the need to send children to school and the costs of maintaining more than one wife. The study of child labour in cocoa production in Ghana found the incidence of the worst forms of child labour to be very low (Haeming-Bemping et al. 2007).

Traditionally, the other source of farm labour was solidarity work where individual farm operators form a group in which members offer each other mutual assistance with farm duties (nocobox scheme). However, this is becoming unattractive because of cheating by some people who fail to reciprocate assistance given by others. Since enough family labour is no longer available and the nocobox scheme has virtually faded out, farm operators have had to resort to hired labour from the community. This has created a scarcity of farm labour and increased the rural farm wage which in many areas is much higher than the minimum wage announced by the government (when the minimum wage was about 20,000 cedis per day the rural farm wage was 25,000–40,000 cedis per day depending on location). It’s a result some farm operators from time to time offer themselves as farm labourers on other people’s farms in return for wages to supplement their incomes.

The high cost of farm labour coupled with the high cost of inputs has deterred many farmers from adopting improved practices and maintaining farms well. The low ratio of hybrid trees to traditional trees on cocoa farms is a case in point. Many farmers do not use around their farms three times a year, they scarcely spray their cocoa trees against the capaul pest and black pod disease, and they leave mistribe to grow on the trees. The result of this neglect is a low yield of cocoa in Ghana. Cocoa yields of less than 400 kg per hectare compare unfavourably with other cocoa-producing countries. However, there are managers in COCOBOD who believe that yields in Ghana could go up to 2000 kg per hectare as a result of policies and programmes being implemented by the Board.
6.2 Enabling environment and farmer participation

In this section, other economic and social factors that constrain cocoa farmers are discussed. These factors emanate from focus group discussions conducted across the sampled cocoa districts. They include: the local marketing of cocoa (i.e., local cocoa purchasing by LBCs), the lack of any strong farmer associations at the community level, perceptions of the responsibilities of government and related agencies working to enhance productivity and access to farm inputs.

6.2.1 Marketing: LBCs and payments

At the time of the survey there were 23 LBCs licensed to buy cocoa in the cocoa-growing areas. One of the conditions for getting a licence to buy cocoa is to be able to operate in at least two of the six cocoa regions (as defined by COCOBOD). LBCs were also required to buy at least 2,000 tonnes of cocoa in a cocoa season. LBCs paid an operating margin which is a percentage of the floor price of cocoa. During the 2005/2006 cocoa season the margin was 8.52% (COCOBOD Research Department). In their quest to make profits, fierce competition has been arisen among the LBCs. Some of them entice the producers with small gifts at the end of the season. Apart from Kupaa Kokos, which pays a little more because they are a not-for-profit organisation and get a premium from Fairtrade, none of the LBCs paid anything more than the guaranteed minimum price. Many people have questioned the advantage of having several buying companies if there cannot be differential prices. However, one sure advantage of multiple buyers is that the farmer has a choice if he/she feels cheated by any one particular LBC.

Actual or suspected cheating was reported by many focus group members. There was a general belief that the purchasing clerks adjust the weighing scales to cheat the farmers. It became known that when cocoa was being weighed at more than 67 kg with two kilograms being generally accepted as representing the weight of the jute sack.

Farmers expressed serious resentment and sometimes hostility towards purchasing clerks for their perceived dishonest dealings with them. A woman discussant said sardonically, ‘It is no wonder that a purchasing clerk who has never set foot on a cocoa farm can easily build a house that a farmer can never dream of’.

Farmers complained that the fixed weight weighing stone, which was supposed to be used to calibrate the weighing scale, was absent at the buying centres. When asked why farmers did not report the apparent cheating, one purchasing clerk said that when the bosses came on inspection they were bribed, so no adverse reports were made and the status quo remained.

Another problem farmers and caretakers complained about were delays in payment for cocoa sold. Farmers claimed it could take anywhere between two weeks and several months to be paid. Women focus group members were sceptical about the LBCs for not releasing funds early enough, but they remained suspicious that the LBCs were likely just holding on to the funds.

Cocoa is supposed to be paid for with an Akuafo cheque, which is to be cashed at a nominated Rural Bank. However, increasing numbers of farmers are paying for cocoa with cash. This has happened because many farmers prefer cash to the cheque to avoid many visits and long queues at the Rural Banks to cash cheques. This becomes inconvenient and expensive for farmers who only sell small quantities of cocoa. There were reports of farmers making 3–4 trips to cash cheques of less than one million cedis. Some farmers were disgusted that some of the bank clerks took bribes from them before they would cash their cheques, therefore deviating from the already small amount they had gone to collect. Sometimes, there were also delays in receiving cash from the cocoa purchasing clerks who did not use the Risalfo cheque. Some of the purchasing clerks paid for the cocoa in instalments and the farmers complained that it ‘spooked’ their money since they could not make investments, or plan a budget with this mode of payment. If the farmers received payment in bulk, they could pay major debts or make some larger expenditures. When the money was given to them piecemeal, it was difficult to save it or to use it for significant purchases, so then it tended
to be spent on everyday expenses and was essentially ‘wasted’ as far as they were concerned. Women farmers who had similar concerns also added that, payment by instalment often led to unnecessary expenditures that ‘wasted’ money with which they could otherwise have done something useful. Those who had borrowed money during the production season could not pay back in such piecemeal payments and they risked losing their farms if they had used them as collateral.

As to whether farmers preferred the ill-fated cheque system to paying cash, opinions were divided. With many of them choosing cash, especially with low sales volumes. Those who preferred payment by cheque said the reason was that they got the whole amount as long as the bank clerks did not deduct anything. Some farmers also said that with the cheque system one was forced to have a bank account and develop a culture of saving, and if the account was operated properly one could potentially obtain a bank loan to purchase inputs or to pay for some farm services or other investment.

6.2.2 Responsibility of government

A difference between the youth and the women’s focus groups was the ability of the former group to look beyond the government in assigning blame and responsibility for action. Unlike the women’s groups for whom the central government was the main agent of change in the cocoa industry, the youth were able to identify various organisations (at least different departments of the government) that they believed should act on their recommendations. For instance, while the responsibility for providing most social amenities still fell on government, the youth were able to talk about the responsibility of the Electricity Company to better manage power so cocoa-producing areas would be provided with electricity, or the need for the District Assembly to garner loans for farmers. In addition, the youth were not reticent about putting the blame on farmers themselves for bad practices or negligent acts such as failing to weed their farms properly, not spraying adequately or regularly, or not sourcing good seeds/seedlings for their farms.

Appeals for assistance were mostly directed at the state. Although a number of other agents and service providers came up for critique (for example LBCs, agriculture extension officers, and private store-owners who sold farming equipment at high prices), when it came to the question of who should do to correct these circumstances, the state was invariably identified as the primary agent. The women recommended variably that the government intervene directly by making provision for equipment, facilities and services, or by mediating in transactions between farmers and private persons/companies involved in the cocoa trade.23 The youth were more likely than the women to note the importance of the agricultural extension services, but they also stated that the service had grossly neglected its responsibilities to farmers.

6.2.3 Membership of associations

Social capital in the form of membership in an organisation or association is important for farmers. Farmers’ complaints about unfair dealings by the LBCs, among others, could be minimised with strong cocoa farmer associations in the districts. However, membership in associations of the respondents was very limited. These are summarised in Tables 6.1 to 6.4.

In Ghana, there is an umbrella Cocoa, Coffee and Shea Nut Farmers Association. However, in Table 6.1, only 1.5% of the valid respondents indicated they were members of the association. With specific reference to a named cocoa farmer’s cooperative (Kuapa Kokoo), 19% of the respondents belonged to the named association (Table 6.2).

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6.3 Farmers’ perspectives on production

6.3.1 Cultivation

Farmers used around their farms about these a times a year when the trees are young and the leaf canopy has not yet formed. To avoid the physical labour involved in weeding or the cost of hiring labour, some farmers, particularly the women, have resorted to the application of herbicides. During the expansion of cocoa in the Eastern and Western Regions, free labour use provided by the cocoa extension service of the Ministry of Rights to sue for weeding and replanting of old cocoa farms.24 Some of the farm operators advocated that the service be brought back since it was becoming difficult to meet the cost of controlling the weeds on their farms. Farmers have to be educated about the proper use of herbicides so that they can benefit fully from them without introducing any serious side effects.

There are two ways of planting the cocoa. The traditional way is to sow the seeds at stake after removing them from the pod, washing and drying them (atodwe). The seeds are planted haphazardly and are later planted by atodwe or Amazon, but those who raise or buy seedlings invariably plant hybrid cocoa. Some hybrid seeds too are planted by atodwe.

Table 6.1: Are you a member of the Cocoa, Coffee and Shea Nut Farmers’ Association?

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
<th>Valid%</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
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<td>3</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>No</td>
<td>202</td>
<td>98.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>205</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

* Ghana Cocoa, Coffee, Shea Nut Farmers’ Association

6.3.2 Responsibility of government

Responsibility of government varied across the focus groups. The youth believed that the state should be the main agent of change in the cocoa industry. Women’s groups, on the other hand, were more likely to place responsibility on the roles of other players in the cocoa value chain beyond their locale, and especially beyond the shores of Ghana. They were more critical of the LBCs for failing to support the process of value addition and service delivery to farmers. The youth were more likely than the women to note the importance of the agricultural extension services, but they also stated that the service had grossly neglected its responsibilities to farmers.

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6.3.4 Spraying against pests and diseases

Farmers stressed the importance of spraying against pests and diseases. The major pests of cocoa are mistletoe, CSSV, capsid (insect), and black pod (Fusarium). Pruning or cutting down mistletoe has proved a big challenge to farmers. Since many women farmers do not have the long-handled pruning knives and they cannot climb the trees, they have to hire labour to do it for them at a high cost. On occasions, children and adults are expected to climb the cocoa trees to remove mistletoes.

Spraying was also an expense that some farmers were unwilling or unable to meet. As a result, yields were declining so COCOBOD introduced mass spraying of cocoa trees, which was financed from the fob price of cocoa. In other words, farmers indirectly pay for the mass spraying exercise. People are tired and given spraying machines, insecticide/fungicide and fuel to execute the mass spraying, which they do working in ‘gangs’. Farmers are supposed to use around their farms and provide water before the gang enters the farm. In theory, then, the arrangement does not call for any direct expenditure on the part of the farmer. Spraying cocoa trees (and the chemical inputs for that exercise) was mentioned as one of the major factors in determining production levels, and was a priority for all the focus groups. However, this programme was beset by problems and its sustainability is in jeopardy. In addition to the problems already discussed, some of the farmers complained about a perceived scarcity of land. This was one major reason offered by some young people for their inability or unwillingness to use fertiliser to enhance the fertility of available land. Younger farmers linked the importance of fertiliser to land infertility or unavailability; that is, fertiliser application was expected to increase yields on infertile land or optimise the utility of small parcels of land. Adoption of fertiliser seems to be higher among the younger farmers than the older farmers and also higher among males than females. Fertiliser application has been the most recent introduction to agronomic practices on cocoa farms in Ghana. The COCOBOD Hi-tech programme, described in section 6.1, introduced fertiliser to farmers through a credit scheme administered by the licensed buying companies (LBCs). Farmers who applied the fertiliser correctly realised its potency in higher yields the following year. Two focus group discussants testified as follows:

G1: After applying the fertiliser I was able to harvest cocoa the whole year and that boosted my income tremendously.

G2: The phenomenal yield of my cocoa trees after applying fertiliser resulted in some of the trees falling down; the branches could not carry the several pods that came on the trees. However, as pointed out earlier, despite these success stories, the programme has been beset by problems and its sustainability is in jeopardy. In addition to the problems already discussed, some of the farmers complained about lack of availability of fertiliser at the appropriate times in the farming season. For instance, some farmers said that fertiliser was supplied to them by the LBCs after the rains had stopped. Some operators complained that the fertiliser created too many hardships for farmers who may need money and have cocoa but are not permitted to sell it. This problem should be looked at by COCOBOD since farmers are able to harvest hybrid cocoa all year round with the adoption of fertiliser. Could cocoa be purchased all year round so that farmers don’t have to wait for their cocoa beans to dry, or sell their cocoa at a discount to a purchasing clerk with a bit of money?

6.3.5 Opening of cocoa purchasing

COCOBOD specifies a period during which the purchasing of cocoa takes place (the ‘Opening of the Cocoa Season’), with the main crop season running from October to June and the mid crop running from July to September. There is a minimum of a two week break between the buying periods and the seasons to allow for returns (1 week) and delivery (1 week) to COCOBOD. Both the length of the buying periods and the break between them are fixed according to the calendar. From season to season to reflect the profile of the current crop and the availability of larger main crop beans. This brings undue hardships to farmers who may need money and have cocoa beans but are not permitted to sell it. This problem should be looked at by COCOBOD since farmers are able to harvest hybrid cocoa all year round with the adoption of fertiliser. Could cocoa be purchased all year round so that farmers didn’t have to wait for their cocoa beans to dry, or sell their cocoa at a discount to a purchasing clerk with a bit of money?
6.4 Production constraints

6.4.1 Financial/capital constraints

When it came to financial/capital constraints, the cocoa farmers said the most important input for successful farming was capital. One needed money to hire labour for the arduous physical activities of weeding, pruning and harvesting; money was needed to buy land to expand one’s farm; and money was needed for other inputs. Thus the availability and provision of capital was paramount in cocoa farmers’ production activities.

6.4.2 Labour constraints

Labour is a major factor of production of cocoa in Ghana. The farm operator can engage a person on a daily basis (‘by-day’) to carry out specific assignments and pay him a daily wage or a piecework (that is, by activity). A farm labourer can also be engaged long-term (usually annually) and taken care of by the farm owner in terms of housing, food, clothing and healthcare, as well as given an agreed sum of money at the end of his term. The annual labourer (who is invariably a male) may be assisted in his work by his wife and children if they stay with him on the farm.

It is, however, becoming increasingly difficult to find hired labour for farming activities. The situation is not as acute in the larger communities where people who do not have farms are willing to undertake by-day jobs from time to time. In the small communities most people operate a farm and so there is not a pool of farm labourers for farmers to draw on.

The problem with farm labour is also itscost. The farmers recognised that the maintenance of their farms through regular weeding and pruning was imperative, but they also frequently stated that they lacked the physical capacity required for this. (This was even more of a problem for female farmers.) At the same time, they frequently did not have money to hire labour to weed for them (the higher labour wage relative to the minimum daily wage has already been indicated). This tended to limit the size of farms, productivity and total output.

Noboa or solidarity farm work used to be one reliable source of labour in the past but the practice is dying out gradually since sometimes the reciprocity principle does not work and one party feels cheated. Through noboa a farm operator can get assistance to carry out a major labour-intensive farm operation with the expectation that s/he will reciprocate. This was a way for many caretakers to avoid finding money to pay for labour for weeding, sometimes for harvesting and for the breaking of pods harvested.

Children of farm operators also provide assistance on the farm. When farmers were asked whether some of the children who assisted them did not attend school they stressed the importance of schooling and reiterated that all the children were registered to attend school and that they helped on the farm on holidays and at weekends. Although many farmers claimed their children under 15 years of age did not undertake hazardous work, there were instances when children who were interviewed said they were able to break open cocoa pods with cutlasses or they would fetch water for mixing with chemicals when spraying was taking place. Some children even mentioned that they had climbed cocoa trees to prune mistletoe.

6.4.3 Lack of equipment

Cocoa farmers mentioned the need for basic equipment such as machetes, long-handled pruning knives (for removing mistletoe) and Wellington boots.

The activity of pruning to control mistletoe was a particular challenge for the aging cocoa farmer. The majority of farmers said they lacked the long-handled pruning knives so they were compelled to hire labourers to climb the trees to cut away the mistletoe. The option of hiring labour has its own disadvantages first, there is the cost involved; secondly, there is the danger to the labourer for whom the farmer might be liable (people have been known to fall and hurt themselves) and finally there is the risk of the labourers damaging trees and the budding cocoa pods when they climb the trees to prune them.

6.5 Income and livelihood diversification

6.5.1 Price

In a simple regression of cocoa output on nominal and real producer prices using data presented in Appendix I Table I, it was found that farmers respond positively and significantly to prices as indicated in equations (1) and (2), with their t-statistics in parentheses.

\[
\begin{align*}
\text{(1) Output} & = 284291 + 0.0356 \times \text{Nominal Price} \\
& (13.928) \\
\text{(2) Output} & = 102722 + 1.08296 \times \text{Real Price} \\
& (3.5039)
\end{align*}
\]

Elasticity of output with respect to nominal price = 0.2377

Elasticity of output with respect to real price = 0.6977

In quantifying the response in terms of elasticity, it was found that a 10% increase in nominal price would lead to about a 2.4% increase in output, whereas a 10% increase in real price would lead to about a 7% increase in output, implying that farmers respond more to real prices than nominal prices.

Increasing the price of cocoa as a way of sustaining production came out very strongly in the discussions with farmers, women, caretakers and youth. However, the producer price of cocoa depends on the fob price of cocoa and the exchange rate of the Ghanaian cedi. Unlike a stable exchange rate the producer price largely depends on the fob price whose level is a function of the international cocoa demand and supply situation. Demand for cocoa can be stimulated by encouraging local demand, for example by locally advertising the health properties of flavonoids, which is found in cocoa and is known to contain large amounts of antioxidants which are good for maintaining a healthy cardiovascular system. Such advertisements in Ghana have boosted demand for powdered cocoa and drinking cocoa in the country and the same strategy can be used internationally to increase demand.

6.5.2 Lack of income diversity

Women respondents were particularly concerned about income diversity. They perceived cocoa farming as a good source of income, but not adequate to sustain their livelihoods because of its seasonal nature, and because women tend to lack the resources of land, capital and physical strength to make cocoa farming their sole source of earnings. In addition to cocoa farming, the women cultivated other crops and/or engaged in trade.

Finding supplementary income was imperative for the women, given the seasonal nature of cocoa. In the absence of any other avenues for earning income, both male and female farmers in the migrant communities hired themselves out as labourers on other cocoa farms.

Engagement in other non-farming activities was presented by some women as an important strategy for ensuring one’s future and aspirations, given that their earnings from cocoa were inadequate.

Cocoa farmers expected that cocoa would be of some help to them in enhancing their livelihoods, and for some, it had afforded them a better standard of living than they would otherwise have had. On the other hand, there was the general feeling that the gains from cocoa were much less than they could be. Across the board, the impression given was that cocoa yield (productivity) had grown down steadily over the years. This state of affairs was put down to the decreasing fertility of land, the age (and low yield) of cocoa trees, the expense of inputs, and the waning attention of the government and Ministry of Agriculture to the circumstances of cocoa farming and cocoa farmers.

6.6 Production constraints
School-related items were mentioned as the top priority social amenity need...

School infrastructure and supplies. School buildings in some of the smaller communities that had been built with communal labour were not of good quality to begin with, and some had become run down. The communities wanted the government to repair these school buildings (e.g. replace broken-down walls, put in doors and windows, repair roofing, etc.). In addition, most of the schools were without adequate furniture and basic textbooks. A necessary element of school infrastructure was housing for teachers. The farmers recognised that some communities were not attractive postings for teachers. The least that could be done to make teachers comfortable and more likely to stay at their post would be to provide them with fairly decent housing (i.e. cement buildings with proper doors and window fixtures and furniture).

Additional schools. In the towns that already had primary and, perhaps junior secondary school, the next step was to have a senior secondary school (SSS) sited in the town and beyond that a tertiary-level institution such as a vocational training college. For instance, Masoene and Iliamnae in the Eastern Region are both fairly large towns with basic social services such as pipe-borne water, electricity, a clinic, and a primary school and JSS. In the focus groups in the two towns, the farmers wanted a public SSS and a public library. The focus groups that were most vocal in the demand for healthcare were the smaller communities. 

6.6.6 Health Service (Health personnel, clinic and access)

After education, the next most important social amenity was health facilities. Most of the small communities did not have access to health facilities. In such cases they had to attend to their healthcare in the cocoa farms. The focus groups that were most vocal in the demand for healthcare were the smaller communities.
Various levels of health service were requested. For the settlements like Subreho, farmers wanted a nurse or a doctor to be resident in town, as a first step. The next step would be an actual building that would house a clinic and living quarters for the health workers. For farmers in Nankese who had both these facilities, their request was for subsidised healthcare for cocoa farmers.

6.6.7 Marketplace

The desire for a marketplace is related to the motivation to diversify income. According to women who traded in agricultural goods or other consumer items, a dedicated market space in the community could boost trade. The markets should be built by the local government since it would require a larger investment than the women felt the community could afford, if it was to be built properly with roofings sheets and cemented floors.

6.6.8 Housing

Men tended to be more ambitious than women in relation to housing. Owning a house is very important for men since they take it as a responsibility to provide accommodation for their spouses and children. The aim of most of the migrant farmers was to be able to build a house in their home towns even though they might live in a ramshackle building in the community where the farm is situated.

6.7 Satisfaction with social amenities

It is here that we see the most noticeable small town/big town divide. The types of amenities listed and the priority given to each were related to the size and relative level of development of the town. In smaller communities, the priority social amenities tended to be roads, schools and clinics. Very basic needs such as potable water and public toilet facilities were also ranked highly. Larger communities had these basic amenities but need improvements, such as a regular flow of water, vocational college, etc.

The level of satisfaction of the focus group discussants with the availability of social services is summarised in Table 6.5.

Table 6.5: Satisfaction of farmers and caretakers with social services (average score)

<table>
<thead>
<tr>
<th>Community</th>
<th>Cocoa district</th>
<th>Owner farmers 25–40 years</th>
<th>Owner farmers 40+ years</th>
<th>Caretakers 25–40 years</th>
<th>Caretakers 40+ years</th>
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<tr>
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<td>1.00</td>
<td>1.00</td>
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<tr>
<td>Menang</td>
<td>Askari</td>
<td>2.57</td>
<td>2.40</td>
<td>2.22</td>
<td>1.56</td>
</tr>
<tr>
<td>Tonkoase II</td>
<td>Akim Tech</td>
<td>2.40</td>
<td>2.11</td>
<td>2.11</td>
<td></td>
</tr>
<tr>
<td>Kyekyewere</td>
<td>1.22</td>
<td>2.41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nsuaem</td>
<td>Dunkwa</td>
<td>1.33</td>
<td>1.75</td>
<td>2.11</td>
<td></td>
</tr>
<tr>
<td>Subreho</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Bled-Nsuaema</td>
<td>1.88</td>
<td>1.00</td>
<td>2.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bediman</td>
<td>Accra</td>
<td>1.00</td>
<td>2.67</td>
<td>2.67</td>
<td></td>
</tr>
<tr>
<td>Ulamasease</td>
<td>Mampong</td>
<td>1.75</td>
<td>2.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>1.83</td>
<td>1.89</td>
<td>1.64</td>
<td>2.23</td>
<td></td>
</tr>
</tbody>
</table>

Scale: 4 = highly satisfied; 1 = lowly satisfied

6.8 Youth employment

Some farmers, particularly the youth and women, complained that there was no source of employment beyond farming. The need for formal employment (termed ‘company work’ or ‘government work’) was commonly articulated in the bigger cocoa towns such as Accra, Nsuaem, Nankese, and Bediman. The women wanted industries, factories and offices to be set up that would take up unskilled, semi-skilled and white-collar workers. The Nankese focus group, drawing from the experience of some of its participants who were attached to the extension service, suggested that the Ministry of Agriculture and COCOBOD could be sources of employment. If, in times past, COCOBOD could engage farmers to act as agricultural extension officers, the desire for formal employment was related to the desire for income diversity that women often addressed through petty trading and cultivation of other crops. However, formal employment has features and advantages that distinguish it from farming and trading. In the first place, while the women talked about agricultural activities and trading in terms of their own occupation, the need for formal employment was for the benefit of their children and other young people. Secondly, the farmers considered formal employment to be a substitute for cocoa farming, not a complement to it.

The common denominator for women in all three regions was the desire for better educational facilities for the children in the communities.
7. The future of cocoa: farmer and youth aspirations

A major issue in cocoa production is the advanced age of farmers and the uncertainty about who will replace them. In this section, we explore the aspirations of cocoa farmers, and how these affect the sustainability of cocoa production. We highlight the aspirations of young people, since their goals and actions will largely determine the future of cocoa cultivation in Ghana.

7.1 Farmers’ aspirations

In the survey, farmers were asked to list the challenges to cocoa farming that impact on their ability and their incentive to produce cocoa. Table 7.1 ranks the problems faced by the cocoa farmer respondents in the survey areas. The topmost problems identified were the high costs of inputs and equipment, black pod disease that can cause the loss of the pods, and the capsid pest that can destroy the cocoa trees. Inadequate funding and too much drudgery in cocoa farming were also mentioned, although these ranked lowest.

Table 7.1: Problems faced in cocoa farming

<table>
<thead>
<tr>
<th>Problems</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>High cost of inputs and equipment</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>Black pod/capsids and certain insects destroy a lot of my pods and/or my cocoa trees</td>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>Mistletoe causes great decline in output</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Low soil fertility</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Some LBCs don’t pay instant cash (delayed payment) and this causes a lot of frustration</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>There is too much drudgery involved in cocoa farming</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Inadequate funding for production</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: This was an open-ended question hence other answers had a frequency of 1

Table 7.2 reports the aspirations of cocoa farmers in the survey.

<table>
<thead>
<tr>
<th>Aspirations</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want to get more money from my farm in order to take care of my family (including children’s education and well being)</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>I want to observe appropriate cultural practices to increase yield</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>I want to build a house</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>I want to increase yield (productivity)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>To increase security of my household income</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
Respondents indicated that their aspiration was to gain more income from their cocoa-farming activities, either through deriving higher yields from their existing farms or from expanding the size of their farms. This aspiration was linked with a desire to take better care of their families. In fact, the goal of providing for their children and other dependents was the highest-ranked aspiration among survey respondents. Practically, this translated into providing for children’s material needs and giving them formal education so they would acquire a profession, or earn marketable skills through informal training.

Kudueko, a 46-year-old itinerant trader, moved to Torkor in the Ahanta Region to work on his family’s cocoa farm. In addition to wanting to secure the farm for his younger siblings and for posterity, he hoped that, within the next few years, he would have enough money to pay for a private school for his children. He said:

However much I can get out of cocoa farming will determine how far I can help my children to advance (in school, in life). Because I myself did not get a chance to continue my education… but right now, education is very important. In the past… I would gather all my children and dump them here (to farm with me), but that’s not how we do things any more. (Individual life history)

In addition to education and training, parents wanted to leave children a tangible inheritance, usually in the form of a house. Aspirations in this direction were not too elaborate – typically, farmers desired to put up a set of two rooms on a small compound. The aspiration to care for children widened by the survey results was amplified in the focus groups. In the women’s group, in particular, participants universally stated that the primary goal for cultivating cocoa, and for any other economic activity they undertook, was to invest in their children’s future. Women’s hopes were overwhelmingly invested in the next generation, so much so that they seemed to erase themselves out of the future. In all at least two separate focus groups, women made statements to the effect that their own well-being did not matter; what mattered was that their children and grandchildren should be better off. All one focus group participant stated:

My life is over and all the toil I am going through is for my children and grandchildren to be better off than I have been. (Individual life history)

Some parents explicitly tied their personal well-being to their hopes for their children – if their children succeeded in life, then their own lots would be made easier. Kofi Ahene, 34 years old and a part-time cocoa farmer, made this statement:

I want God to give me strength so I can look after my kids until they are established in life. Maybe when they finish school, they can get a really good job, you know? (Individual life history)

7.2 Youth aspirations

Youth aspirations were quite diverse, and the role of farming in their life plans likewise varied. Unlike the adult respondents who were mostly farmers, the youth had diverse backgrounds, educational levels, and experiences of life outside their villages. One category included youth with little or no formal education who were full-time farmers and aspired to own farms. These full-time farmers were very few, and were present in only two focus groups in the migrant cocoa settlements of Suheneho and Kru-Nkuentia-Mamramela. The second category was made up of those young people who had been educated above primary level. In this category, there was a further divide between those who had terminated their formal education at the basic level (that is, at junior secondary school) and planned to enter or had already entered various trades, and those students who expected to pursue their education to or beyond senior secondary school (SSS).

It was evident that young people prized education as much as their parents did. Almost all the children currently in school stated that they wanted to continue their education and obtain salaried work. Those young people who had left school and had not had the opportunity to obtain formal education wanted to learn a trade, with car mechanics, weaving and hairdressing being the most popular options. Some of these people were farming temporarily in order to earn money to finance their apprenticeships. In this respect, cocoa farming was a stepping stone to doing something else.

There was also a clear gender divide, in that it was mostly the young men who talked about farming as an occupation or as a means to some other end. There were a few young women who had cocoa farms, but the majority of the girls did not own nor did they aspire to own farms or to produce cocoa as a supplementary livelihood activity. This gender divide may stem from the different models that girls and boys have access to: while there are examples of successful male farmers, there were fewer examples of successful female farmers.28

2.3 Role of cocoa farming in fulfilling aspirations

Cocoa held varying degrees of importance within people’s life plans. In the survey of 227 adult cocoa farmers, the perception of cocoa farming as an occupation was generally positive. Respondents said that cocoa farming was ‘a lucrative venture’, ‘a lifelong investment’, ‘a source of income security’ and a ‘source of collateral’. (To a lesser extent, respondents also said that farming was ‘hedonic’, unrewarding and increasingly tenuous as land for farming becomes more and more scarce.)

Some farmers use income from cocoa to finance major investment expenditures such as homes, or as capital for re-investment in their farms. Agya Asante, a retired agricultural extension officer with the Ministry of Agriculture, is an example of someone who has acquired properties through cocoa. Taking the advice of a friend who encouraged him to start cocoa-farming as a means of securing his retirement, Agya Asante used his savings and his wages from occasional work as a farm labourer to buy six plots of land which he put in the care of caretakers, on a sharecropping basis. With the profits from his farms, he put his younger siblings through school, and also managed to put up two houses in his hometown.

Most respondents in the survey, focus groups and in the life history interviews had less impressive returns on their investment in cocoa than Agya Asante. They did believe cocoa would go some way to helping them to meet their life goals. One woman said:

...farming doesn’t really help us. My husband and I, we have a farm – we have a large farm, but it doesn’t help us much. It helps only a little. (Women’s focus group)

Individuals in the focus group discussions were asked to indicate, on a scale of one to four, how far they had come in reaching their expectations. The results presented in Table 7.3 make it clear that, on the whole, farmers perceived themselves to have achieved little in their cocoa-farming careers.

In the personal life history accounts, there were two women – in their late 20s and early 30s – who stated explicitly that their mothers were an inspiration in their own lives. When asked why they chose to take up farming, they said they drew strength from the examples of their mothers who had raised families on cocoa. For example:

...while there are examples of successful male farmers, there were fewer examples of successful female farmers.”29

23 Role of cocoa farming in fulfilling aspirations

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7.4 Future sustainability of cocoa

There were mixed perceptions about the sustainability of cocoa farming. On the one hand, some respondents could not imagine that cocoa could ever disappear; it had been a feature of the lives of their grandparents, and had survived for many decades. Their identities as farmers, individually and as communities, were tied to cocoa farming. However, when it came to the more personal question of whether they would want their children to be involved in cocoa, a majority of survey respondents indicated that they would not. When the same question was put to the focus groups, the answer was an even more emphatic ‘no’. When asked why she would not encourage her children to farm, one focus group discussant asked rhetorically: Why would the children make a choice to go into cocoa farming when they see how I am suffering and the little I get from the farm? (Individual life history)

Table 7.4 ranks reasons why survey respondents did not think of cocoa farming as a preferred option for their children. Low aspiration, low esteem and too much drudgery are ranked in order of importance as key reasons. Cocoa farming being dangerous work and the children not being interested are some of the lower ranked reasons.

Table 7.4: Reasons why respondents did not want their children to go into cocoa farming

<table>
<thead>
<tr>
<th>REASONS</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low esteem</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>Low aspirations</td>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>Too much drudgery</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Low income</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Scarcity of land</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Dangerous work</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>I want my children to be highly educated</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My children are not interested in farming at all</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

When focus groups members were asked why cocoa farming was such an undesirable vocation for their children, the answers paralleled the survey results: that it was low-status work with little prospects; that it was dangerous and backbreaking work without commensurate rewards.

Kwame, formerly a businessman living and working in the capital Accra, had made the move to Menang at age 50 to take up farming. He said that his expectations had been met, and that he still had further ambitions to fulfill in Menang, and that he would not ask his children to help him. Asking his children to come to the village and to farm, he said, would compromise their futures.

Some parents were more flexible in regards to cocoa farming as a future occupation for their children. Yet, even in those instances, the idea of farming was clearly a second choice. Parents would prefer their children to attend higher educational levels so that they could secure salaried employment. If it turned out that the child was resistant to this idea, or if the child was not ‘good enough in school, or if his parents could not afford to continue his education, then cocoa farming would be the fallback option.

One theme coming out of the focus groups was that the value of cocoa farming as a livelihood activity has changed over recent years and this was the primary reason parents did not want to encourage their children to go into that occupation. There was a time, people said, when cocoa meant a good life. People recounted stories of men and women who had, in the past, grown rich from cocoa farming, putting up magnificent houses and sending their children to the best schools in town. In fact, there were white towns that were established with cocoa money in the Greater Accra and Eastern Regions. Such stories, it seemed, have become less and less common, for example:...
Table 7.5: Views of how cocoa farming could change to become more attractive to youth

<table>
<thead>
<tr>
<th>Views of how cocoa farming could change</th>
<th>Frequency</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide credit on inputs for those farmers who cannot afford to buy them outright</td>
<td>57</td>
<td>1</td>
</tr>
<tr>
<td>Government should increase the producer price of cocoa</td>
<td>24</td>
<td>2</td>
</tr>
<tr>
<td>Supply farmers with equipment and implements, e.g. Wellington boots, sprayers, etc.</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Government should provide easily accessible loans</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Provide easily accessible loans for farmers to purchase inputs</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>Provide easily accessible loans for farmers to purchase inputs and hire labour</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Educate the general public especially the youth, about the benefits of cocoa farming</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>More extension officers should be employed to teach young cocoa farmers</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Continue with the mass spraying exercise</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Subsidise the cost of inputs by pricing controls</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Subsidise the cost of equipment/hardware/machinery by pricing controls</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Provide scholarships for children of cocoa farmers</td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>

7.5 Youth perceptions of the future of cocoa

One noteworthy finding centred on the ways in which young people positioned farming in their plans for the future. Given that cocoa farming seemed to diminish in importance as an occupation the more education one acquired, one would expect that farming would disappear entirely from the life plans of young people who hoped to attain higher levels of education. That was clearly the expectation that parents held for their children. In general, the youth did subscribe to the same perceptions their parents held about the superiority of a profession or a trade over farming. It was surprising then to have discussions with the youth revealed that, whereas their parents thought that salaried employment would replace farming, the young people did not always see these occupations as being mutually exclusive.

When adults said that they would prefer that their children did not become cocoa farmers, they were in effect expressing their opposition to their children becoming small-scale, often struggling, cocoa farmers as sub-groups:

We farmers, we don’t count, we don’t count at all. Nobody has any regard to us. In this country, farmers especially women, village women. We just don’t count. (Women’s focus group)

Niasia Rante was representative of those who offered this argument. Despite the returns he himself had reaped from cocoa farming, the 81-year-old veteran farmer Rante did not hold out much hope for the future of cocoa farming. As he saw it, the current generation of youth are too interested in that line of work and no wonder. There’s no work as thankless as cocoa farming, he said. Niasia Rante placed the blame for this squarely on the shoulders of the government.

Respondents in the study tied the sustainability of cocoa farming to the condition that the government increases its commitment to recognising the contributions of cocoa farmers to the nation, and thereby raising their stature in society. It was suggested that this attention could be demonstrated by responding to the various recommendations farmers made regarding production inputs, marketing and social provisioning.

Stephen, a 41-year-old farm owner with 10 acres of cocoa farm land, expressed his dismay at not receiving the aid he expected from the government. Stephen said the challenge of cocoa farming was that, at some point, the physical strength and material resources needed to key up the farm would be more than a farmer could handle. Given the scale of his own farm operation, he was uncertain about allowing him some support such as credit facilities or farming equipment, so he could maintain or even expand his farm. None of this help was forthcoming. He wanted the government to recognize that farming is a difficult but potentially profitable venture for the individual and for the nation, which should be given the support necessary.

Respondents contrasted the relative neglect of farmers currently with what prevailed in the past. In the Eastern region communities with a long history of cocoa farming, farmers recounted how COCOBOD had been assiduous in supervising farms, providing labour and giving support to farmers. Through its programmes, it demonstrated a strong interest in the cultivation of cocoa, which motivated farmers. Many wanted a return to those times when cocoa production attracted the attention of policymakers and being a cocoa farmer was held in high esteem in society.

Table 7.5 reports cocoa farmer households’ views on what should change in cocoa farming to make cocoa farming attractive to the youth. The item ranked foremost was provision of credit for inputs, and second was an increase in the producer price of cocoa. Other suggestions included the supply of equipment and facilities such as Wellington boots, machetes and spraying machines. The farmers recommended that young people be given general education and more specific training about both the importance of cocoa and best practices in the sector.
8. Key Issues for Sustainable Cocoa Production

The previous sections synthesise key findings from research carried out along the global cocoa-chocolate value chain and through an in-depth study of cocoa farmers within Ghana. Part of the research process subsequently involved a workshop held in Accra with 34 invited stakeholders from the cocoa sector. Participants came from a range of organisations including COCOBOD, Government Ministries, industry associations, non-government organisations, international donors, Cadbury and researchers. This section synthesises key issues raised at the workshop, and identifies approaches to tackling each issue, along with potential stakeholders who could play an important role. The workshop provided an important opportunity for frank discussion of the long-term challenges to sustainable production facing the cocoa sector, and the need for integrated strategies involving multiple stakeholders both within Ghana and the wider global value chain.

8.1 Income and Poverty

The government has identified agriculture, and the production of cocoa in particular, as having the potential to make an important contribution to economic growth and to Ghana meeting the Millennium Development Goals. However, this study found that there is still a long way to go before sustainable poverty reduction is achieved for all cocoa farmers. Households surveyed in this study were found to have an estimated mean per capita daily income from cocoa alone of US$0.42, and a mean per capita daily income from cocoa and all other sources of US$0.63. However, there are variations by district. New Talfo farmers have on average the lowest mean per capita income per day at just US$0.33. This contrasts with farmers in Aflao Mampong who have a similar profile in terms of the relative importance of cocoa in their livelihoods portfolio, but whose per capita incomes from cocoa are the highest at 0.56 cents (and where overall household incomes of US$0.84 per capita per day are also higher than the other regions).

Enhancing incomes and the sustainability of cocoa production requires simultaneously addressing a number of issues, and the involvement of a number of actors within the cocoa value chain. The key issues identified by this study are considered below.

8.2 Credit and Finance

Issue:

Lack of adequate access to finance and credit has become a major problem for cocoa farmers. Before liberalising the domestic purchasing of cocoa, the Produce Buying Companies could make cash advances to cocoa farmers on the basis of future cocoa sales. With multiple LBCs it has become difficult to operate a similar loan scheme because of the risk of farmers selling to another LBC. Cocoa farmers do not see Rural Banks as friendly institutions and are therefore wary of approaching them for loans. On their part, banks are reluctant to provide credit to farmers who see very little with formal financial institutions. Many farmers who want cash have resorted to the informal credit market, and moneylenders in the communities who charge high interest rates and demand a cocoa farm, a house or some other valuable asset as collateral. Some farmers who were unable to make repayments have lost their farms through such loans.

Proposals:

- One approach is to develop credit unions and solidarity saving/credit schemes like ‘susu’ in the communities. Where farmers collectively join a scheme, they are more likely to perceive it as a friendly institution, and group pressure can be applied when an individual farmer is at risk of defaulting on repayments.

Clement, 21 years old, exemplified this paradigm shift in his own aspirations. Clement works as a mason, and plans to start a cocoa farm alongside that trade. As a first step, he might have to enter into a lease agreement with a landowner, or act as a caretaker for a cocoa farm. Through this he would earn money to buy his own land. He does not anticipate that he would have a problem holding two occupations, if he needed to be away on a building project for short durations, he would have his father or someone else look after the farm. However, Clement says he would not want his children to be cocoa farmers; he would prefer them to attain a high level of education and acquire a good job that would earn them enough money to obviate the need to farm. Instead, they would have the legacy of their father’s farm, and they could hire someone to manage it.

In general, the attitude of the young people to farming was mixed; they acknowledged the role of cocoa in contributing to the livelihoods of their families, and in their upkeep and education. When it came to the role of cocoa farming in their own future, some saw it as a viable way of earning a living, but the majority did not. However, the majority also stated that, if the conditions of cocoa farmers were to improve significantly, then they would be willing to go into cocoa farming – if not as a full-time occupation, then as a complement to whatever other vocations or lines of work they pursued.
8.3 Production

Low levels of productivity are still a significant obstacle to achieving sustainable cocoa production. The cocoa sector on average obtains 350-400 kilograms per hectare (less in the areas surveyed for this case study) as compared with rates of 1000 kilograms per hectare and over in some cocoa-producing countries. The ability to expand output by extending the area of land used in cocoa production is constrained because of the scarcity of suitable land. Therefore raising productivity on existing land, or re-establishing (replanting) cocoa on once used cocoa lands is crucial to attaining longer-term growth and sustainability of production in the cocoa sector. However, there are a number of challenges in achieving this.

8.3.1 fertiliser

Issue:
There have been problems in the adoption of fertiliser. Many farmers complained that it was expensive and beyond their means. Many of the farmers who applied fertiliser did not apply it in the recommended dosages. This rendered the fertiliser ineffective and further discouraged farmers. Adoption of fertiliser seems to be higher among younger farmers and also higher among male than female farmers.

Proposals:
There needs to be more farmer education as part of the promotion exercise, with a focus on reaching older and female farmers. Sustainable credit facilities should be instituted to allow many more farmers to get access to fertiliser. The bonus paid by COCOBOD to farmers after the season could be given out just after the season closes, which is when fertiliser application is recommended. This will require an effective cocoa or general extension service that currently does not exist in Ghana (see below).

Key actors to involve:
COCOBOD, MOFA, government, fertiliser companies.

8.3.2 Hybrid cocoa seeds and seedlings

Issue:
The use of hybrid seeds and seedlings is central to the improvement of productivity on cocoa farms. The Seed Production Unit of COCOBOD produces hybrid cocoa seeds and seedlings for farmers. Farmers are encouraged to replant the cocoa on their old farms with the hybrid varieties or at least plant the hybrid variety on new farms. Many farmers still plant the old variety from seeds obtained from pods or seedlings from their farms. Many farmers do not understand that this is bad practice from a genetic, and productivity, point of view. Many farmers also claim they cannot afford to buy the hybrid pods. Some farmers who attempted to buy hybrid pods or seedlings complained they had to travel long distances and make several trips to obtain them.

Proposals:
• Expand a programme of mass production and distribution of cocoa hybrid seeds and seedlings to ensure availability to all farmers engaged in new plantings. There is the need to expand the locations of seed gardens at district level and explore whether the private sector (for example LBCs) could play a role in the delivery of hybrid seeds and seedlings alongside COCOBOD.
• The hybrid pods need to also be produced to be ripe at the time of the starting of the rainy season. This will require specific measures (such as irrigation of the parent plants) to get the pods to ripen at the correct time for planting.
• A programme to subsidise hybrid pods and seedlings could be extended. Even though this could be costly initially, the expected outcome of higher yields from new plantings in the next 20 to 30 years strongly favours such a policy.
• There is a continued need for cocoa research to provide even better planting material and new techniques for controlling the many pests and diseases of cocoa in Ghana in an efficient and cost-effective manner.

Key actors to involve:
COCOBOD, MOFA, Licensed Buying Companies.
8.4.2 Land

issue

The problem of access to land for cocoa farming and the possibility of obtaining large tracts of land for plantation-type farms should be carefully examined. In the past people who wanted to obtain land for cocoa production have been able to do so. This is why most of the cocoa farmers in the Western and Eastern regions are migrants (about 94%). The share cropping arrangements available in many of the cocoa growing areas allowed landless persons to have access to land and eventually to own part of the land through the abuno arrangement where the farm is divided into two between the landowner and the farm operator. In some places outright purchase of land was allowed, although, in some communities, only usufructuary rights were available. For instance, in the Eastern Region, outright sale of land is not permitted. Even under an abuso arrangement, the operator and the landlord continue to share produce until the trees are dead, at which time the land reverts to the landlord. It therefore becomes important for the operator to ensure that old cocoa trees are replanted so that the farm can continue to bear pods. Women tend to be at a disadvantage when it comes to access to land for cocoa production. Many of the women in focus group discussions complained about the unfairness in the way male landlords give land to them either for purchase or for an abuso arrangement. Caretaking arrangements are usually with men, except for a few mothers and grandparents who allow their daughters or granddaughters to take care of their farms.

Proposals:

- If cocoa farms are to be enlarged as a means of expanding output (as a complement to raising productivity), then contiguous land will be needed. This requires land reforms. One major change that will have to take place will be on the issue of access to land. Adult respondents in the focus group discussions and life history interviews opined that land for cocoa farming would become scarce, and many of the young people in the focus groups, rightly or wrongly, believed that, even at present, it would be difficult for them to acquire land for a farming venture. The land situation is one that many developing countries are tackling. In Ghana, a land reform project is currently underway to look at how best to reform land administration in a way that will aid development.

Key actors to involve:

- Government;
- District Assemblies;
- Community-based organisations;
8.5 Market access

Issue: Market access is a problem for many farmers, particularly those in smaller or more remote locations. Constraints relate to lack of transport, poor roads, lack of communication, and poor information flows. Enhancing infrastructure in the cocoa regions is an important prerequisite for both raising productivity and efficiency of delivery in cocoa production, and developing alternative crops and diversified production activities. Greater focus is therefore needed on improving links of farmers to markets.

Proposals:
- Take steps to provide markets for non-cocoa products in line with the objectives of the Comprehensive Africa Agriculture Development Programme (CAADP).
- Government and private sector programmes to improve roads and transport in cocoa-growing regions, and ensure that roads in these areas link to the main feeder and trunk roads that provide access to more distant markets.
- Expand access to market information and communication systems (eg mobile phones which have experienced a rapid rate of growth in Africa). Farmer cooperation can support the sharing and spreading of information.
- Provision of finance to support market expansion.

Key actors to involve:
- COCOBOD, private sector (commercial firms and cocoa buyers), government (Ministry of Transport and Ministry of Communications), trade negotiators, banks, District Assemblies

8.6 Community-based organisation

Issue: Some key actors in the cocoa sector believe that a critical issue is weak organisation of farmers at the community level. Farmers often do not know where to access services, or where to go for support and local service providers lack resources. Only one LBC is a producer organisation (Nyapa Kokoso). The Cocoa, Coffee and Sheanut Farmers’ Association does not always meet the aspirations of many farmers and some farmers do not count themselves as members. It is better way of organizing farmers and enhancing community-based institutions at a community level would help to articulate concerns of farmers, and spread knowledge on how and where to access support services. The right approach would also seek to support community-based institutions that can articulate farmer demands.

Proposals:
- Farmers need to be sensitised about the benefits of coming together. However, it matters who initiates these actions; when the state organises farmers it creates dependency. A pilot programme involving civil society actors that uses participatory methods to involve farmers in developing production techniques, and links these to social improvements (such as reduction in use of child labour) has shown promising results. A more integrated approach could make a big difference at the community level.
- Pragmatically resources will need to be made available if community-based organisations are to be sustainable.
- Different models and approaches can be tested to assess what works best and can be scaled up.

Key actors to involve:
- Producer organisations, Cocoa, Coffee and Sheanut Farmers’ Association, civil society organisations

8.7 Social amenities

In terms of social amenities, farmers and caretakers would like to have the same amenities as those in the towns and cities. They would like to have a good road connecting their community to the nearest trunk road so that they can get access to markets to sell their produce and buy inputs for their operations. Many farming communities would like to have electricity and good drinking water (at least a hand-dug well or borehole with a pump), public toilets, schools and health facilities. For smaller communities, the priorities for social amenities tended to be roads, schools and clinics but their very basic needs such as potable water and public toilet facilities were highly ranked. Larger communities tend to have these basic amenities but need improvements, such as new pipes to ensure a regular flow of water, or rehabilitation and extensions of existing school buildings. A need for formal employment opportunities came up frequently in focus groups.

8.7.1 Education

Education is a key priority for farmers. All the farmers interviewed indicated that they would like their children to have at least basic and secondary education. Currently, provision of or access to education within cocoa-growing areas is inadequate. Many communities lack school facilities and textbooks, and also teachers, who often do not want to work in rural communities. Primary education is free, but farmers struggle to find resources for uniforms and books for their children to attend school, or to find the fees and related costs to support the children in secondary school. COCOBOD runs a scholarship programme for the brighter children of cocoa farmers. However, farmers complained that poor administration and favouritism created obstacles for deserving children from cocoa farming families, or diverted funds to children of non-farming families. From the 2007-2008 academic year new entrants into senior secondary school will be staying in school for four years, implying that COCOBOD has to increase the scholarship fund to accommodate this.

This and other studies have shown that the provision of adequate education is important to the social sustainability of farming communities. Farmers need better literacy and numeracy to absorb information and knowledge, update their production practices and understand under health and social issues (such as HIV/AIDS). For cocoa farming to be sustainable, it is important to improve the standard of education in the communities.

Proposals:
- Better provision of schools and of school equipment in cocoa-growing areas.
- Incentives for teachers to work in more remote cocoa-growing communities (such as pay increments or access to land for cultivation).
- Review and extension of COCOBOD scholarship programme to ensure it reaches children of cocoa farmers.
- Support through corporate social responsibility activities of cocoa buyers and users could help provide education facilities and teacher incentives.

Key actors to involve:
- COCOBOD, Ministry of Education, District Assemblies, cocoa buyers and chocolate manufacturers

8.7.2 Health

Issue: Health was also ranked highly as an important issue amongst farmers. Remote cocoa-growing areas do not have clinics and so the sick are sometimes carried on the back of young men or on bicycles to nearby clinics. Delays in conveying sick persons to clinics sometimes result in death. Clinics in rural areas often lack adequate equipment or trained health staff. Some people are not able to access healthcare because of the ‘cash and carry’ policy in healthcare delivery, in the absence of health insurance.

Proposals:
- Health workers should be given extra incentives for staying in rural areas.
- Consideration should be given to supporting the enrolment of cocoa farmers in the Ghana Health Insurance Scheme.
8.7.3 Housing

Issue:
Poor housing has been an issue for cocoa-farming communities. Cocoa farmers often aspire to live a good life which includes ownership of a good house built of sandcrete blocks with aluminium or aluzinc roofing sheets. COCOBOD has donated to a fund to establish a housing programme for farmers. The housing scheme is being undertaken by Department of Rural Housing. Cocoa farmers able to afford the cost of a house can apply to the fund for a loan. Farmers in many communities have taken advantage of this scheme, but some migrants would prefer to build in their home town rather than where they work.

Proposals:
- Extend provision of an affordable housing scheme to low-income farmers.
- Allow migrant farmers to decide the location of construction of their house.

Key actors to involve:
COCOBOD, Department of Rural Housing, private housing companies, banks.

8.8 Global value chain

Concentration within the global value chain, and liberalisation of parts of the chain within Ghana, mean that COCOBOD and farmer organisations alone are unlikely to be able to meet the challenges faced by the cocoa sector. A more holistic approach involving all value chain actors is needed to fully achieve sustainability of cocoa production, ensure the position of Ghanaian cocoa on world markets, and advance the contribution of cocoa production to Ghanaian economic development.

8.8.1 Licensed buying companies and purchasing of cocoa

Issue:
LBCs are in a prime position to interface with farmers, and are the main contact point for farmers in the value chain. But LBCs argue that the resources at their disposal are constrained by the international price of cocoa, their share of fund, bottlenecks in the cocoa delivery system, and the time it takes to access payments from COCOBOD. It can take many weeks between an LBC buying cocoa and delivering it to COCOBOD for payment to be made. Delays also cause problems for hauliers. During this period COCOBOD charges interest on monies provided, and LBCs often have to take out overdrafts from banks, increasing costs and reducing their profitability, and hence their ability to help farmers. COCOBOD argues that some LBCs take advantage of loopholes in the system and the need for scrutiny to prevent these misdemeanours causes delays.

Again, competition by LBCs to buy cocoa from farmers has sometimes led to inadequate fermentation of cocoa by farmers with serious consequences for quality. Farmers also complained about cheating by some buying clerks during weighing of cocoa. Although a bag of cocoa is supposed to weigh 62.5 kilograms with an additional 2 kilograms to account for the weight of the jute storage bag, there were occasions when a bag of cocoa weighed far in excess of 64.5 kilograms. Some farmers were of the opinion that the weighing scales are sometimes adjusted by the buying clerks to cheat the farmers and thus that the annual accuracy checks of all LBC cocoa scales were ineffective.

Cocoa is supposed to be paid for with Akuafo cheques. Due to the difficulties of cashing the cheques at Rural Banks, many farmers demand cash for payment when they sell their cocoa. As LBCs are competing for cocoa to buy, they are willing to pay farmers in cash, but this hinders the cultivation of a bank savings culture among farmers, and this in turn makes it difficult for farmers to access credit in the formal financial system. LBCs also complain about the carrying of large amounts of cash by buying clerks, some of whom have absconded with the money.

Proposals:
- Support for health clinics could be provided through corporate social responsibility activities of cocoa buyers.

Key actors to involve:
COCOBOD, Ministry of Health, private health providers and insurance companies, cocoa buyers.

8.8.2 Niche/high-value markets

Issue:
Cocoa-producing countries face many challenges on the international market, including changing consumer demands, falling or variable price, and declining quality of cocoa beans. COCOBOD has played an important role in sustaining the quality and price premium of Ghanaian cocoa, and smoothing seasonal price variations by setting annual minimum price paid to farmers. But COCOBOD needs to be responsive to changing trends in international markets, and ensure Ghana’s position in various corners of the cocoa market. In the mainstream-quality market, where Ghanaian cocoa is well positioned, there needs to be greater observance of bean quality, minimum residual levels and social concerns (such as child labour). In the high-value niche market, where Ghana has the potential to grow, there is a further potential for the expansion of unique or single origin, Fairtrade and organic cocoa.

Addressing these challenges involves innovation and implementation of systems to assure enhanced bean quality, meet buyer demands for traceability (particularly in niche markets), and return higher premiums to farmers or producer groups that opt to sell Fairtrade or organic cocoa. Particular challenges include lack of information to farmers about the different market options outside Ghana, the costs of acquiring and sustaining the capacity and meeting the inspection fees of Fairtrade and organic certification; the costs and logistics of implementing systems of traceability that are efficient and do not cause undue delays in delivery. Addressing social issues such as child labour is a sober socio-economic challenge than the cocoa sector alone can address and should be considered as part of the National Plan to Eliminate Child Labour – recently produced by the Ministry of Manpower and Youth Employment. The costs of accessing niche markets are often borne by farmers and producer groups that have limited resources to meet them. Niche markets are not a panacea for all cocoa producers. However, all actors in the value chain could work collaboratively to support those farmers wishing to access niche markets, and spread some of the benefits of niche markets into the mainstream market where a wider number of small producers are located.

As Ghana’s cocoa production increases, steps should be taken to increase and promote the expansion of local and regional markets for cocoa products as cocoa is such a good foodstuff. Value addition to beans to produce cocoa powder, cocoa butter and cocoa liquor may bring in higher returns to the cocoa sector within Ghana. Ghana could also participate in the returns from value addition through external investment in cocoa processing and manufacturing along the value chain in international markets.

Proposals:
- Provide support and advice to farmers and producer groups wishing to pursue origin, organic and Fairtrade cocoa could be provided by COCOBOD working with other actors in the value chain, including buyers and relevant civil society organisations.
- COCOBOD and buyers purchasing cocoa destined for niche markets need to ensure that adequate price premiums and financial incentives are passed back to participating farmers and producer groups, and outweigh their cost of participation. As a marketing
8.9 Making cocoa farming ‘a real job’

Issue:
The average age of cocoa farmers in this study was 55 years. Many farmers interviewed did not want their children to work in the cocoa sector and young people with some education were more likely to leave cocoa for better remunerated work elsewhere. The study found that the aspirations of young people (and their parents) include education, salaried employment, a life of relative comfort in an urban setting, and the relative status associated with a non-farming profession. These are aspirations that, for many respondents, not compatible with cocoa farming which provides irregular income, involves living in a rural area with inadequate social amenities, and receives little recognition from the society or from the government.

On the other hand, when young and educated people were involved in cocoa production, they were found to be more productive than older farmers, and more likely to introduce innovative production methods. This suggests that when people regard cocoa farming more favourably, and might encourage them to at least consider it as a livelihood activity.

Proposals:
• The Ministry of Manpower and Youth Employment is currently running a National Youth Employment Programme, which has a Module on Agribusiness. This provides an opportunity for young workers to be informed about the potential within the cocoa value chain.
• Government, COCOBOD, LBCs, farmer organisations and chocolate manufacturers should work together to formulate a plan to introduce youth to cocoa farming. The government must be willing to invest in youth, test different approaches and generate new farmer incentives for engaging in cocoa production.
• Youth perception of the importance of cocoa needs to be enhanced through the demonstration of greater commitment to cocoa farmers by national government and chocolate processors and manufacturers within the global value chain.

Key actors to involve:
Government, relevant ministries, COCOBOD, cocoa processors and chocolate manufacturers
9. Concluding remarks

This study has examined rapid changes in the chocolate confectionery sector over the past decade. Consumers have become increasingly discerning, markets have become more differentiated, and significant growth has taken place at the high-value niche end of the market. The whole cocoa-chocolate value chain needs to adapt to a more nuanced consumer focus. However, there is currently an imbalance within the cocoa-chocolate chain between manufacturers and processors at one end and cocoa producers and farmers at the other.

Processors and manufacturers have been better able to understand and adapt to changing consumer requirements. They have developed strategies to expand higher value activities, particularly in relation to the high-value niche and mainstream quality segments of the market, where social and environmental concerns are growing. Whilst there has been an increased concentration amongst processors and manufacturers, in most cocoa-producing countries economic liberalisation and deregulation of marketing boards has increased fragmentation of supply. Cocoa producers have seen a secular decline in cocoa prices; farmers have been less able to sustain good farming practices; and a decline in overall quality of cocoa beans produced has taken place. They have also been at risk of exposure for poor social and environmental practices, particularly in relation to the worst forms of child labour.

This is putting pressure on processors and manufacturers. Uncertainty over the sustainability of cocoa production could put the future supply of quality cocoa at risk.

Ghana is not immune from these trends. But the maintenance of COCOBOD as a cocoa marketing board against international pressure for deregulation in the 1980s has provided farmers with some protection...
Appendix 1: An empirical analysis of performance and welfare indicators among the sampled cocoa farm households

The framework

The field data collected enables a test of the following two sets of hypotheses, that:

a) Performance $= f$ (productivity, location, market access (to farm inputs), production costs, cooperation, extension, access to credit)

b) Welfare $= f$ (productivity, location, market access (to farm inputs), production costs, cooperation, extension, access to credit)

where, performance indicators are measured as either:

- Net income from cocoa (gross income from cocoa net of cost of production)
- Net income from cocoa (gross income from cocoa net of cost of production) per acre per annum
- Net income from cocoa (gross income from cocoa net of cost of production) per capita per annum

and a welfare indicator as per capita household expenditures per annum.

The explanatory/independent variables are measured as:

- Productivity – cocoa output in bags (62.5 kg/acre/annum)
- Location — a dummy variable to denote each of the six (6) cocoa districts separately
- Market access – a dummy to denote access to input market (1 if farmer indicated YES to using market for inputs, zero otherwise)
- Production costs – computed as either total cocoa operating costs per annum or total cocoa operating costs per acre per annum in units of currency
- Cooperation – a dummy $= 1$ if farmer is a member of any group and zero otherwise
- Extension – a dummy $= 1$ if farmer indicates visit by an extension officer, zero otherwise
- Access to credit – a dummy $= 1$ if farmer is able to borrow money if needed, zero otherwise

Information could then be provided to farmers about the commercial benefits they can reap through enhancing quality and supporting Ghana’s position within international markets. COCOBOD could work with processors and manufacturers to advance promotion of Ghanaian-origin chocolate in consumer markets. Consumers could be better provided with information that highlights the social and environmental benefits of buying Ghanaian-origin cocoa and chocolate. This would help to raise consumer awareness of Ghana as a high value producer, even in the mainstream quality market. All actors in the value chain need to work in a more integrated way to benefit both sustainable cocoa production, and a chocolate confectionery sector that is seen to promote the well-being of farmers as well as consumers.

In a differentiated consumer market, routes need to be found through better positioning within the chocolate-cocoa value chain, so that farmers can produce ‘higher value’ beans that generate larger revenues. Higher value relates not only to enhancing the tangible quality of the cocoa as a physical commodity, but also less tangible qualities such as better social and environmental processes through which production takes place, for which some consumers are prepared to pay more. Ghana is already situated within the mainstream quality segment of the market, and has a foothold in the higher value niche market. But, if these segments of the market continue to grow at current rates, it is imperative that it extends its position within them to secure the higher revenues that will help generate the future sustainability of its cocoa production.

Sustainable production requires not only increasing output, but also raising the profile of Ghanaian cocoa as part of a dynamic international sector that attracts younger and innovative farmers. COCOBOD has a key role in addressing the technical issues needed to raise productivity and improve product quality. COCOBOD, Government, farmers organisations and civil society organisations all have a role in helping to enhance the social and environmental processes of production and attaining accepted international standards (including addressing the use of child labour). Producers and manufacturers also have a role by supporting and rewarding the attainment of better quality and good social and environmental practices, for example by enhancing the quality premium paid to reflect rising standards.

Appendices

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Appendix Table 1: Analysis of performance and welfare indicators in the sampled cocoa districts

<table>
<thead>
<tr>
<th>Explanatory Variable</th>
<th>Performance indicator: net income from cocoa (lnNYCOCO)</th>
<th>Welfare indicator: per capita household expenditures (lnPCAPEXP)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regression (1) estimated coefficient</td>
<td>Regression (2) estimated coefficient</td>
</tr>
<tr>
<td>Constant</td>
<td>-30.72891</td>
<td>-27.34881</td>
</tr>
<tr>
<td>Land productivity (log)</td>
<td>0.943511***</td>
<td>0.918436***</td>
</tr>
<tr>
<td>Input market access (dummy)</td>
<td>0.025470</td>
<td>-0.025725</td>
</tr>
<tr>
<td>Access to extension (dummy)</td>
<td>0.266699</td>
<td>-0.266699</td>
</tr>
<tr>
<td>Age (log)</td>
<td>0.294070</td>
<td>0.266699</td>
</tr>
<tr>
<td>Age2 (log)</td>
<td>0.873527**</td>
<td>0.873527**</td>
</tr>
<tr>
<td>Gender (dummy: F=0, M=1)</td>
<td>-0.094657</td>
<td>0.094657</td>
</tr>
<tr>
<td>Total income from sources other than cocoa (log)</td>
<td>0.169743</td>
<td>0.066637</td>
</tr>
<tr>
<td>Per capita income from sources other than cocoa (log)</td>
<td>0.203555</td>
<td>-0.160424</td>
</tr>
<tr>
<td>Dukase (dummy)</td>
<td>0.133686**</td>
<td>-0.133686**</td>
</tr>
<tr>
<td>Total cost of production per acre (log)</td>
<td>0.259416**</td>
<td>0.259416**</td>
</tr>
<tr>
<td>Net income from cocoa per acre (log)</td>
<td>0.234036**</td>
<td>0.160424</td>
</tr>
</tbody>
</table>

The estimated equations are:

**Performance** = \( \beta_0 + \beta_1 \text{productivity} + \beta_2 \text{location} + \beta_3 \text{market access} + \epsilon \)

**Welfare** = \( \alpha_0 + \alpha_1 \text{productivity} + \alpha_2 \text{location} + \alpha_3 \text{market access} + \epsilon \)

where \( \beta \) and \( \alpha \) are estimated parameters and the \( \epsilon \)'s obey the classical normal regression assumptions. From equation (1) for example, it is hypothesised that performance, as measured by, say, net income from cocoa per acre, is influenced positively by productivity (\( \beta_1 > 0 \)). The a priori expectations are therefore:

\( \beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 > 0, \beta_6 > 0, \alpha_1 > 0, \alpha_2 > 0, \alpha_3 > 0, \alpha_4 > 0, \alpha_5 > 0, \alpha_6 > 0 \)

The estimated parameters are validated using the student's t-statistic. The coefficients \( \beta \) and \( \alpha \), for location are ambiguous in the performance and welfare functions. However, differences in performance and welfare indicators are estimated separately using the following regression analysis:

\( Y_i = \beta_0 + \beta_1 \text{location}_i + \beta_2 \text{market access}_i + \epsilon \)

where \( Y_i \) is the performance or welfare indicator. Since the location variables are measured as dummy variables, the intercept term \( \beta_0 \) serves as the reference location point, with respect to the indicator being measured. The other estimated coefficients are interpreted as the difference in the indicator between the reference location and that location. The location of reference in this analysis is the location with the largest/highest measured indicator. Significance differences are measured by the significance in the computed t-statistics.

The analysis

In Table 1 column 2 (Regression 1), the estimated coefficients for the performance indicator of net income from cocoa are presented. The estimated coefficients in column 3 (Regression 2) test the inclusion of the variable value of total income from other sources other than cocoa, rather than the per capita value of the total income from sources other than cocoa in Regression 1.

Access to productivity-enhancing variables appears key in increasing cocoa farm incomes. Access to extension services and input markets are paramount. Provision of roads to connect these cocoa communities to market towns and centres needs attention. An effective organisation of the farmers could help enhance their social capital and help increase their incomes.
Appendix 2: Bibliography


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