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Cocoa is Ghana, Ghana is Cocoa

Evaluating Reforms of the Ghanaian Cocoa Sector

Helena Lundstedt
Sara Pärssinen

Advisor: Yves Bourdet

Associate Professor

Abstract

The cocoa sector is of vital importance to Ghana, employing millions of people and contributing important revenues to the government. In order to raise prices received by producers and to increase overall performance of the cocoa sector, a number of reforms were undertaken, where the most important opened up the internal market to competition. The thesis examines how the reforms of the Ghanaian cocoa sector have affected its performance in terms of producer prices, production, yields and quality levels. The conclusion is that through the reforms producer prices, production and yields have increased, while quality levels have been maintained. In comparison with other cocoa producing countries that have undergone more extensive liberalisation reforms, the performance of the Ghanaian cocoa sector is still relatively low and could increase if further liberalisation takes place.

Keywords: Ghana, cocoa, market chain, liberalisation, competition, performance.

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Abbreviations

CMB	Cocoa Marketing Board
CMC	Cocoa Marketing Company
COCOBOD	Ghana Cocoa Board
CSD	COCOBOD Service Division
CSMC	Cocoa Sector Marketing Committee
CTOR	Cocoa Take-Over Receipt
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
ICCO	International Cocoa Organisation
IMF	International Monetary Fund
LBC	Licensed Buying Company
NCG	Nigerian Cocoa Board
NGO	Non-Governmental Organisation
PBC	Produce Buying Company
PC	Purchasing Clerk
PPRC	Producer Price Review Committee
QCD	Quality Control Division

1 Introduction

The popular saying *Cocoa is Ghana, Ghana is Cocoa* illuminates the importance of cocoa production in Ghana.[1] Ghana is one of the largest suppliers of cocoa on the world market and its cocoa sector employs millions of people. It is not only small-scale farmers that are dependent on earnings from cocoa, but also the Ghanaian state, and now more than ever since cocoa in 2004 became Ghana's main source of export revenue.[2]

The cocoa is used to extract cocoa butter, cocoa paste and cocoa powder which in large parts are consumed as chocolate confectionery and other cocoa-based food products. Cocoa is a commodity that directly links consumption patterns of consumers in the developed world with the overall well-being of farmers and rural workers in developing countries. The demand for the product increases each year as a result of rising living standards, development of new products containing cocoa, advertising campaigns and reports of the health effects of chocolate that reach the market in developed countries.[3]

In many cocoa producing countries where the cocoa sector was controlled by the state, the sector has gone through a liberalisation process. In Ghana, the cocoa sector has not been as liberalised as in its neighbouring cocoa producing countries and is thus still, to a large extent, controlled by the government. A partial liberalisation of the sector has however taken place, opening up for the possibility of increasing production and higher producer prices.

1.1 Purpose

The purpose of the thesis is to analyse and evaluate the structure and reforms of the cocoa sector in Ghana through chosen indicators of performance. The thesis also suggests further reforms to improve the sector's performance by discussing possible gains and risks of further liberalisation.

[1] Ministry of Finance and Economic Planning (1) (2009-07-22).
[2] ICCO, 2006, p 20
[3] Ibid, p 13-16

1.2 Methodology

In order to obtain information, interviews and meetings were held with representatives of farmers, private buying companies, the Ghanaian government, University of Ghana and other stakeholders on the internal cocoa market in Ghana. Additionally, various sources of literature have been used as well as statistics obtained from the Food and Agriculture Organisation (FAO), International Cocoa Organisation (ICCO) and Ghana Cocoa Board (COCOBOD).

Caution has to be taken to the fact that information given in interviews and meetings may have been misinterpreted and/or not correctly given, due to underlying interests or different forms of pressure of and on the respondent. The answers given could also have been modified in order to fit assumed interests of the interviewers. The information used in the thesis has, in most cases, been confirmed in other interviews or in other sources.

1.3 Outline of the Thesis

The thesis is organised as follows. Section 2 presents the world cocoa market – cocoa producing countries, world supply and demand of cocoa and development of world market prices. Section 3 gives a summary of liberalisation processes in cocoa producing West African countries. Section 4 focuses on the Ghanaian cocoa sector, with an overview of the economic background followed by an exhaustive presentation of the internal and the external cocoa markets. In section 5, the degree of competition on the internal Ghanaian cocoa market is examined. Section 6 evaluates the performance of the Ghanaian cocoa sector and relates it to institutional arrangements and reforms of the internal market chain of cocoa. The thesis is concluded and gains and risks of further liberalisation are discussed in section 7.

2 World Cocoa Market

In order to more fully understand in what context the Ghanaian cocoa sector operates, this section gives an overview of the market forces regulating the international cocoa market and the development of the world market price as well as an introduction to the production of cocoa and the cocoa producing countries.

2.1 Supply, Demand and World Cocoa Price

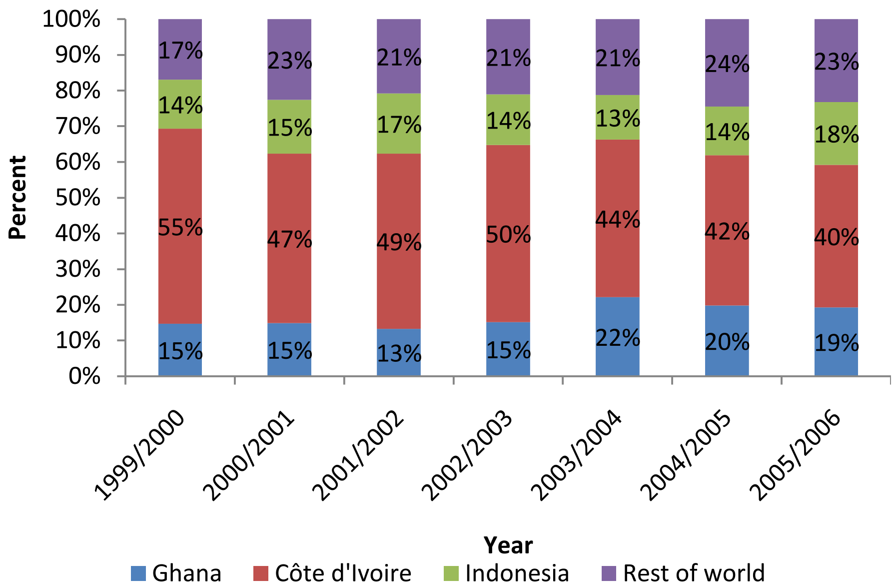
Cocoa is grown on trees and the cocoa fruits grow directly on the stems and branches. There exist different types of trees, all having in common that it takes a couple of years after planting until they bear fruit, which they do for approximately 30 years. Cocoa is reaped continuously throughout the year, since the seed cases do not ripen at the same time. In West Africa they are collected most intensively in the harvest seasons December and June, together constituting a crop year. The cocoa fruits are cut down by hand, often using long machetes. Machines cannot be used because it is not possible to harvest all beans at the same time. The seeds are fermented on the ground for around seven days and dried for approximately three weeks, before they are packed in bags and exported.[4]

Although cocoa originally came from South America, West Africa is the primary producer of cocoa today. Côte d'Ivoire, Ghana, Nigeria and Cameroon produce two-thirds and export three-quarters of total world cocoa production. Ghana was the primary producer of cocoa for most of the 20th century, and is today the second largest producer after Côte d'Ivoire.[5] The third largest producer is Indonesia and other big producers are Brazil, Malaysia and Ecuador.[6] Figure 1 illustrates the development of exports of cocoa by the three largest cocoa producing countries. The share of total exports supplied by Côte d'Ivoire decreased by 15 percent because of its civil war, while the share supplied by Ghana increased from 15 to 19 percent. The amount supplied by Indonesia remained fairly constant, except for a substantial increase in the last crop year. Around 30 countries belong to the category labelled "rest of world",

[4] Bartholdson & Valentin, 2006, p 14 and Interview Tetteh Quarshie farm (2009-04-17)
[5] Bartholdson & Valentin, 2006, p 14
[6] ul Haque, 2004, p 2. Statistics from FAO (2009) indicate that Ghana since crop year 2007/08 is the third largest producer in the world after Côte d'Ivoire and Indonesia. It is hard to determine which country that is the second largest, since Ghana's and Indonesia's production volumes have been of almost equal size the last years.

indicating that they are small suppliers of cocoa, even if their share has increased. Most exports are directed to Europe which is both the biggest processor and consumer of cocoa.[7]

Figure 1: Exports of cocoa, by main exporting countries, 2000 – 2006

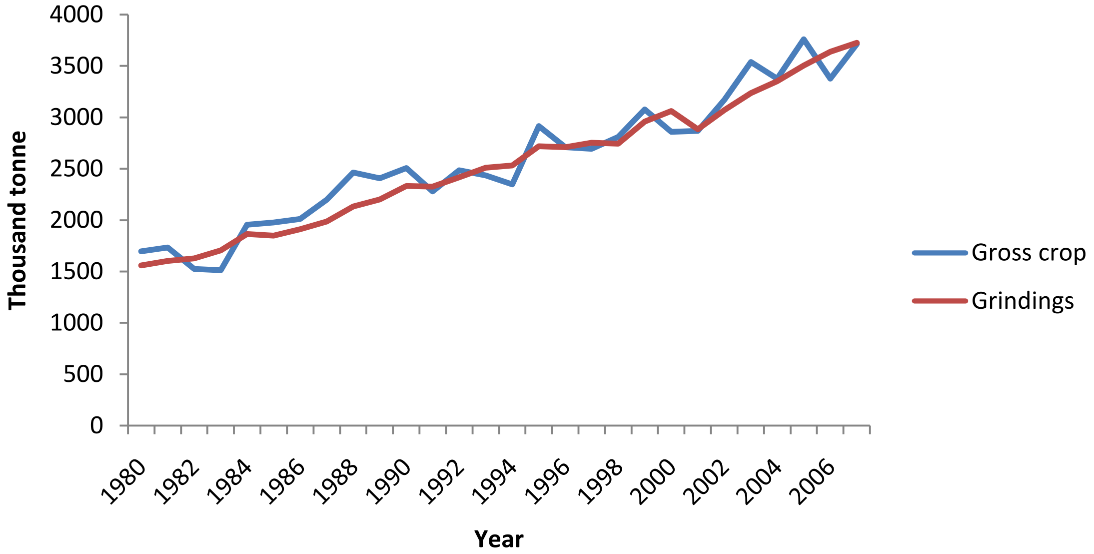


Source: ICCO, 2008, p 12; ICCO, 2006, Annex 1, p 12 and own calculations

During crop years 1998/99 to 2007/08 global cocoa production increased from around 2.8 million tonnes to 3.7 million tonnes, with an average annual growth rate of 2.7 percent. Consumption showed similar patterns, with an average annual increase of 2.9 percent, from 2.9 million tonnes to 3.7 million tonnes.[8] Figure 2 portrays supply and demand of cocoa on the world cocoa market between 1980 and 2007, showing that they on the whole were balanced. Demand is measured by total grindings of cocoa, and supply is measured by gross crop production of cocoa. During the second half of the 1980s, a divergence existed between supply and demand, caused by excess production of cocoa. The cocoa price is very sensitive to changes in supply since supply cannot quickly adjust to changes in demand, due to slow maturity of cocoa trees and inability of farmers to switch to other crops in times of supply surplus.[9]

[7] Bartholdson & Valentin, 2006, p 13
[8] ICCO, 2008, p 3
[9] ICCO, 2006, p 7

Figure 2: Global supply and demand in the world cocoa market, 1980 – 2007



Source: ICCO, 2008, p 29

In conformity with prices of other primary products, the cocoa price has been categorised by wide fluctuations and a declining relative price. Many developing countries are highly dependent on commodity trade and fluctuations of the world market price of such products are of large concern to policy makers.[10] Commodity prices tend to change from day to day, as well as varying during planting, harvesting and exporting periods of the crop, making the price difficult to forecast.[11]

A reason for the declining relative price of cocoa is the increase of cocoa supplied on the world market; total supply has doubled today compared to the beginning of the 1980s, see figure 2. Several cocoa producing countries entered the market during the 1980s because of the at that time relatively high price of cocoa, and, more recently, cocoa supply has increased due to more efficient processing methods.[12] Figure 3 portrays the development of the world price of cocoa expressed in current and constant prices. The price decreased steadily until the beginning of the new century when it recovered slightly. Another factor contributing to the pattern of falling prices was the tendency of industries to hold large stocks of cocoa, which meant that market participants did not dread the risk of future shortages.[13]

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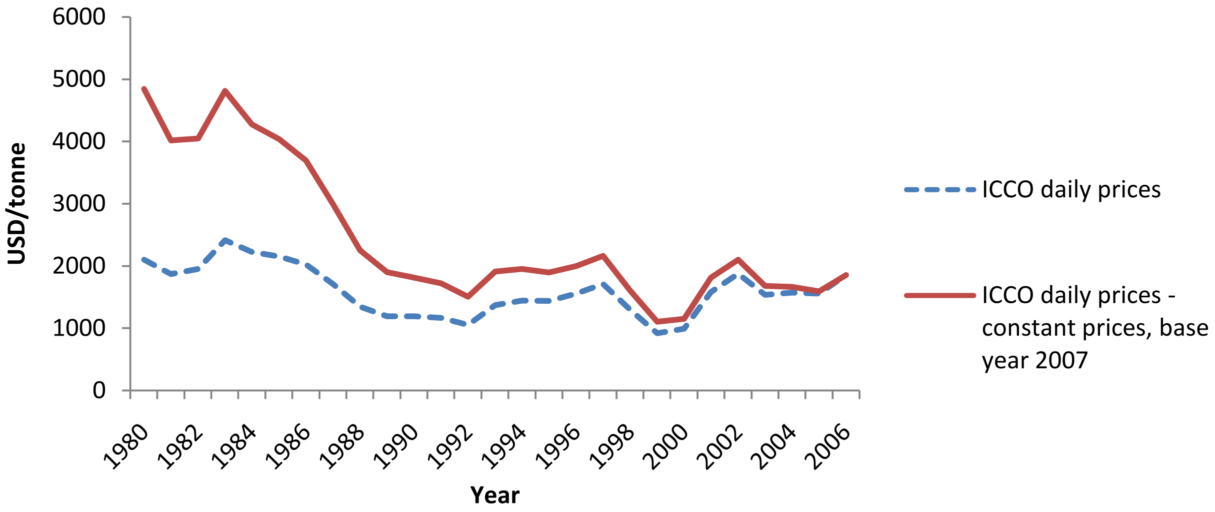
[10] Bartholdson & Valentin, 2006, p 13
[11] ICCO, 2006, p 7
[12] Bartholdson & Valentin, 2006, p 15
[13] ICCO, 2006, p 3

Figure 3: International cocoa prices, 1980 – 2007



Source: ICCO, 2008, p 30

As illustrated in figure 3, the price decline was reversed in 2001. Several factors contributed to the increasing prices of which the most influential were changing stock-holding behaviour of the industries, social unrest in Côte d'Ivoire and lower yields of cocoa. The lower yields were caused by farmers' lower ability to maintain production levels due to a period of lower incomes and thus absence of sufficient resources.[14] After the peak around 2002/03, prices have once again declined, inter alia due to increased supply from the largest producers. Moreover, unstable weather conditions, instability in Côte d'Ivoire, uncertainty and lack of information about risks and market imperfections as well as the mentioned fundamental features of commodity markets in general, result in volatile prices.[15]

2.2 Production and Institutional Structure

There exist large differences between cocoa producing countries concerning size and effectiveness of cocoa farms. In Brazil and Malaysia farms are big and run like commercial firms in the sense that they view profit as the most important reason for growing cocoa and are more prepared to withdraw when market conditions are unfavourable. In West Africa, most of the cocoa is produced on small family farms where income received from the cocoa harvest constitutes the livelihood of farmers.[16]

[14] ICCO, 2006, p 5
[15] ICCO, 2008, p 7-9
[16] Bartholdson & Valentin, 2006, p 15-16

The cocoa sector can be administered in different ways. One way is to let market forces determine prices and quantities produced. This situation is characterised by many private actors and little intervention from the government. This usually enables producers to receive higher price for their harvests, but the volatility of the market price also makes them more vulnerable. Despite the fact that the cocoa market is under influence from world market forces, the state can intervene to coordinate private actors and control quality and level of taxation of the cocoa produced.

Different from the free market approach is the marketing board system where the state controls production methods and the internal market chain of cocoa. There may be a few private actors that have influence over certain parts of the production chain, but it is the government that sets producer prices and handles exports. If producers are unorganised, they have little or no influence over their revenues.

In the middle of these two extremes is the system with a stabilisation fund. It resembles the marketing board system in the sense that producer prices are determined by the government and that the fund handles exports and domestic markets. But it does not exercise control over the physical handling of the crop, even though it determines the agents that can act on the internal market. The prices are set to prevent fluctuations and the idea is to accumulate reserves when world market prices are high and to use these reserves to support cocoa producers when world market prices are low.[17] The characteristics of different marketing and pricing systems are portrayed in table 1.

[17] Varangis & Schreiber, 2001, p 40-41

Table 1: Characteristics of different cocoa marketing and pricing systems

Characteristics	Free market	Stabilisation fund	Marketing board
Legal ownership of crop	Traders, exporters	Traders, exporters	Marketing board
Physical handling of crop	Traders, exporters	Licensed private agents	Marketing board
Domestic price setting	Market forces	Stabilisation fund	Marketing board and government
Price stabilisation	None	Yes	Yes, but not explicit
Taxation	Absent or very low	Mainly explicit	Implicit
Marketing costs and margins	Low	Medium to high	High
Producer prices	High	Medium to low	Low

Source: Varangis & Schreiber, 2001, p 41

Most cocoa producing countries have to various degrees adopted market-oriented reforms. The cocoa sectors in Brazil, Indonesia, Malaysia and Nigeria, for example, all operate under such conditions. Even in countries where the government has more influence over the production chain, such as Cameroon, Ghana and Côte d'Ivoire, the systems have been partly liberalised. Following liberalisation of cocoa markets, the price that farmers receive for their products is largely determined by the world market price. This indicates that farmers may receive higher, but more insecure earnings, due to on the one hand volatile world market prices and on the other hand country-specific production and economic conditions. A long-term negative consequence of liberalisation may thus be that farmers will not be protected in periods of low market prices, since it is, as mentioned, hard to adjust governmental policies according to volatile market prices. A positive aspect of liberalisation is that marketing costs and taxes appear to be lower in countries that are liberalised, indicating more efficient production.[18]

[18] ul Haque, 2004, p 8 and Varangis & Schreiber, 2001, p 40-42

3 Liberalisation Reforms in West Africa

To get a better picture of the issues at stake in Ghana, a brief overview of liberalisation reforms in other West African countries is presented in this section. Since Ghana in terms of production conditions and market structure has less in common with cocoa producing countries on other continents than with its neighbouring countries, these countries have not been taken into account as reference material.

The former colonial powers France and Great Britain established stabilisation funds and marketing board systems. These systems turned out to be inefficient and their efficiency declined further after independence was gained, leading to large costs of operations mainly paid by cocoa producers. As a condition for the Structural Adjustment Programmes, the World Bank required reforms of the cocoa sectors, in order to diminish operation costs and raise producer revenues. A free market system was thought to give farmers better prices in the long term. All cocoa producing countries in West Africa undertook some reforms – Nigeria, Togo and Cameroon reformed the whole system, while Côte d'Ivoire and Ghana chose a more partial and gradual approach to liberalisation.[19]

3.1 Nigeria

Until the 1970s, Nigeria was one of the leading suppliers of cocoa, but due to low producer prices, migration from the countryside to the cities and cocoa pod diseases, Nigeria today accounts for only six percent of total global supply. During the decline period, the marketing board Nigerian Cocoa Board (NCB) was the sole buyer and exporter of cocoa and controlled the internal market chain. The NCB was abolished in 1986, as a part of more general economic reforms, and prices were thus set by market forces, leading to higher but more volatile prices and an abandoned quality control. This, in addition to the entry of inexperienced middlemen in both internal and external market chains, led to quality deterioration and loss of the cocoa premium for Nigeria, resulting in lower sales and revenue losses for the government. Farmers formed cooperatives to sell directly to exporters, in order to avoid problems with inexperienced middlemen. As an effect of internal market liberalisation, private players have started to provide additional services to farmers, leading to

[19] ul Haque, 2004, p 7-8 and Laven, 2005, p 18

higher quality control and credit possibilities. These private initiatives are to be encouraged in other fields, such as research, in order to strengthen cooperation between different actors on the market chain.[20]

3.2 Côte d'Ivoire

Côte d'Ivoire accounts for around 40 percent of total cocoa supply. Prior to liberalisation, private exporters were allowed to operate on the market even if both internal and external markets were controlled by a state-owned company. In the middle of the 1990s, the state's control was diminished, in order to reduce marketing costs, raise producer prices and encourage the creation of producers' organisations. The reforms increased production, but did not lead to sufficient changes for farmers, which brought about further liberalisation reforms in 1999. This led to a reconstruction of the state owned company, which only got a limited monitoring role, and a full liberalisation of the producer price. However, the contemporary decline in world market prices led to lower revenues for farmers, who protested against the newly installed system. Due to the civil war, which started in 1999, Côte d'Ivoire's production decreased and hence the world market price increased, since the country has a significant share of world cocoa production. This has, however, not benefited producers in Côte d'Ivoire. In recent years the government has tried to strengthen the position of farmers by providing information about prices and encouraging farmers to form cooperatives to gain more bargaining power.[21]

3.3 Cameroon

Until 1990, the cocoa chain in Cameroon was controlled by a stabilisation fund that managed exports, price settings and quality controls. Buying companies were allowed to operate under regulations on the internal market. Due to declining international cocoa prices and overvalued exchange rates, the fund cut producer prices and faced serious financial problems. This led to a reconstruction of the sector in 1994, including a reform of the stabilisation fund and introduction of a floor price for producers. A more thorough liberalisation was carried through in crop year 1994/95, leading to a free market system where prices and margins are totally determined by the world market and any company can buy and export cocoa. The former stabilisation fund is now in charge of quality control and maintaining statistics. The reforms resulted in over two hundred purchasing companies, but only a dozen of them are considered

[20] Laven, 2005, p 18-21 and Varangis & Schreiber, 2001, p 65
[21] Laven, 2005, p 21-23

large actors. As an effect of liberalisation, producers receive higher prices. Cocoa quality has been negatively affected, but this may not entirely have been due to liberalisation since production of cocoa at the same time was shifted to less productive sites.[22]

3.4 Togo

Togo is one of the smallest cocoa producers in West Africa, accounting for only one percent of total global supply.[23] Despite this, the cocoa sector plays an important role in the country's economy. Prior to liberalisation, cocoa prices as well as external and internal market were controlled by a marketing board. The country undertook a profound liberalisation of its cocoa sector in 1996, in order to increase producer incomes and develop private export participation, and maintain a high quality of produced cocoa. This was achieved through an inclusion of the private sector in the design stage of the reform process, a clear dialogue with all participants in order to coordinate all interests and a detailed information system on international market prices to enable producers to more easily choose between buyers and receive proper prices. The reforms increased the producers' share of the world market price from under 60 percent before the reform to around 80 percent in 1997, resulting in increased production. Due to the cooperation between the government and private actors concerning quality controls, the high quality level was maintained and Togo still receives a higher cocoa price than average world market price.[24]

In sum, as a result of its rapidly implemented reforms, Nigeria's cocoa quality decreased significantly, the country lost its price premium and experienced decreasing cocoa sales. In Côte d'Ivoire production of cocoa increased, which turned out to be unprofitable since the country is a price-maker on the world market, leading to deteriorating cocoa prices. The country was later afflicted by social unrest, and liberalisation did thus not on the whole improve the performance of its cocoa sector. In Cameroon and Togo, liberalisation resulted in increased production and higher producer prices. The quality level decreased in Cameroon, but it was maintained in Togo, mainly because the private sector was included in the design stage of the reform process and because Togo introduced a detailed information system, aiding farmers in their choice of buyers.

[22] Varangis & Schreiber, 2001, p 47-49
[23] ICCO, 2008, p 36
[24] Laven, 2005, p 26-28 and Varangis & Schreiber, 2001, p 78

4 Structure and Reforms of the Ghanaian Cocoa Sector

This section starts with a background to the structure and reforms of the cocoa sector in Ghana, focusing on the development of the cocoa sector and Ghana's overall political and economic development. Thereafter the cocoa sector is presented, starting with the structure and implemented reforms of the sector and continuing with a presentation of the functions of the internal and external market chains.

4.1 Background

The colonial government was until the end of World War II little involved in the cocoa sector which was dominated by private international manufacturing and processing companies. For the purpose of gaining bargaining power towards international companies, purchasing of cocoa was after the war overtaken by the British government. In 1947 the Cocoa Marketing Board (CMB) was established and given sole responsibility of exporting cocoa through its wholly-owned subsidiary the Cocoa Marketing Company (CMC). The main beneficiary of export earnings was the government. Several licensed buying companies (LBCs) operated on the internal market as buying and transportation companies for the CMB.[25] The producer price was determined by the world market price and a tax, but the system was eventually abandoned in favour of a marketing board system with fixed nominal producer prices that granted the CMB high shares of the world market price.[26]

After independence in 1957 the responsibilities of the CMB and the structure of the cocoa sector remained unchanged until 1961 when the multiple buying system was replaced by a monopsony system. This system was abandoned as early as 1966 and the system with licensed buying companies was re-introduced. At the same time a state-owned buying company was established, the Produce Buying Company (PBC), to operate alongside the private-owned buying companies. The monopsony system was introduced again in 1977 with the PBC as the sole buying company operating on the internal market chain.[27]

[25] Ministry of Manpower, Youth and Employment, 2008, p 29
[26] Leith & Söderling, 2003, p 22
[27] Ministry of Manpower, Youth and Employment, 2008, p 29

Prior to independence, the world market price of cocoa was high, enabling the CMB to pay farmers relatively high producer prices. As a result, planting of cocoa trees, and hence the country's capacity for growing cocoa, increased substantially. From 1950 to 1960 production of cocoa doubled. Due to Ghana's large share of world cocoa exports (it averaged around 30 percent of the world market between 1911 and 1978) the production increase depressed world market prices. This price decrease affected farmers negatively, but from the government's point of view the loss of revenues due to lower prices was compensated for by an increased demand for cocoa.

The use of fixed nominal producer prices and high domestic inflation led to a further decrease of the producer price. Despite the important role of the cocoa sector (at the time of independence, cocoa was the country's largest single source of government revenues) the new government paid it very little attention. The negative impact of decreasing prices on production therefore became apparent only in the middle of the 1960s and was invigorated by increased smuggling of cocoa to Côte d'Ivoire, which offered farmers higher producer prices.[28]

The government's use of fiscal and monetary policies created an overall excess demand in Ghana. Despite the use of import-licensing and exchange rate controls, the pressure on the balance of payment turned the net foreign assets in the monetary system negative. The real exchange rate had by 1966 appreciated by 50 percent since independence and the international competitiveness as well as the share of exports of GDP decreased sharply. The military, which took power in Ghana in 1966, devaluated the currency in 1967 in an attempt to restore the balance of payment. The price of foreign exchange increased by 43 percent while the nominal producer price increased by only 30 percent, which implied that the government took a larger share of the cocoa revenues. The increase was not enough to cover many years of increases in the nominal producer price by less than the inflation rate, leading to additional real term decreases in the price received by farmers. The producer price however benefited from a major recovery of world cocoa prices and it increased significantly in real terms.[29]

The initial devaluation did not have the expected effects and a new devaluation was conducted in 1971, this time by a democratically elected government. The nominal producer

[28] Leith & Söderling, 2003, p 21-23
[29] Ibid, p 24-26

price of cocoa increased, but again to a lower extent than the devaluation rate. Another military coup was carried out in 1972. One of the first actions of the new government was to revaluate the currency. The underlying fundamentals of the Ghanaian economy worsened quickly due to the government's mismanagement of the economy. The boom of the cocoa sector however continued until 1973 due to good weather conditions, high international prices of cocoa and a successful mass-spraying scheme against cocoa diseases.[30]

Years of political turmoil followed the military government, leading to a severe economic downturn of the Ghanaian economy. There were food shortages in urban areas, schools and health clinics were out of staff and infrastructure maintenance was heavily neglected. Even though elections were held, the political agitation continued. The nominal producer price increased with inflation, but this did not make up for previous decreases of the price in real terms. In addition, a severe drought in the beginning of the 1980s resulted in bush fires destroying huge areas where cocoa was grown.[31]

Despite shorter periods of peak production, total cocoa output declined steadily between the late 1960s and middle 1980s. Low producer prices led farmers to shift to more profitable crops. Cocoa farmers were mainly of old age and illiterate, which obstructed adoption of new technology and disease and pest controls, and the lack of credit of cocoa farmers led to a lack of good planting materials for rehabilitation of old farms. The low income levels of cocoa farmers and the bush fires caused production in the beginning of the 1980s to drop to levels comparable with those in the 1930s.[32]

A market-oriented reform program was launched in 1983 and the late 1990s, supported by the Washington institutions, aiming at increasing GDP, reducing poverty and eliminating rent-seeking behaviour by government officials.[33] The reforms of the cocoa sector were important elements of the overall reform process.

4.2 Structure and Reforms

The structure of the cocoa sector was prior to the reform process characterised by complete monopoly. The market was in the hands of the government which through the CMB was the

[30] Leith & Söderling, 2003, p 30-32
[31] Ibid, p 32-39
[32] Ministry of Manpower, Youth and Employment, 2008, p 26-27
[33] Leith & Söderling, 2003, p 40

only authorised domestic buyer and exporter of cocoa. The CMB carried out its activities through its subsidiaries the PBC and the CMC. In addition, its subsidiary the Quality Control Division (QCD) was responsible for controlling the cocoa quality.[34]

The first phase of the reform was initiated in 1984/85 and focused on restructuring the CMB. The CMB was made more streamlined by a reduction of the amount of staff from around 100 000 employees to 6 000 and by a cut-down on overlaps in the organisation. The many operational and institutional changes of the CMB led to it changing its name to Ghana Cocoa Board (COCOBOD).[35] During this initial phase attempts were also made to restructure production by providing farmers with seedlings to replace old trees, promoting transport and sales by constructing and upgrading roads and putting greater emphasis on extension services and the use of fertilisers and pesticides in production.[36]

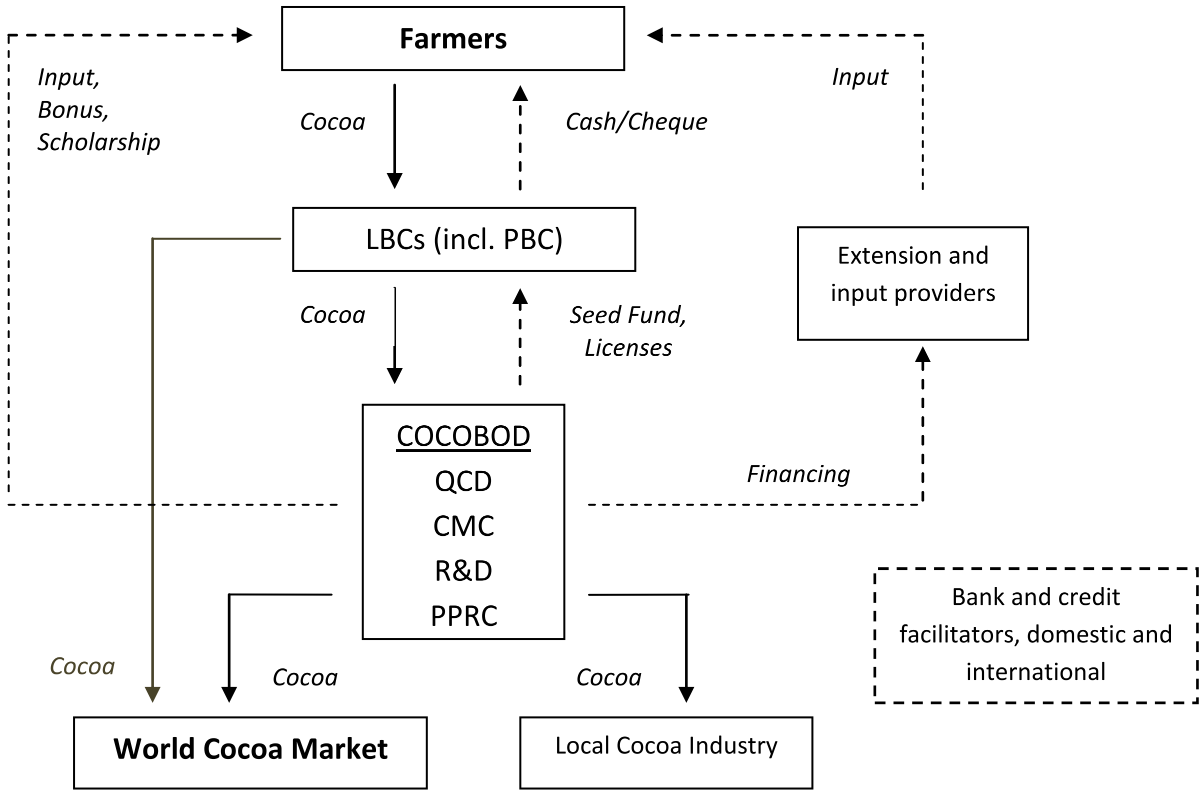
The second phase, which was implemented in 1993, consisted of a re-introduction of the multiple buying system and implied that private LBCs were once again allowed to operate on the domestic market together with the PBC.[37] The objective of the liberalisation reform was to introduce competition on the internal market and improve the chain with regard to its operational and financial performance as well as open up for the possibility of paying higher competitive producer prices.[38]

More recent reforms, aiming at further increasing the efficiency of the cocoa sector, were implemented in 1999 in the government’s Cocoa Strategy. These reforms involved reducing marketing costs and taxes of COCOBOD further and targeting the producer price to 70 percent of the world market price by crop year 2004/05.[39] In addition, the PBC was partly privatised in year 2000 and introduced on the Ghanaian stock exchange. COCOBOD owns 40 percent of the stocks directly and another 30 percent indirectly through its ownership of a major stakeholder.[40]

[34] Laven, 2005, p 32-33
[35] Interview COCOBOD (2009-05-14) and Ministry of Manpower, Youth and Employment, 2008, p 29
[36] van Duursen & Norde, 2003, p 25
[37] Varangis & Schreiber, 2001, p 63
[38] Laven, 2005, p 34
[39] Ministry of Manpower, Youth and Employment, 2008, p 35
[40] Meeting PBC (2009-05-13)

The cocoa sector, as it is organised today, resembles a stabilisation fund and is portrayed in figure 4. The main players are farmers, LBCs and COCOBOD. In addition, various government and business groups providing extensions and inputs to farmers as well as bank and credit facilitators are important actors on the market. Hence the cocoa sector consists of a chain of economic activities related to production, transportation, quality control and marketing of cocoa.

Figure 4: Structure of the cocoa sector



Even though the internal market has been partly liberalised, it is more or less controlled by the Ghanaian government. Through COCOBOD, the government controls cocoa quality, hands out licenses, finances and controls activities of private companies, sets producer prices and margins and sells and exports to manufacturing and processing companies. The QCD and the CMC are still subsidiaries of COCOBOD and have the same responsibilities as prior to the reforms. Moreover, COCOBOD finances a cocoa research institute, distributes subsidised inputs and hands out scholarships to farmers' children.[41] The bulk of the Ghanaian cocoa is

[41] van Duursen & Norde, 2003, p 31

exported, while a minor share is sold to domestic processing companies, whose products are mainly consumed locally and at a lower price and quality compared to the exported cocoa.[42]

4.2.1 Internal Marketing

Ghana has, in comparison with other cocoa producing countries, one of the highest percentages of smallholders, i.e. farmers owning less than 5 hectares of land. The number of smallholders is approximately one million, whereas the overall number of workers in the cocoa sector is around 3.2 million, i.e. 14 percent of the population.[43] Few farmers are organised in cooperatives. The farmers operate in 67 cocoa producing districts and in six of ten regions in Ghana. The cocoa producing regions are located in the southern part of the country.[44]

Farmers transport and sell their harvest to the LBCs located at approximately 2 700 selling points across the country's cocoa producing regions. In regions where the volume of cocoa production is low, the only operating LBC is the former subsidiary of COCOBOD, the PBC. Hence there is at least one outlet where farmers can sell cocoa in all cocoa growing areas.[45] COCOBOD buys all cocoa that is of required quality, implying that cocoa production is a relatively secure income compared to other types of crop production. The economic risks facing farmers are related to price fluctuations and yield levels, which to a large extent depend on the world market price of cocoa and on diseases and tree stock losses.[46]

The cocoa is inspected, graded and sealed by the QCD, for which the LBCs pay a fee. The quality control is performed at several stages along the domestic market chain; at the villages, at the depots, at the port when the cocoa arrives and immediately before exports.[47] The LBCs hire Purchasing Clerks (PCs) to do the purchasing of cocoa at community and village level, working on commission equal to a fixed percentage per bag of cocoa.[48] The LBCs transport the cocoa from the country-side to designated take-over centres, where they are given a Cocoa Take-Over Receipt (CTOR) stating the amount of cocoa handed over to the CMC. The CTOR

[42] Fold, 2008, p 103
[43] Statistics from COCOBOD, 2009, van Duursen & Norde, 2003, p 18 and Bartholdson & Valentin, 2006, p 13
[44] COCOBOD guidelines, 2009-05-21
[45] Vigneri & Santos, 2008, p 12
[46] van Duursen & Norde, 2003, p 30
[47] Vigneri & Santos, 2008, p 9
[48] Laven, 2005, p 34

is submitted, together with other invoices, to COCOBOD for payment.[49] The value added at the various stages of the chain is small – the cocoa is fermented and dried by farmers and packed and sealed by the LBCs. There are very little exports of processed cocoa products from Ghana.

Ghana has a reputation as a high quality producer of cocoa which allows COCOBOD to trade the cocoa on the forward market, allowing it to pre-finance its cocoa purchases.[50] COCOBOD receives cheap foreign currency loans from international banks by using contracts from the forward sales as collateral. The loans are used partly to finance state expenditures and partly to set up a fund to finance the operations of the LBCs.[51] The latter is called the seed fund and allows the LBCs to finance its purchases with loans below market rates. The loans are distributed in the beginning of the season. The LBCs officially have the right to export 30 percent of the harvest, but no export licenses have yet been granted.

COCOBOD previously provided extension and input services (education, seeds, fertilisers and pesticides etc.) through its subsidiary COCOBOD Service Division (CSD). For savings and efficiency reasons, the CSD was in 2000 merged with a government division and made more autonomous. Since then provision of extension and input services has been insufficient and underfinanced. There is approximately one agric officer per 3 000 farmers and the officers are oftentimes illiterate, receive low salaries and lack accurate transportation.[52]

There is no limit in entry of becoming a farmer and farmers can sell their cocoa to any LBC they like. The number of LBCs operating on the market is regulated by COCOBOD and their activities are subject to regulations. The competition between farmers is limited, since all cocoa of sufficient quality is marketable at a minimum producer price, and so is the degree of competition of COCOBOD because of its monopoly position in exports. Hence the act of competition on the internal market chain in Ghana is limited to purchasing and transport activities by the LBCs.

[49] COCOBOD guidelines, 2009-05-21, p 4-5
[50] Laven, 2005, p 34
[51] Fold, 2008, p 104
[52] van Duursen & Norde, 2003, p 31 & 60

Prices and Margins

To reduce the negative impact of price fluctuations on farmers, a fixed producer price is set every year by the Producer Price Review Committee (PPRC), comprising representatives from the government, COCOBOD, farmers, the LBCs, University of Ghana and different business groups.[53] The producer price is a price floor, i.e. the LBCs are not allowed to purchase cocoa for less than the producer price. Even though there are no formal restrictions against raising the price above the price floor, it is not raised above the minimum level. The producer price, which is based on the predicted average world market price of cocoa, is set in the beginning of each crop year and is constant throughout the seasons.[54]

In addition to setting the producer price, the PPRC sets a yearly fixed purchase price, i.e. the price that the LBCs receive from selling the cocoa to COCOBOD.[55] This so-called buyer's margin is set at levels that take into account average transport costs, commissions to PCs and other costs faced by the LBCs and at levels where the LBCs break even. Each LBC faces the same buyer's margin.[56]

When the world market price of cocoa fluctuates, there is a discrepancy between the actual and the predicted price, the latter on which the producer price is grounded. This implies that there will be surpluses or deficits in relation to the targeted level depending on how the world market price fluctuates. The surplus is divided between the government and the farmers, while the deficit is covered by the government alone. Farmers receive the surplus in form of yearly bonuses after payment.[57]

Regulations and Guidelines

The undertakings of the LBCs are heavy regulated by COCOBOD. They apply to all LBCs equally and the PBC is not subject to additional obligations or exemptions apart from its geographical coverage.

In order to obtain a licence, companies must comply with criteria set up by COCOBOD related to the organisation and structure, the operational strategy and the financial strength of

[53] COCOBOD guidelines, 2009-05-21, p 4
[54] van Duursen & Norde, 2003, p 33
[55] Interview COCOBOD (2009-05-14)
[56] Meeting COCOBOD (2009-05-19)
[57] van Duursen & Norde, 2003, p 32

the companies. In addition, applicants must demonstrate that they have access to tools of trade, warehousing facilities and vehicles or transport facilities. It is also required that the companies have the capacity to purchase a minimum of 2 000 tons of cocoa the first crop year. The location and condition of the warehousing facilities must be approved of and certified by the QCD. Applicants that meet the requirements, or certain key requirements, are granted licenses or, in the latter case, temporary licenses.[58] The applications are reviewed by the Cocoa Sector Marketing Committee (CSMC), consisting of representatives from the Board of Directors at COCOBOD, banks, University of Ghana and farmers, which makes recommendations to COCOBOD's Board of Directors. The registration procedure takes on average one year. COCOBOD has no strategy with regard to how many LBCs that can operate on the market and all applicants fulfilling the requirements are approved licenses.[59]

The licenses are renewed annually based on the performance of the LBCs. If the operational requirements are violated or if the LBCs fail to carry out operations for two crop years in a row, the companies are suspended until minimum requirements are met. The operational requirements of the LBCs concern what type of bags to use, packing requirements, grading and sealing procedure, bagging weight, minimum capacity of the sheds, when to disinfect sheds etc. The care and the storage of cocoa are subject to inspections by the QCD. In addition, the LBCs shall declare returns weekly to COCOBOD and submit an operational report and an audited financial statement annually.[60]

4.2.2 External Marketing

During the reform process the government had the intention of liberalising the external market of cocoa, thus allowing the LBCs to export. From the year 2000, LBCs meeting the conditions set by the government are officially allowed to export 30 percent of their purchases. It was the intention that the 30:70 split between the LBCs and the CMC was to exist during a transition period ending in crop year 2002/03.[61] No export licenses have been granted and an interview with a COCOBOD representative indicates that there is no intention of the government to implement the reform.[62]

[58] COCOBOD guidelines, 2009-05-21, p 1-2, 6
[59] Interview COCOBOD (2009-05-14)
[60] COCOBOD guidelines, 2009-05-21, p 3, 5-7
[61] Laven, 2005, p 38
[62] Interview COCOBOD (2009-05-14) and Government of Ghana (1) (2009-06-26)

The reason advanced by the government for maintaining the monopsony structure of the sector is to guarantee high quality and contract fulfilment for which Ghanaian cocoa receives a price premium on the world market. Since it is difficult to monitor purchasing activities, the government fears that quality will deteriorate and that Ghana will lose the premium. Other reasons put forward by COCOBOD are that the LBCs are neither ready nor interested in exporting and that the government, and hence the country, now directly benefits from cocoa exports.[63] It has also been argued that the government's reluctance to open the market to competition is Ghana's weak tax system; hence with a deregulated system the government loses a large part of its revenues.[64]

By contrary most LBCs report that they want to enter and would be capable of entering the export sector and that COCOBOD deliberately hinders them from engaging in external marketing. The possibility of full deregulation was in fact one of the main motives for one of the two internationally owned LBCs to enter the cocoa sector in the first place.[65]

The World Bank and the International Monetary Fund (IMF) initially put pressure on the Ghanaian government to liberalise the external market. However, since COCOBOD increased producer prices and made efforts to increase output, the Washington institutions do not seem to put emphasis on further reforms.[66] International processing and manufacturing companies do not oppose the system in Ghana, most likely because Ghana is the only country in the world offering a consistent supply and relatively low price of high quality cocoa.[67]

[63] Interview COCOBOD (2009-05-14)
[64] Laven, 2005, p 38
[65] Interview PBC (2009-05-19), Armajaro (2009-04-27), Olam (2009-05-05) and Laven, 2005, p 38
[66] Laven, 2005, p 38-39
[67] Fold, 2008, p 105

5 Competition in the Ghanaian Cocoa Sector

The objective of the liberalisation reform was to introduce competition on the internal market and by this improve the sector's operational and financial performance and open up for higher competitive producer prices. This sections looks into the degree of competition on Ghana's domestic market in terms of number and coverage of the LBCs and their competitive weapons.

5.1 Licensed Buying Companies

The number of registered LBCs has increased gradually since the liberalisation reform. Initially six companies were granted licenses to operate on the internal market while today there are 26 active LBCs, including the PBC. Table 2 portrays the ranking of LBCs by market shares and it shows that the number of active LBCs increased from 16 to 26 between crop year 2004/05 and 2008/09. The average number of LBCs per village increased by around 30 percent between 2002 and 2004, which implies that the potential trading partners of cocoa farmers have increased significantly over the years.[68]

One can divide the LBCs into four categories depending on the ownership structure of the company. The first category comprises the former subsidiary of COCOBOD – the PBC. The second category of LBCs consists of domestically owned LBCs. Many of these Ghanaian companies are former transport companies that were contracted by COCOBOD prior to the liberalisation reform. Global Haulage is an example of a successful former transport company that today is key shareholder in three major LBCs – Adwumapa, Federated Commodities and TransRoyal.[69] Category three constitutes of the farmer-based fair trade cooperative Kuapa Kokoo. Kuapa Kokoo was established in 1993 by a group of farmers and with support from the British NGO TWIN Trading Limited.[70] The fourth and final category of LBCs comprises the two international companies, Singaporean-owned Olam and British-owned Armajaro. Both Olam and Armajaro are leading suppliers of cocoa and other commodities (such as coffee and sugar) on the world market and operate in all main cocoa producing countries. In Ghana they operate as buying companies, but their expertise includes origination, exporting

[68] Vigneri & Santos, 2008, p 12
[69] Ibid, p 10-11
[70] Kuapa Kokoo (1) (2009-06-15)

and processing of cocoa.[71] The international companies have access to foreign capital, an advantage that makes them less dependent on the seed fund.[72]

Table 2: Ranking LBCs by market shares

		Market Share (%)					
	LBC	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009*	5-Year Average
1	Producer Buying Company	37,60%	32,76%	30,28%	30,63%	32,87%	32,83%
2	Akuafo Adamfo Marketing Co. Ltd.	13,11%	11,37%	9,29%	12,63%	13,45%	11,97%
3	OLAM Ghana Ltd.	13,18%	13,87%	11,47%	7,94%	7,11%	10,71%
4	Adwumapa Buyers Ltd.	7,24%	8,95%	9,75%	9,02%	8,14%	8,62%
5	Federated Commodities Ltd.	6,77%	6,82%	7,57%	6,90%	7,14%	7,04%
6	Kuapa Kokoo Ltd.	6,80%	6,61%	5,58%	5,29%	5,27%	5,91%
7	Transroyal Ghana Ltd.	5,06%	5,70%	6,71%	5,57%	5,54%	5,72%
8	Armajaro Ghana Ltd.	5,36%	4,97%	5,12%	6,86%	6,21%	5,70%
9	Cocoa Merchants Ghana Ltd.	2,21%	2,37%	3,59%	3,33%	4,36%	3,17%
10	Diaby Company Ltd.	0,09%	1,23%	4,03%	4,24%	3,91%	2,70%
11	Dio Jean Company	0,38%	1,26%	1,73%	1,30%	0,66%	1,07%
12	Royal Commodities Ltd.	0,45%	0,79%	1,09%	1,19%	1,69%	1,04%
13	Sika Aba Buyers Ltd.	0,10%	0,89%	1,00%	0,99%	1,24%	0,84%
14	Chartwell Ventures Ltd.	-	0,13%	0,95%	2,25%	0,68%	0,80%
15	Sompa Kokoo Ltd.	0,90%	0,68%	0,52%	0,43%	0,49%	0,60%
16	West Africa Exchange Co. Ltd.	0,33%	0,49%	0,75%	0,26%	0,07%	0,38%
17	CocoExco Ltd.*	0,41%	1,12%	-	-	-	0,31%
18	Evadox Ltd.	-	-	-	0,93%	0,45%	0,28%
19	Sunshine Commodities Ltd.*	-	-	0,57%	-	-	0,11%
20	Allied Commodities Ltd.	-	-	-	0,10%	0,25%	0,07%
21	Fereday Company Ltd.	-	0,04%	0,03%	0,10%	0,12%	0,06%
22	Farmers Alliance Co. Ltd.**	-	-	-	0,03%	0,10%	0,03%
23	CDH Commodities Ltd.**	-	-	-	-	0,11%	0,02%
24	Ghana Co-operative Marketing Co. Ltd.	-	-	-	0,01%	0,05%	0,01%
25	Aba Pa Golden Ltd.**	-	-	-	-	0,05%	0,01%
26	Yayra Glover Ltd.**	-	-	-	-	0,04%	0,01%
27	Aboafo Buying Co. Ltd.**	-	-	-	-	0,01%	0,00%
28	Duapa Buyers Co. Ltd.**	-	-	-	-	0,01%	0,00%
	Total	100%	100%	100%	100%	100%	100%

** License withdrawn, ** Newly licensed LBC, *** Ongoing season*

Source: Statistics from COCOBOD, 2009

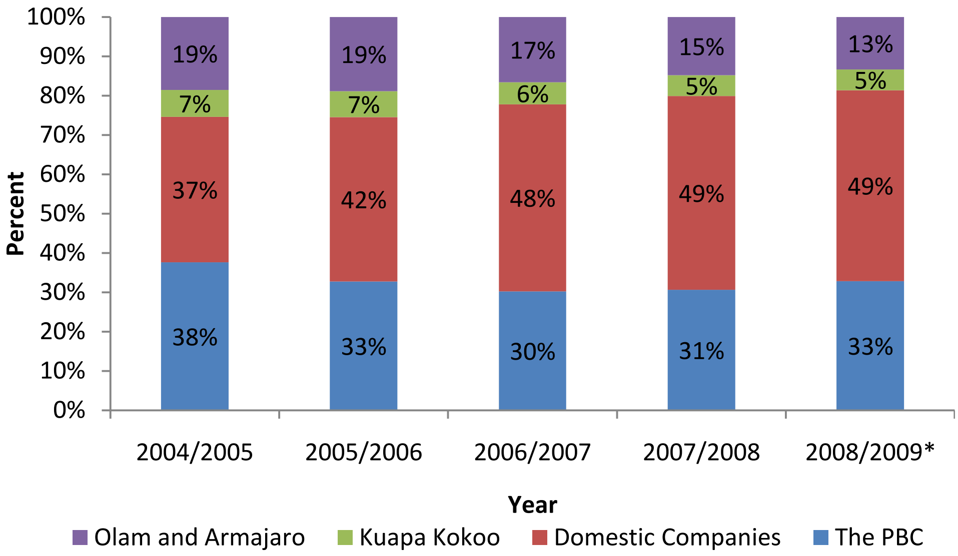
Table 2 reveals that the PBC has the largest market share with a five-year average market share of around 33 percent. The second largest LBC is the domestically owned company Akaufo Adamfo with an average market share of close to 12 percent. Olam, with its approximate market share of 11 percent, is the third largest LBC. The Glaubal Haulage owned LBCs Adwumapa, Federated Commodities and TransRoyal are at fourth, fifth and seventh place, while Kuapa Kokoo and Armajaro are at sixth and eighth place. The eight largest LBCs

[71] Olam (1) (2009-06-15) and Armajaro (1) (2009-06-15)
[72] Vigneri & Santos, 2008, p 11

together purchase around 90 percent of all cocoa while the remaining companies only have marginal shares. This implies that the market is dominated by few big players.

When dividing the market shares into its categories, shown in figure 5, it is revealed that domestically owned LBCs have increased their shares over the five-year period, while the shares of both Kuapa Kokoo and of Olam and Armajaro have decreased. The PBC strongly decreased its market shares in 2004/05 and 2006/07, but reversed the trend the years after. The reason for the increasing shares of domestically owned companies may be due to that several of the LBCs not being active in the beginning of the time period later started operating on the market and that more domestically owned LBCs have been granted licenses.

Figure 5: LBCs by market shares and type of LBC



Source: Statistics from COCOBOD, 2009, and own calculations

5.2 Competition Strategies

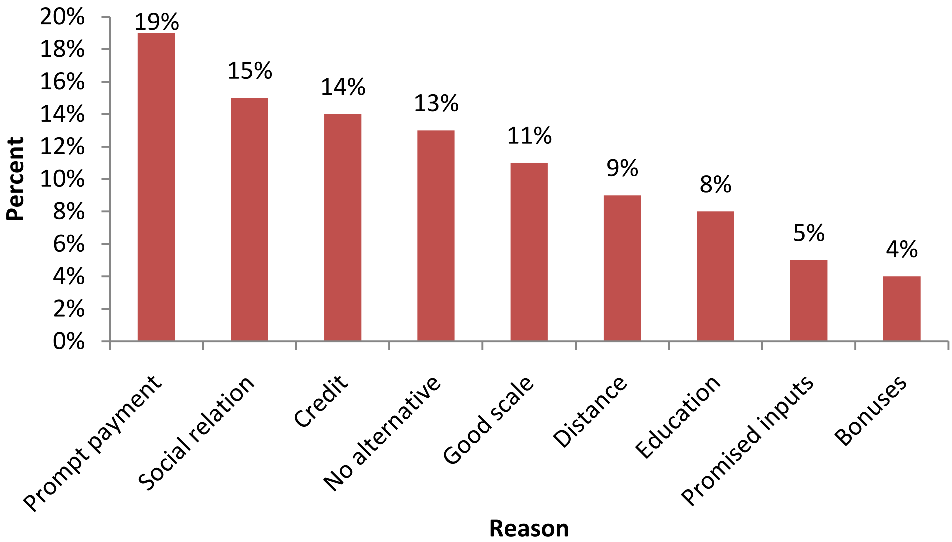
One notable feature of the internal market is that the LBCs do not compete in prices. Instead of paying farmers a top up to the producer price, the LBCs offer competitive weapons based on cash payment, non-economic motivations and/or different incentive packages. Examples of non-economic competitive strategies are allowing community representatives to select the PCs or letting the PCs become socially involved with farmers.[73] Incentive packages offered by LBCs may comprise services, credit, subsidised inputs and/or handing out small things

[73] Laven, 2005, p 36

ranging from soaps, pens and school books to Wellington boots, torches and machetes, depending on the amount of cocoa sold to the LBC.[74] Other examples of incentive strategies are guaranteeing farmers an accurate scale (by having a standard weight at the depots), handing out annual farmer's awards, bonuses and "scratch lots" (with prices comprising anything from money to spraying items), and organising farmer forums.[75]

The most frequently mentioned reasons by farmers for choosing a particular buyer are cash payments, social relations with the PC, provision of credit, and in the case of the PBC, its accountability.[76] The motives are presented in figure 6 and confirmed in interviews with farmers.[77]

Figure 6: Main reasons for farmers' choice of LBC



Source: Laven, 2005, p 36

According to regulations, the LBCs are required to purchase cocoa with so-called akuafo (farmers) cheques. The cheque system was introduced by COCOBOD in the 1980s with the intention of encouraging farmers to save money, reduce the risk of fraud and avoid handling large amounts of money at the depots and villages.[78] There are several problems related to the cheque system, e.g. remoteness of farmers, farmer-banking relations and liquidity problems in local banks. For these reasons, in practice there has been a gradual shift towards cash

[74] Interview PBC (2009-05-19), Olam (2009-05-05) and Armajaro (2009-04-27)
[75] Interview Armajaro (2009-04-27), PBC (2009-05-19), Kuapa Kokoo (2009-04-24) and Laven, 2005, p 37
[76] Vigneri & Santos, 2008, p 13
[77] Interview farmers in Anwona (2009-04-24)
[78] Interview COCOBOD (2009-05-14)

payments and the majority of the LBCs today offer both types of payments. While large scale farmers usually prefer cheque payments the majority of farmers prefer cash payments.[79]

There is a tendency of farmers selling their cocoa to only one buyer and farmers seldom sell to more than two buyers.[80] In addition, in interviews with farmers in Anwona community, farmers have indicated that they seldom or never receive incentives from the LBCs (besides cash payments) and that competing LBCs almost never try to persuade them to sell the cocoa to them. Another study has shown similar results.[81]

The availability of cash with regard to inputs such as labour and chemicals is important in production of cocoa. Farmers are generally liquidity constrained and need credit in order to maintain or expand production. The demand for credit is confirmed in interviews with farmers.[82] Many LBCs are reluctant to provide credit since they mistrust farmers.[83] If the LBCs give farmers credit in return for a guarantee of cocoa it cannot be guaranteed that the farmers will supply the cocoa to them and not to their competitors.[84] Furthermore some LBCs have experienced problems with theft, i.e. when farmers have not returned the loans. Hence most LBCs do not provide credit or only provide credit to large-scale farmers.[85]

[79] Interview COCOBOD (2009-05-14) and Olam (2009-05-05)
[80] Vigneri & Santos, 2008, p 13
[81] Laven, 2005, p 36
[82] Interview farmer 2 and 3 in Anwona (2009-04-24)
[83] Meeting University of Ghana (2009-04-06)
[84] Interview Kuapa Kokoo (2009-04-24), Armajaro (2009-04-27) and PBC (2009-05-19)
[85] Interview PBC (2009-05-19), Olam (2009-05-05) and Laven, 2005, p 37

6 Evaluating Performance of the Ghanaian Cocoa Sector

This section aims at analysing the performance of the Ghanaian cocoa sector and relates performance to the structure of the internal market chain, with a focus on the effects of the reforms. The dimensions of performance which the thesis relates to are producer prices, production, yields and quality levels. These dimensions are important since they are vital for evaluating the capacity of the sector and because the intention of the reforms was to increase the first three, while maintaining quality levels.

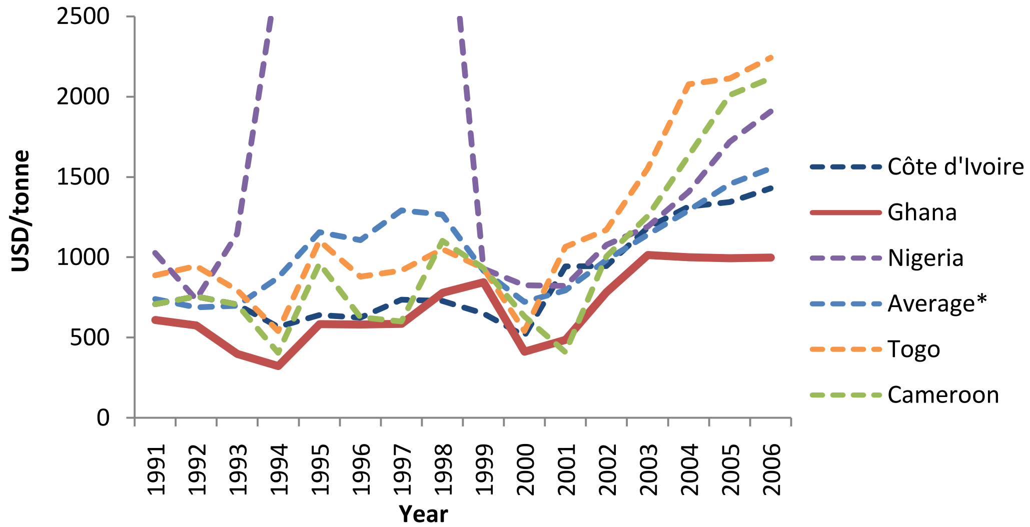
6.1 Producer Price

One major goal of liberalised cocoa sectors is increased producer prices, to be gained through increased competition and lower costs. The experiences from other countries, which to a larger extent have liberalised their cocoa sectors, is that marketing costs and taxes are lower, implying a more efficient system and higher producer prices.

The reforms of the Ghanaian cocoa sector resulted in an increase of the producer price, but persisting macroeconomic problems implied that the real price increase lagged behind during most of the 1990s and real gains for farmers were thus initially low.[86] The producer price increased from 320 USD/tonne in 1993 to a top level of 1 010 USD/tonne in 2003, see figure 7. Since then prices have been fairly constant. The producer price is, as a result of COCOBOD's high share of the world market price, substantially lower in Ghana than in other cocoa producing countries. Having in mind that Ghana receives higher prices for its high quality cocoa, this indicates that the quality premium is not passed on to farmers. Hence it seems like COCOBOD benefits most from it.

[86] Varangis & Schreiber, 2001, p 61

Figure 7: The producer price in selected cocoa producing countries, 1991 – 2006



Note: Calculated data. *Average of 10 (out of 11) largest cocoa producing countries in 2007 (Côte d'Ivoire, Indonesia, Ghana, Nigeria, Brazil, Cameroon, Ecuador, Togo, Colombia, Dominican Republic). Note also the dramatic changes in the Nigerian producer price, for which one possible explanation is macroeconomic instability due to political turmoil and an overvalued currency, which enabled buyers to purchase cocoa at prices above the world market price and make profits through currency transactions. To better show the difference between the producer prices in Ghana and the other countries, the figure does not fully show the fluctuations of the Nigerian producer price (which reached its top level in 1997 at approximately 4 100 USD/tonne).
Source: FAO, 2009 and own calculations

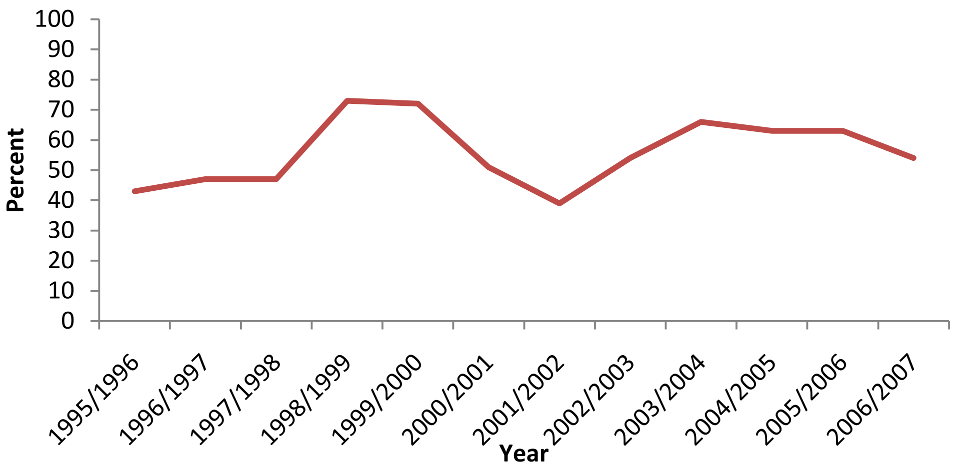
Before the reforms, the share of the world market price received by Ghanaian farmers could be as low as 20 percent.[87] After the reforms, the producer price's share of the world market price varied between 39 and 73 percent between 1996 and 2007, as seen in figure 8. The drop in the relative producer price in crop years 2000/01 and 2001/02 was due to a sharp increase in the world market price of cocoa during these years (recall that the producer price is set according to the expected world market price).

In order to increase the producer price and ensure farmers high shares of the world market price, the price was targeted to 70 percent in 2004/05. The fact that the producer price from 2005/06 and onwards has been lower than the targeted level may be because the expected world market price differed from the actual price and this later was corrected by the bonus system. However, as seen in table 3, which shows total bonus paid by the government, the bonus has ranged between 2.6 and 2.9 percent of the producer price. These small numbers

[87] Varangis & Schreiber, 2001, p 61

indicate that the bonus system, even if used to correct the discrepancy, did not fully adjust the price.

Figure 8: The producer price in Ghana as percentage of the world market price, 1996 – 2007



Source: ICCO, 2008, p 32

Table 3 indicates that the government has distributed bonuses almost every year and that the error range has been fairly constant since crop year 2003/04. COCOBOD has stated in an interview that it is reluctant to lower the producer price, which may imply that the price is set with caution and perhaps slightly below the expected world market price. In addition, there have been signs of not all farmers having received the bonuses.[88] This could confirm the habit of COCOBOD of not passing revenues on to farmers.

Table 3: Total bonus paid by COCOBOD between 1999/00 and 2008/09

Crop Year	Producer Price (GHC/tonnes)	Total Bonus Paid (GHC/tonnes)	Bonus as Percentage of Producer Price (%)
1999/2000	225,0	-	-
2000/2001	347,5	17,82	5,1
2001/2002	620,0	12,18	2,0
2002/2003	850,0	31,78	3,7
2003/2004	900,0	21,87	2,4
2004/2005	900,0	nil	nil
2005/2006	900,0	24,08	2,7
2006/2007	915,0	26,23	2,9
2007/2008	1 200,0	31,16	2,6
2008/2009*	1 632,0	-	-

Note: * Season is on-going

Source: Statistics from COCOBOD, 2009

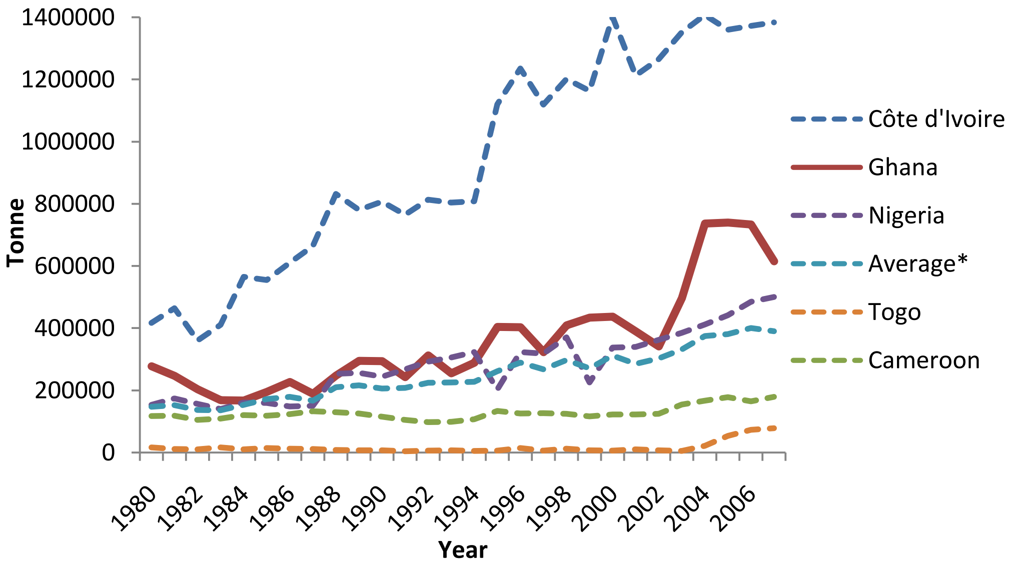
[88] van Duursen & Norde, 2003, p 32

Due to the lack of price-based competition mechanisms in the internal market, the producer price in Ghana reflects to a larger extent the world market price of cocoa and profit margins and costs facing various market participants and, to a lesser extent, the bargaining power of and between farmers, the LBCs and COCOBOD. The latter is reflected in farmers' lack of capacity to put pressure on buying companies to raise the price above its minimum level and the LBCs' inability to raise the buyer's margin.

6.2 Production and Yields

There exists a direct relationship between increased producer prices and increased production. High producer prices stimulate the use of improved technology, pesticides and fertilisers and increase the incentives of farmers to conduct good farming practices, replant trees and expand production.[89] Hence an additional goal with liberalisation is to increase cocoa output through higher yields and new areas harvested.

Figure 9: Cocoa production in selected cocoa producing countries, 1980 – 2007



Note: *Average of the 10 largest cocoa producing countries in 2007 (Côte d'Ivoire, Indonesia, Ghana, Nigeria, Brazil, Cameroon, Ecuador, Togo, Colombia, Papua New Guinea)
Source: FAO, 2009

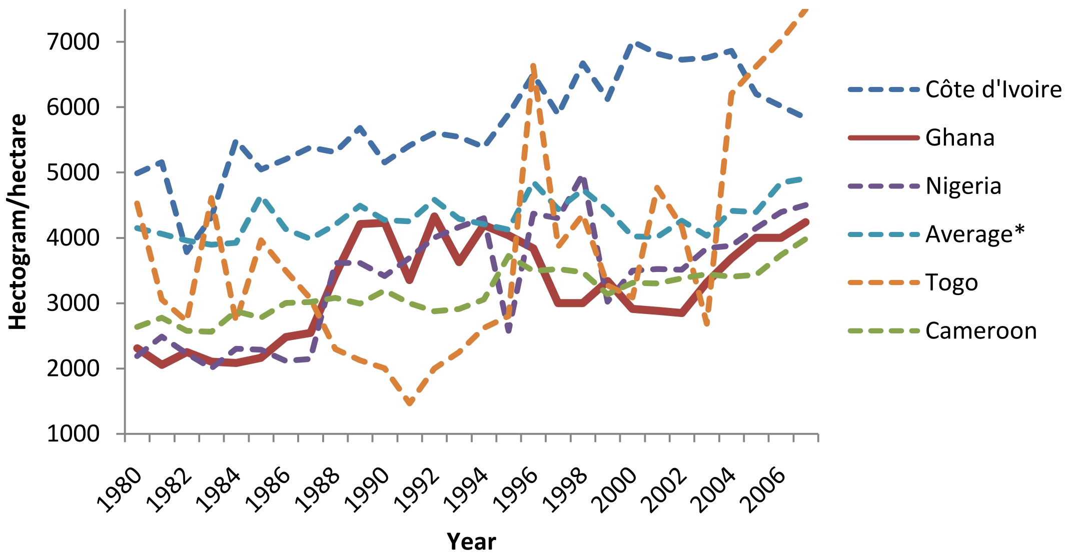
As seen in figure 9, since the beginning of the 1980s, Ghana's production of cocoa followed an upward trend, from approximately 200 000 tonnes per year to roughly 700 000 tonnes in

[89] van Duursen & Norde, 2003, p 20

2007. After a relative decline in 2002, cocoa production increased sharply, due to good weather conditions, higher producer prices, improved agronomic practices and new areas harvested.[90] As seen in the figure, most other cocoa producing countries in West Africa experienced increased production.

As shown in figure 10, Ghana's cocoa yield has been on average 25 percent below the average yield level of the ten largest cocoa producing countries and approximately 40 percent below the average yield level of neighbouring Côte d'Ivoire. Reasons put forward to explain Ghana's low yield levels are the relative old age of cocoa trees, the absence of widespread row planting, and pests such as black pod and mistletoes – explanations related to resource constrained farming practices.[91]

Figure 10: Cocoa yields in selected cocoa producing countries, 1980 – 2007



Note: Calculated data. *Average of the 10 largest cocoa producing countries in 2007 (Côte d'Ivoire, Indonesia, Ghana, Nigeria, Brazil, Cameroon, Ecuador, Togo, Colombia, Papua New Guinea)

Source: FAO, 2009 and own calculations

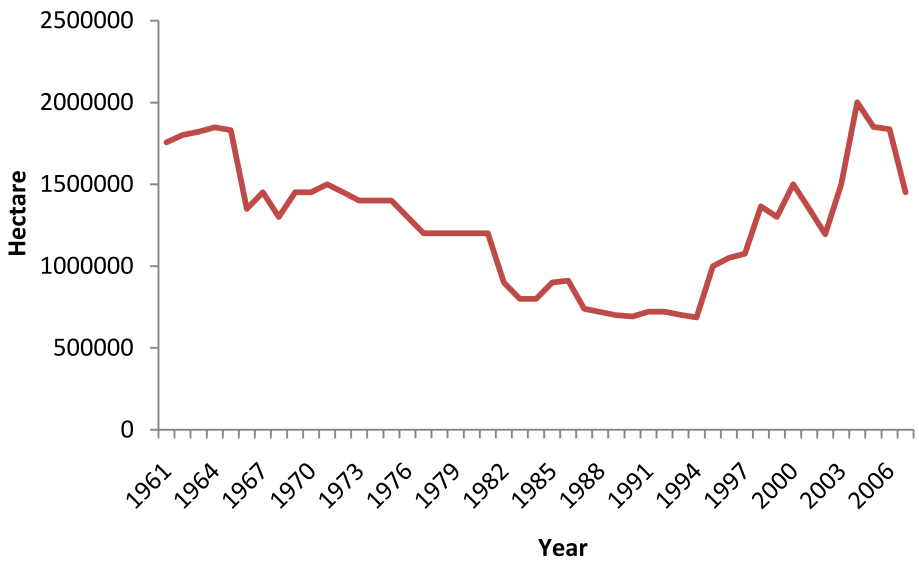
Figure 11 illustrates area harvested for cocoa production in Ghana between 1961 and 2007. It shows a declining trend, which was sharply reversed around 1994. The increased use of land for cocoa production may reflect that it has become more profitable for farmers to produce cocoa relative to other crops. It may also reflect that liberalisation seems to have improved

[90] ISSER, 2008, p 139 and statistics from COCOBOD, 2009

[91] van Duursen & Norde, 2003, p 24

farmers' access to cocoa purchasing companies. Even prior to liberalisation, the PBC was responsible for operating in all cocoa producing districts, but there have been signs of the company not always being present, leading to contingency of farmers. This problem has disappeared since the liberalisation reform.[92]

Figure 11: Area harvested for cocoa production in Ghana, 1961 – 2007



Note: Some statistics are estimations by FAO

Source: FAO, 2009

6.3 Quality

Quality is important since it determines prices and reputation of cocoa. The high quality level in Ghana is an outcome of COCOBOD's control system that promotes the use of adequate cultivation practices among farmers. In order for COCOBOD to continue selling its cocoa on the forward market and receiving the price premium, its reputation as a high quality cocoa producer must be maintained. Without the use of forward sales contracts as collateral for discounted international loans, the prevailing price setting system would not exist. Hence the possibility of setting a fixed producer price and other profit margins, as well as providing the seed fund to the LBCs, are dependent on the preservation of the market structure.[93] In other countries, for example Cameroon and Nigeria, the presence of forward sales has to a large

[92] Interview farmer 1 in Anwona (2009-04-28)

[93] Fold, 2008, p 118

extent been eliminated, since there is no marketing board or other governmental organisation in charge of guaranteeing export volumes.[94]

It is argued that the quality of Ghanaian cocoa has declined since the liberalisation of the internal market. The LBCs are responsible for controlling the cocoa quality at community level and there have been indications that some LBCs, due to competition, pressure farmers to sell the cocoa before it has been enough fermented or dried.[95] Hence, even with a fixed producer price, farmers do not have an incentive to hold the cocoa if they can sell it before it has been properly prepared. This practice has been confirmed in interviews with farmers and implies that farmers are not properly rewarded for maintaining good quality, which yet again indicates that it is mainly COCOBOD that benefits from the high quality standard.[96] Other reasons put forward to explain the possible quality downturn are problems with smuggling of low quality cocoa from Côte d'Ivoire, fast increasing volumes of cocoa produced and extensive planting of hybrid trees.[97] However, the quality level of Ghanaian cocoa is still high and the price premium received.

[94] Varangis & Schreiber, 2001, p 71
[95] Laven, 2005, p 34
[96] Interview farmer 2 in Anwona (2009-04-28) and van Duursen & Norde, 2003, p 57
[97] Laven, 2005, p 35

7 Summary and Conclusions

The final section of the thesis consists of a summary of the reforms and impacts on the Ghanaian cocoa sector, followed by a discussion on how further liberalisation may improve performance.

The reform programs launched in 1983, 1993 and the late 1990s marked the ending of decades of political chaos and economic turbulence that Ghana faced after its independence. One of the reasons for the economic downturn was the country's neglect of its export sector of which cocoa constituted the major part. The reforms of the cocoa sector were important elements of the overall reform process, contributing significantly to the recovery of the Ghanaian economy. The main components of the reforms of the cocoa sector were the reconstruction of COCOBOD, the deregulation of the internal market chain and the targeting of the producer price's share of the world market price. The reforms aimed at achieving a more efficient and productive cocoa sector and were initiated by the Ghanaian government and actuated by the Washington institutions. An objective of the proponents of the reforms was to raise the low production volumes caused by low producer prices, low yield levels and low incentives of farmers of growing cocoa.

The reforms were to a large extent implemented. The restructuring of COCOBOD was carried out together with the implementation of pro-production policies. Ghana undertook a partial liberalisation of its cocoa sector, resulting in the presence of LBCs operating on the internal market. Their activities are heavily regulated by COCOBOD and there is thus no price competition between them. Liberalisation of the external market has not been followed through and there are no signs of it being liberalised in the near future. The producer price is targeted to 70 percent of the world market price. Even though it has not reached the target level, it is likely that the government will try to keep to it because of the positive relationship between higher producer prices and increased production. The reforms have resulted in an increased producer price, but it is still lower than in other West African producer countries. The yield level and the amount of land used for cocoa production have increased, resulting in larger output. The yield level in Ghana is however low in comparison with rival cocoa producing countries and the optimal capacity level may therefore not have been reached. Within the range of current reforms, the level of quality seems to have been maintained.

7.1 The Challenge of Further Liberalisation

The reforms have had positive impacts on the Ghanaian cocoa sector, improving its performance significantly. In comparison with other cocoa producing countries in the region, there though seems to exist room for improvement concerning producer prices, production and yield levels, while quality levels in Ghana are substantially higher. This may be explained by the extensive governmental control over the cocoa sector, where the market structure restrains competition between LBCs. Ghana may for these reasons consider loosening internal market restrictions and liberalising its external market as an option for increasing its performance further.

Further liberalisation may lead to higher producer prices through decreasing the government's share of the world market price as well as increasing efficiency and decreasing costs of LBCs, enabling more efficient price competition. It may also lead to increased production due to the higher producer prices and thus increased incentives of farmers to grow cocoa, as well as increased yield levels, since higher prices may enable farmers to use more efficient production techniques and expand to new production sites. The aspect of maintained quality levels through liberalisation can be achieved if farmers have increased possibilities of receiving the price premium.

Still, there is risk involved with further liberalisation. Many LBCs would not exist without access to the seed fund, since these companies, at least initially, would not have the financial means required to purchase cocoa. The structure of the cocoa sector secures the presence of these companies, which are almost entirely domestically owned. Within the current structure, it is difficult for the LBCs to develop and become independent companies. If it is desirable to have the internal market dominated by private Ghanaian companies after further liberalisation, it is important that these companies receive initial support.

Ghanaian farmers are mainly smallholders and suffer from illiteracy and lack of organisation, implying that they have little bargaining power and small possibilities of getting access to accurate information on prices and buyers. The government currently provides farmers with services which increase production, e.g. information on production techniques and mass-spraying programmes. (However recall that the CSD is underfinanced and the provision of many of these services is insufficient.) The private sector in Ghana is not very well developed[98], hence these services may not be fully provided by the market. In a further liberalised market, the role of the government is thus important when it comes to supporting farmers, e.g. in supplying information and inputs to production as well as forming cooperatives. The potential gains from liberalisation may otherwise not take place.

A risk of further liberalisation is that the quality level may deteriorate. The main benefit of keeping high quality is that Ghana receives a price premium. Nonetheless, as shown in section 6, it seems like it is currently mainly COCOBOD that benefits from the high cocoa price and farmers thus use expensive production methods without profiting from it. If the market is liberalised, farmers will instead be directly rewarded from keeping quality levels high, implying that quality deterioration may not be an effect of liberalisation in Ghana. This requires that farmers have accurate information on prices. There is otherwise a risk of buying companies taking control of the price premium.

A common argument in favour of marketing board systems and stabilisation funds is that producer prices are stabilised yearly, decreasing the negative effect of volatility on production. There is a substantial risk that further liberalisation results in more volatile producer prices, but there are indications of the price volatility being limited. Seasonal price changes in Malaysia and Indonesia have for example been less than ten percent.[99] If farmers have other income sources, producer price volatility will not necessarily translate into income volatility. Hence the necessity of having the government acting as price stabiliser may be questioned. If gains from further liberalisation outweigh the possible negative effects from price volatility, further liberalisation is preferable.

Goals of liberalisation are on the one hand to increase the producer price and on the other hand to improve efficiency, often expressed in terms of increased output. According to supply and demand factors, a country with significant market power that increases its output contributes to deteriorated world market prices. The twofold goal of liberalisation can therefore be seen as contradictive.[100] Ghana is currently a price-taker, implying that the potential risk of lowering the producer price through increased output is limited.

[98] Meeting University of Ghana (2009-04-06)
[99] Varangis & Schreiber, 2001, p 71
[100] ul Haque, 2004, p 8

Lessons to be drawn from other West African countries that to a larger extent than Ghana have liberalised their cocoa sectors are that liberalisation should not be undertaken too fast, as in Nigeria, or under unfortunate circumstances, as was the case in Côte d’Ivoire with the civil war. It is also apparent from the experience of Togo that the liberalisation process is facilitated and better undertaken if the government lets private actors participate in the design stage of the reforms and ensures farmers well-functioning information systems. The case of Togo also shows that liberalisation does not necessarily lead to quality deterioration.

In conclusion, the above argumentation indicates that further liberalisation is preferable, if undertaken with caution due to the mentioned risks.

References

Literature

Bartholdson, Örjan & Valentin, Mats, 2006: *Chokladens mörka hemlighet – En rapport om arbetsvillkoren på kakaoodlingarna i Västafrika*. SwedWatch, report nr 12.

COCOBOD (Ghana Cocoa Board): *Regulations and Guidelines for the Privatization of Internal Marketing of Cocoa*. Obtained 2009-05-25

COCOBOD (Ghana Cocoa Board), 2009, statistics. Obtained 2009-05-21

van Duursen, John & Norde, Derk-Jaap, 2003: *Identifying and Assessing Convergences of Interest for Stakeholders in the Cocoa Chain, in Order to Attain Increased Farm Income and Wider Sustainable Production.* EPECM.

FAO (Food and Agriculture Organisation), 2009, statistics.

Fold, Niels, 2008: Transnational Sourcing Practices in Ghana's Perennial Crop Sectors. In: *Journal of Agrarian Change*. Vol. 8, No. 1, p 94-122.

ul Haque, Irfan, 2004: *Commodities under Neoliberalism: The Case of Cocoa*. G-24 Discussion Paper Series. Research Papers for the Intergovernmental Group of Twenty-Four on International Monetary Affairs. United Nations Conference on Trade and Development. Exists as a download file at http://www.unctad.org/en/docs/gdsmdpbg2420041_en.pdf

ICCO (International Cocoa Organisation), 2006: *Assessment of the Movement of Global Supply and Demand.* Market Committee, 6th meeting. Exists as a download file at http://www.icco.org/economics/consultive.aspx

ICCO (International Cocoa Organisation), 2008: *Assessment of the Movement of Global Supply and Demand.* Executive Committee, 136th meeting. Ref. nr: EX/136/6. Exists as a download file at www.icco.org

ISSER (Institute of Statistical, Social and Economic Research), 2008: *The State of the Ghanaian Economy in 2007*. Published by ISSER, University of Ghana, Legon.

Laven, Sara, 2005: *Relating Cluster and Value Chain Theory to Upgrading of Primary Commodities: The Cocoa Chain in Ghana*. Amidst, University of Amsterdam.

Leith, Clark J & Söderling, Ludvig, 2003: *Ghana – Long Term Growth, Atrophy and Stunted Recovery*. Nordiska Afrikainstitutet, research report no. 125

Ministry of Manpower, Youth and Employment, 2008: *Labour Practises in Cocoa Production in Ghana (Pilot Survey)*.

Varangis, Panos & Schreiber, Gotz, 2001: *Cocoa Market Reforms in West Africa*. In: Akiyama, Takamasa; Baffes, John; Larson, Donald & Varangis, Panos, 2001: *Commodity Market Reforms: Lesson of Two Decades*. The World Bank. Washington D.C.

Vigneri, Marcella & Santos, Paul, 2008: *What Does Liberalization Without Price Competition Achieve: The Case of Cocoa in Ghana*. GSSP Background Paper. International Food Policy Research Institute.

Electronic Sources

Armajaro, www.armajaro.com

1. http://www.armajaro.com/page.aspx?page_id=13

Government of Ghana, www.ghana.gov.gh

1. http://www.ghana.gov.gh/ghana_at_a_glance

Kuapa Kokoo, http://kuapakokoogh.com/kuapa/

1. http://kuapakokoogh.com/kuapa/index.php?option=com_content&task=view&id=29&Itemid=48

Ministry of Finance and Economic Planning, http://www.mofep.gov.gh/

1. http://www.mofep.gov.gh/documents/cocoa%20is%20ghana.pdf

Olam, www.olamonline.com

1. http://www.olamonline.com/globalbusiness/cocoa.asp

Interviews and Meetings

Meetings are considered less formal than interviews. When interpreter is not mentioned, the interviews and meetings were conducted in English. All interviews and meetings have been of great value for the work with the thesis, even if not all have been reference material in the final thesis' layout.

2009-04-06	Meeting with Rev. Dr. Samuel Asuming-Brempong in his office at the Department of Agricultural Economics and Agrobusiness at University of Ghana, Legon, Accra.
2009-04-16	Meeting with Labaran Y. Barry, Director of Khuda Services (Gh) Ltd in his office, Tema.
2009-04-17	Interview with Teophilus Asamami Adubi, tour guide at Tetteh Quarshie Cocoa farm in Mampong-Akuapou.
2009-04-24	Interview with Mary Mabel Tarjoe, Deputy Manager of Research and Development Department at Kuapa Kokoo, in head office of Kuapa Kokoo, Kumasi.
2009-04-24	Group interview with cocoa farmers in Bipoa society, Ashanti region. Interpreter: Emmanuel Appiah-Kubi, Research Development Officer at Kuapa Kokoo, Kumasi.
2009-04-27	Interview with Seth Amoako Hammond, Administrative Manager at Armajaro Ghana Ltd, in head office of Armajaro, Kumasi.
2009-04-28	Four interviews with different cocoa farmers in Anwona community, New Edubiase District, Ashanti region. Interpreter: Edward Nana Kutin-Mensah.
2009-05-05	Interview with Cyril Lekettey da Pilma, Cocoa Executive at Olam, in head office of Olam, Accra.

2009-05-13	Meeting with A. Osei Boakye, Managing Director of the PBC, in head office of the PBC, Accra.
2009-05-14	Interview with Francis Osei-Owusu, Deputy Director (R&D) of Research, Monitoring and Evaluation Department at The Cocoa House (head office of COCOBOD), Accra.
2009-05-19	Interview with George Kwadwo Boateng, Deputy Managing Director-Operations of the PBC, in head office of the PBC, Accra.
2005-05-21	Meeting with Francis Osei-Owusu, Deputy Director (R&D) of Research, Monitoring and Evaluation Department at The Cocoa House (head office of COCOBOD), Accra.