



Cocoa industry: Integrating small farmers into the global value chain





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ABBREVIATIONS

ACET	African Centre for Economic Transformation
GVC	global value chain
ha	hectare
NGO	non-governmental organization
TNC	transnational corporation
ICCO	International Cocoa Organization
EC	European Commission
EU	European Union
FBO	farmer-based organization
PPPP	public, private and producer partnership
SMEs	small and medium-sized enterprises
UNCTAD	United Nations Conference on Trade and Development

OVERVIEW

This report contributes to research on the cocoa global value chain (GVC). It examines consolidation patterns in the cocoa industry and their potential impacts on stakeholders along the value chain, in particular small cocoa farmers who constitute the backbone of cocoa production worldwide. It also discusses these farmers' integration into world cocoa markets, highlighting some critical issues they face. The report finally offers some policy recommendations which may help governments, the private sector, the international community and producers to foster the development of a sustainable cocoa economy by empowering farmers, consonant with the Global Cocoa Agenda adopted at the first World Cocoa Conference in Abidjan in 2012. The report should ultimately contribute to the debate on how to attain the Sustainable Development Goals (SDGs) with their commitment to "leave no one behind", especially in cocoa farming communities.

Cocoa is of significant economic importance both for producing and consuming countries. It generates export revenues, income and employment. Cocoa is an important ingredient in the confectionery, and food and beverage industries, and, more recently, in the pharmaceutical and cosmetics industries. Therefore, ensuring sustainability of cocoa production is critical, particularly at a time when most young people do not consider farming, including cocoa farming, a viable business choice. In the case of cocoa, this is probably due to the low profitability of its farming businesses and the relatively poor living standards of cocoa growers. In order to make cocoa farming a more viable source of livelihoods so as to attract younger people and ensure a sustainable global cocoa economy, it will be essential to reorganize the cocoa farming business to enable farmers to obtain higher prices.

Boosting cocoa farmers' incomes by improving their linkages with international markets and increasing competition in national markets was already a key objective of trade liberalization reforms undertaken by producing countries in the 1980s and 1990s. However, the complexity of cocoa markets, characterized by transnational corporations' ease of access to resources and the latter's objective of achieving scale economies have led to increased vertical and horizontal integration in the industry. As a result, a limited number of large trading and processing companies now control a significant share of global and local cocoa markets. As indicated in this report, the three biggest cocoa trading and processing companies traded roughly 50 to 60 per cent of the world's cocoa production in 2013. In terms of cocoa processing, four transnational corporations control now more than 60 per cent of world cocoa grindings.

This concentration pattern which has been recorded at all segments of cocoa GVC may have contributed to a high level of efficiency if the objective was solely to attain economies of scale. However, the extent to which cost savings resulting from these developments have been passed onto other stakeholders, especially small farmers, is debatable. Moreover, concentration may become problematic, especially when it fosters oligopsonic/monopsonic or monopoly/oligopoly behaviour in the industry. Such behaviour increases the bargaining power of big and integrated players to the detriment of small actors, including small farmers and small traders as well as purely chocolate manufacturers.

This report also discusses the extent of integration of cocoa farmers into international markets through an assessment of the transmission of international prices of cocoa to the prices paid to the farmers. The transmission which generally exists, and has increased with trade liberalizing reforms undertaken by cocoa producing countries, has had mixed outcomes, so far. The reforms have increased farmers' exposure to the vagaries of international markets, but they are not associated with a significant, if any, increase in the share of world prices of cocoa accruing to farmers, especially in major producing countries such as Côte d'Ivoire and Ghana. This is due to a number of factors discussed in this report, which identifies three sets of policy options that could address this situation so as to promote a sustainable cocoa economy.

First, at a macro level, policies should seek to reinforce competition laws at national, regional and international levels. National trade and agricultural development policies also need to be designed to provide better support to cocoa farmers. At a meso-level, there is a need to create a level playing field for the various stakeholders along the cocoa GVC. To achieve this objective, making cocoa markets more transparent for all players is critical just as creating opportunities to bolster small players. At a micro level, facilitating the formation of commercially oriented FBOs to empower cocoa farmers; improving farmers' access to finance and price risk management instruments; and, promoting product differentiation to enable cocoa growers to obtain higher prices cannot be overemphasized. These are crucial elements for sustaining small-scale cocoa farming and attracting the younger generation to the cocoa business. To be effective, each of these policy options should be based on a multistakeholder approach, engaging governments, the private sector, civil society and international organizations, as well as farmers, in order to tap into the specific comparative advantage of each entity.



I.

Introduction

Cocoa is of significant economic importance both for producing and consuming countries. For producing countries, it generates export revenues, income and employment. In Côte d'Ivoire and Ghana, for example, this commodity accounted for more than 30 per cent of export earnings over the period 1995-2014.¹ Furthermore, globally, cocoa is produced by five to six million farmers, and contributes to the livelihoods of 40 to 50 million people (WCF, 2012). For most of these people, cocoa constitutes the main, if not only, source of cash income. In consuming countries, cocoa is an important ingredient in the confectionery, and food and beverage industries, and, more recently, in the pharmaceutical and cosmetics industries.

Thus, considering the importance of cocoa in the global economy, ensuring sustainability of its production is critical, particularly at a time when most young people do not consider farming, including cocoa farming, a viable business choice. In the case of cocoa, this is probably due to the low profitability of its farming businesses and the relatively poor living standards of cocoa growers. Indeed, farmers along the cocoa global value chain (GVC) receive relatively low revenues. For example, Cocoa Barometer (2015) estimated that farmers receive only 6.6 per cent of the total value added to 1 ton of cocoa beans that are sold,² and the International Labour Rights Forum (ILRF, 2014) estimated that the net earnings of typical cocoa farmers with 2 hectares (ha) of land in Côte d'Ivoire and Ghana are about \$2.07 and \$2.69 per day respectively.³ These values are just above the global poverty line of \$1.90 per day. Considering that a typical rural household in these countries may exceed 5 people, the daily net income per person would therefore be much lower than the global poverty line. Moreover, cocoa farmers' situation is often exacerbated by their "scattered" nature, which reduces their bargaining power in a context of an increasingly integrated industry. As a result, the younger generation of farmers is shifting to more profitable crops such as palm and rubber,⁴ or to more remunerative off-farm activities, or simply migrating

to capital cities for better careers (ILRF, 2014). In order to make cocoa farming a more viable source of livelihoods so as to attract younger people and ensure a sustainable global cocoa economy, it will be essential to reorganize the cocoa farming business to enable farmers to obtain higher incomes.

Boosting cocoa farmers' incomes by improving their linkages with international markets and increasing competition in national markets was already a key objective of trade liberalization reforms undertaken by producing countries in the 1980s and 1990s (Gilbert, 2009; Wilcox and Abbott, 2006).⁵ However, the complexity of cocoa markets, characterized by transnational corporations' ease of access to resources, such as finance, risk management instruments, as well as technologies, and their singular objective of achieving scale economies have led to increased vertical and horizontal integration in the industry (ACET, 2014; Gilbert, 2009). As a result, a limited number of large trading and processing companies now control a significant share of global and local cocoa markets. Such a market structure could contribute to improving the cost efficiency of the cocoa GVC, with potential benefits passed onto all stakeholders, including small farmers. However, high concentration in the industry could also become problematic if it leads to oligopsonic or monopsonic behaviour, increasing the bargaining power of a few buyers to the detriment of small buyers and producers, in particular atomized small farmers (Deardorff and Rajaraman, 2009). This is of particular concern in the context of low productivity and high costs of inputs, including labour, fertilizers and finance, which undermine the profitability of farmers in many cocoa producing countries.

Market concentration in the commodity sector, especially in the cocoa industry, has become a topical issue in recent years. It has been hotly debated by various stakeholders, including governments, private actors and non-governmental organizations (NGOs), as well as institutions such as the International Cocoa Organization (ICCO), the United Nations, the World Bank and the European Commission (EC). The main purpose of this report is to contribute to the debate by examining some recent

¹ Based on data from UNCTADstat (accessed in December 2015).

² Throughout this report, the term "ton" refers to metric ton.

³ Throughout this report, "\$" refers to United States dollars.

⁴ This was evident in 2010 and 2011, for example, when crops such as rubber and palm oil were more profitable compared with cocoa due to price differentials in international markets. However, since 2011 the prices of palm oil and rubber have fallen significantly.

⁵ At the same time, there were concerns that the dismantlement of commodity marketing boards under these trade policy reforms might result in new challenges to farmers. These include increasing farmers' exposure to price volatility in global markets in a context where most cocoa producing countries lack risk mitigation mechanisms, such as price risk management tools.

consolidation patterns in the cocoa industry and their potential impacts on stakeholders along the value chain, in particular small cocoa farmers who constitute the backbone of cocoa production worldwide. It also discusses these farmers' integration into world cocoa markets, highlighting some critical issues they face, in particular the profitability of cocoa farming, a key determinant of which is the price they receive for their output.⁶ The report finally offers some policy recommendations which may help governments, the private sector, the international community and producers to foster the development of a sustainable cocoa economy by empowering farmers, consonant with the Global Cocoa Agenda adopted at the first World Cocoa Conference in Abidjan in 2012. The report should ultimately contribute to the debate on how to attain the Sustainable Development

Goals (SDGs), which underscore the imperative of achieving inclusive and sustainable economic growth, in particular, poverty eradication as well as environmental and social sustainability.

To achieve its objectives, the study relies mainly on secondary data.⁷ However, where more information was needed, interviews were conducted with key informants by telephone or electronic mail.

The remainder of this report is structured as follows. The next section provides an overview of global cocoa markets. Section III discusses the current structure of the cocoa industry. Section IV analyses the dynamics between producers and world prices of cocoa, highlighting some key issues. Section V discusses policy options that could help cocoa farmers obtain higher prices, and the last section concludes.

⁶ Another key determinant of profitability for cocoa farming is productivity. However, this aspect is beyond the scope of this study.

⁷ Data are based on companies' annual reports and publications of international organizations, including the International Cocoa Organization (ICCO), UNCTAD, Food and Agricultural Organization of the United Nations (FAO), the World Bank and other relevant institutions.



II.

Overview
of the global
cocoa market

Originally, cocoa was grown in Latin America. However, today, it is cultivated in almost all tropical regions, from West and Central Africa to Asia and Oceania. It is typically produced by small farmers, although some large-scale cocoa farms are being planned or developed (Table 1) due to concerns that the world could be running out of cocoa (box 1).⁸

At a global level, Africa remains the largest cocoa producing region. For the 2013/14 crop year, it was estimated that the continent produced roughly 3.2 million tons of cocoa beans, representing 73 per cent of global production (Figure 1), the two leading producing countries being Côte d'Ivoire and Ghana. During this period, 19 per cent of global production was ground in Africa (figure 2).

Historically, cocoa beans have been ground in traditional importing countries located in Europe and North America, where cocoa processing companies

have been able to meet chocolate manufacturers' requirements cost effectively. The criticality and cost effectiveness of just-in-time delivery at the downstream segment of the cocoa-chocolate value chain, owing to the short life of semi-finished chocolate products, have been factors contributing to cocoa processors being located close to retail production (ACET, 2014). Today, however, the first stages of processing of a significant proportion of cocoa bean production are now undertaken in producing countries, thanks to government incentives and investments by national and transnational corporations (TNCs). For example, origin grindings (i.e. grinding operations taking place in cocoa producing countries) in Côte d'Ivoire increased by 40 per cent from 2005/06 to reach 519,400 tons in 2013/14. Similar significant improvements were recorded in other producing countries such as Ghana and Indonesia (Figure 3). Furthermore, the development of local and regional markets for chocolate products in cocoa growing areas such as West Africa and Asia is offering investment opportunities for manufacturers, which will contribute to retaining greater value added in these regions. For example, in May 2015,

⁸ However, the most viable model for cocoa farming will likely remain small-scale production due to the inherent characteristics of cocoa farming. For example, planting cocoa trees or harvesting the pods is done by hand; any form of mechanization which would be required by large-scale farming may be impractical or costly.

Table 1: Selected large-scale cocoa plantation projects

Project entity	Ownership	Country	Crops	Area under cultivation (ha)
Agro Nica Holdings	Private	Nicaragua	Cocoa, plantain, agroforestry	2 000-10 000* (cocoa and other crops)
ROIG Agro- Cacao S.A.	Family-owned	Dominican Republic	Cocoa (organic)	3 000
Romero Group	Family-owned	Peru	Cocoa, palm oil	700
Tropical Farms Ltd (Agriterra)	Private	Sierra Leone	Cocoa, agroforestry	4 000*
United Cacao Ltd	United Cacao, private	Peru	Cocoa, plantain, agroforestry	4 000*

*Including actual and planned area under cultivation.
Source: Hardman & Co., 2014.

Box 1: Could the world be running out of cocoa?

Reports from analysts and the media around the world, including from Bloomberg, CNN, BBC and France 2, have expressed concern that the world may run out of cocoa by 2020. The major argument is that, owing to production constraints, cocoa supply may fail to respond to the increasing demand driven by traditional and non-traditional chocolate consumer countries. This would result in significant price increases for chocolate products that most consumers would be unable to afford.

However, some analysts do not agree with this alarming outlook for cocoa and chocolate markets. For example, at the 2015 session of the UNCTAD Multi-year Expert Meeting on Commodities and Development, the Director of the ICCO certainly admitted that cocoa producers would need to increase supplies to meet future demand; but he pointed out that, given the cyclical nature of cocoa production, the succession of supply and deficit should continue to keep the markets balanced. Thus, there is no strong evidence that the world will run out of cocoa products in the foreseeable future. However, the industry faces some challenges which need close attention, including pests and threats of diseases, low prices received by farmers, as well as climate change and its potential adverse impacts on food production in cocoa growing areas. Tackling these challenges is crucial for making cocoa farming a profitable and economically viable and sustainable activity for growers.

Figure 1: Production of cocoa beans by region, 2013/14

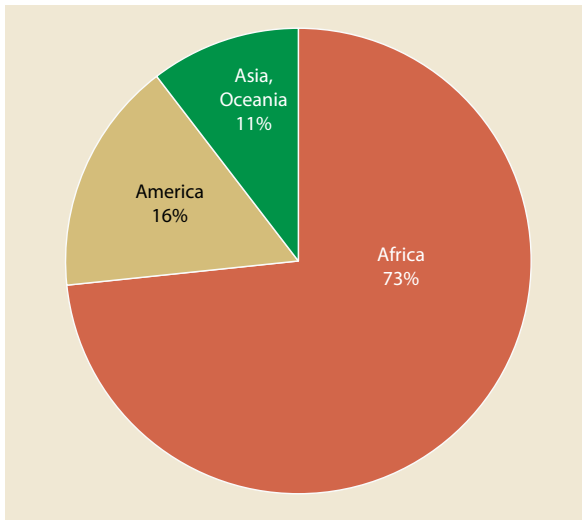
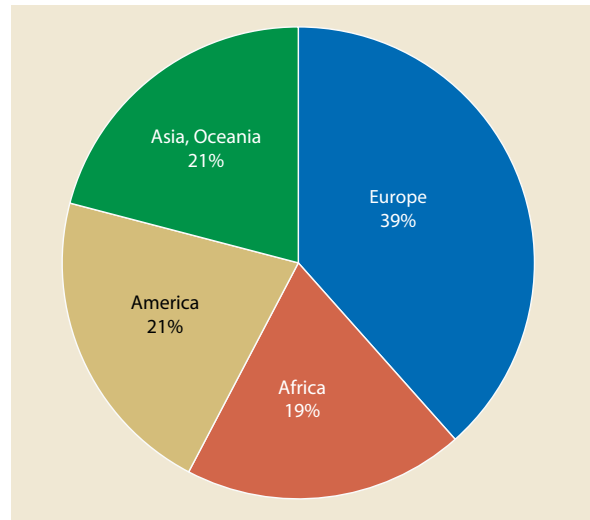


Figure 2: Grinding of cocoa beans by region, 2013/14

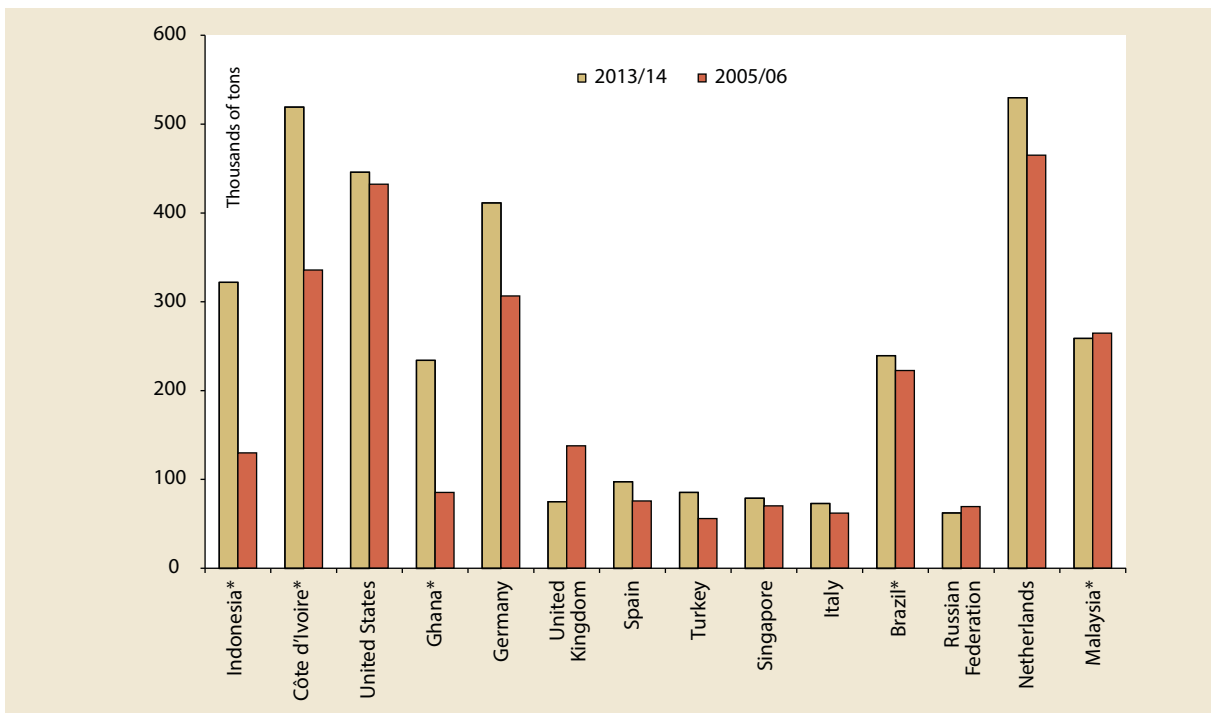


Source: Based on data from ICCO, 2015.

the France's CEMOI Group, inaugurated the first industrial-scale chocolate factory in Côte d'Ivoire with the objective of stimulating and supporting growing West African markets for chocolate products. These developments represent a significant upward movement by cocoa producing

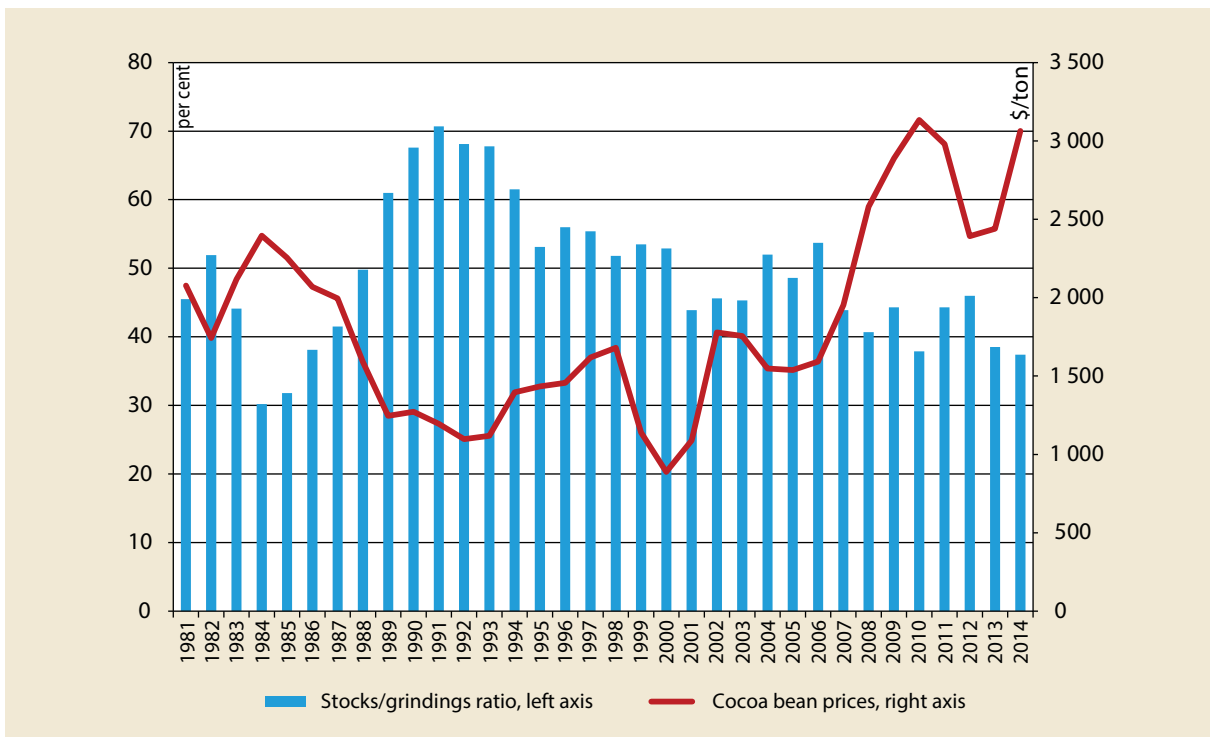
countries along the GVC, and have contributed to boosting some value added in growing regions. However, the extent to which origin grindings are really benefiting producing countries is questionable for two major reasons. First, origin processing is mostly undertaken by TNCs with low involvement

Figure 3: Grinding of cocoa beans in major producing and importing countries (thousand tons)



*Cocoa producing countries.

Source: Based on data from ICCO, 2010 and 2015.

Figure 4: Evolution in the prices of cocoa beans (\$/ton) and stocks to grindings ratio (per cent), 1981–2014

*Cocoa producing countries.

Source: Based on data from ICCO, 2010 and 2015.

of local companies.⁹ Consequently, much of the value created is captured by foreign investors. Second, considering that processing cocoa is capital-intensive, the extent of employment it generates in the producing countries may be limited.

Major developments in cocoa markets over the past decade or so have also been associated with increased prices and high price volatility. For instance, the yearly average price of cocoa beans more than doubled between 2000 and 2002, from \$888 per ton to \$1,778 per ton. Thereafter, it fell by 14 per cent, to \$1,538 per ton in 2005, before skyrocketing to a peak of \$3,133 per ton in 2010. Although, the price of cocoa beans eased subsequently, it remain high compared with its levels in the early 2000s. In 2014, the price of cocoa beans averaged \$3,064 per ton – a more than threefold increase from its level in 2000. The general price trend in the cocoa market is primarily driven by market fundamentals which are mirrored by an inverse relation between prices of cocoa beans and stocks to grindings

ratio (Figure 4).¹⁰ This inverse relationship is confirmed by a negative correlation coefficient of 0.73 between annual prices of cocoa and stocks to grindings ratio over the period 2000–2014. Some other factors that drove up cocoa prices over the past decade included supply concerns relating to a political crisis in Côte d'Ivoire, a weak United States dollar, adverse weather conditions, financialization of the markets (in particular, long positions), strong demand from both traditional consuming areas (i.e. the European Union (EU) and the United States) and non-traditional consuming areas (i.e. emerging economies such as China and Brazil) and the high cost of energy. By contrast, drivers exerting downward pressure on prices included a strong United States dollar, financialization of the markets (in particular, short positions) and sluggish demand owing to an overall global economic slowdown.

These developments in global cocoa markets were accompanied by continued consolidation (i.e. vertical and horizontal integration within the cocoa industry), resulting in significant concentration along the cocoa-chocolate GVC, as discussed in the next section.

⁹ For example, in 2014, the top five grinders in Côte d'Ivoire were TNCs or their local subsidiaries, which accounted for nearly 85 per cent of the country's cocoa grinding capacity (Ecobank, 2014)

¹⁰ The stocks-to-grindings ratio measures the degree of balance/imbalance between supply and demand.



III.

The cocoa industry and market concentration

Concentration at global and local levels in the cocoa industry is not new. It has continued over the past few years following merger and acquisition deals, resulting in a limited number of well-integrated TNCs becoming major players in the industry.

This section examines briefly the organization of the cocoa-chocolate GVC (part A) as well as its vertical and horizontal consolidation patterns at the global and local levels and some of the main drivers of the observed patterns (part B). In the last part (C), the potential impacts on various stakeholders along the value chain are analysed.

A. ORGANIZATION OF THE COCOA-CHOCOLATE GLOBAL VALUE CHAIN

The cocoa-chocolate value chain is complex. The simplified organization chart below (Figure 5) presents five major segments of that chain: cocoa beans production, sourcing and marketing, processing of powder and butter, manufacturing and distribution of industrial chocolate, and retailing to final consumers.

1. Cocoa beans production

The segment of cocoa beans production includes growing the trees, harvesting the pods, and fermenting and drying the beans.

Growing

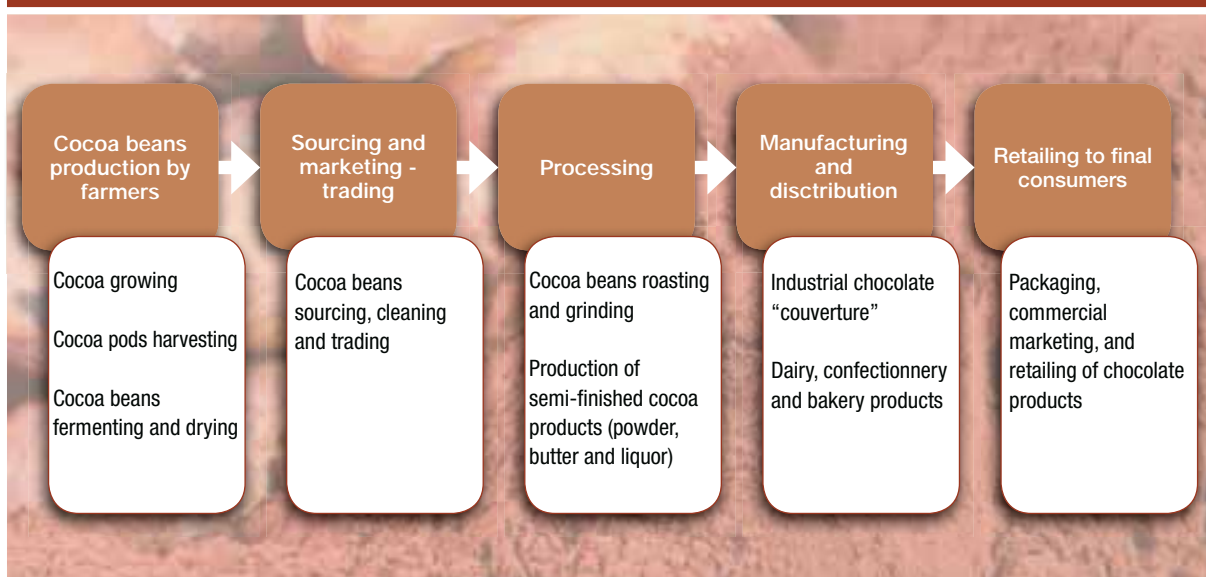
Cocoa is typically grown by small farmers who account for between 80 and 90 per cent of global production. These farmers generally cultivate small patches of land, typically only 2 to 4 ha in Africa and in some parts of Asia, for example. Cocoa beans are the seeds of the *Theobroma cacao* tree, which produces different varieties (see Box 2). The trees thrive in tropical areas, within a range of 10 to 20 degrees north and south of the equator, under the protective shadow of plants such as banana, plantains or palm trees. The trees generally begin to flourish and bear pods from about the fifth year of their life, playing a vital economic role for growers. Recently, some advances in breeding have enabled farmers to grow new species of cocoa trees which bear fruit in their third year. Cocoa trees can live up to 100 years, but are most productive for about 25 to 30 years.

Harvesting

Cocoa is harvested manually when the pods ripen.¹¹ The process consists of cutting the pods, usually with a blade. Generally, the harvesting cycles depend on the planting areas. However, within a crop season, cocoa trees generally flower and produce pods in two cycles of six months (i.e. one main and one intermediate crop season). Table 2 provides cocoa harvest seasons in selected producing countries.

¹¹ When cocoa pods ripen, they tend to turn from green or yellow to orange or red, and sometimes purple.

Figure 5 : Overview of the global value chain for cocoa – from farmers to consumers



Box 2: Varieties of cocoa

Roughly speaking, cocoa can be divided into three varieties: Forastero, Trinitario and Criollo. Forastero cocoa, which is quite easy to cultivate, is the most abundant variety in the world, accounting for about 90 per cent of global production. Its beans have a perfumed aroma with a fruity and bitter taste. The Criollo and Trinitario varieties provide fine flavoured beans. The former, which is often considered the prince among cocoa varieties, produces beans with a sweet aroma and a well-balanced flavour. The latter is a cross between the two other varieties, (i.e. Forastero and Criollo). Its beans generally have a fruity and slightly acid aroma with a spicy and sharp flavour.

Table 2 : Harvest seasons in selected cocoa producing countries

Country	Main crop	Mid-crop
Brazil	Oct-Mar	Jun-Sep
Cameroon	Sep-Feb	May-Aug
Costa Rica	Jul-Feb	Mar-Jun
Côte d'Ivoire	Oct-Mar	May-Aug
Ecuador	Mar-Jun	Dec-Jan
Ghana	Sep-Mar	May-Aug
Indonesia	Sep-Dec	Mar-Jul
Nigeria	Sep-Mar	Jun-Aug
Papua New Guinea	Apr-Jul	Oct-Dec
Togo	Oct-Mar	Apr-Sep

Source: ICCO, at: <http://www.icco.org/faq/58-cocoa-harvesting/131-what-time-of-year-is-cocoa-harvested.html> (accessed 23 April 2015).

Fermenting and drying

Cocoa beans are normally fermented and dried on the farm or in the producer's village. After the cocoa pods are harvested and split, the pulp-covered beans are removed. Thereafter, they are stored in boxes or baskets or heaped into piles and covered with mats, or with banana or plantain leaves. The pulp layer heats up and ferments the beans. This process, which may last three to seven days, is an essential step to flavour the cocoa beans.

After their fermentation, the beans are dried in the sun, for several days – typically five to ten days. The drying stops the fermentation process and enhances the storability of the beans. Sometimes, the drying process is undertaken mechanically, but sun drying is considered the best as it produces a better flavour. This is mainly because, without proper aeration that may be missed during mechanical drying, the acetic acid present in the beans does not escape fully, resulting in more acidic cocoa products.

2. Marketing of cocoa beans

Historically, the marketing of cocoa beans from farm gates to export markets has been controlled by national commodity boards in most producing countries such as Cameroon, Côte d'Ivoire, Ghana and Togo. Although their specific functions differed across countries, in general, these boards would purchase cocoa beans from farmers at a fixed price and act as principal sellers or exporters. However, in the wake of trade liberalizing reforms in the 1980s and 1990s, including liberalization of cocoa bean markets, the boards retreated progressively, except in Ghana.¹² Farmers now sell their crops directly at buying stations to exporters' agents or to traders and brokers, who usually use the prices of cocoa beans futures in international markets, as reference. These prices are denominated in United States dollars, pounds sterling and, more recently, euros (see Box 3). Once the beans are bought, they are transported to roasting and grinding plants in producing or importing countries. When cocoa beans are exported to consumer countries, local buyers transport them first to an exporting company. That company inspects them, then grades and stores them into burlap, sisal or jute bags for shipment to the importer's warehouse. Increasingly, the beans are shipped in bulk, as this is cheaper than using bags, which was the conventional shipping method. At the port of destination, the importer may conduct further quality checks before storing or selling the beans to cocoa processors or chocolate manufacturers.

¹² The degree of liberalization varies across countries and through time. For example, in Côte d'Ivoire, where the cocoa sector was fully liberalized in the early 2000s, the Government introduced new reforms from 2012, creating a central body – le *Conseil du Café-Cacao* (CCC) – comprising representatives of all stakeholders. This body is responsible for the management, regulation, development and price stabilization of cocoa in the country. In the case of Ghana, although Ghana Cocabod, the country's cocoa board, is still responsible for marketing cocoa beans in export markets, the internal market has been liberalized. This implies that local traders and buyers purchase beans from farmers and sell them to Ghana Cocabod.

Box 3: The international markets for cocoa beans

Cocoa beans have historically been traded through futures contracts in two international markets: London (NYSE LIFFE for futures contracts denominated in pounds sterling) and New York (Intercontinental Exchange - ICE - for futures contracts denominated in dollars). The former contracts primarily deal with cocoa flows from Africa, whereas the latter serve mainly Asian and Latin American suppliers.

A major recent development in the markets has been the introduction of a new type of contract denominated in euros. On 30 March 2015, the European arm of the Chicago Mercantile Exchange (CME) group launched new euro-denominated futures contracts to increase competition in the markets. To protect its dominant position, ICE responded by introducing similar contracts on the same day.

This development has some major implications. First, it expands trading possibilities for market participants, including producers, exporters, trading houses, processors, chocolate manufacturers and financial investors. Second, it reduces foreign exchange risks for the market players operating in the euro area, mainly because the national currencies of the major producing countries in Africa, such as Cameroon and Côte d'Ivoire, are pegged to the euro. Third, although it is debatable, the cost savings from the reduced need for hedging by large-scale players may be passed onto other stakeholders along the cocoa GVC, such as farmers, small traders and consumers. This is of concern at a time when limited direct benefits, if any, are expected to accrue to most small traders and farmers in cocoa producing countries, especially in Africa, who do not hedge their cocoa owing to their lack of access to finance and the low level of expertise in a weak institutional context. Fourth, this recent development in cocoa markets raises concerns about the viability of having three cocoa contracts denominated in pounds sterling, dollars and euros. In the short to medium run, a high degree of uncertainty remains about their coexistence, as the cocoa market is a niche market with a relatively low volume of trading and tight liquidity. In the long run, it is most likely that only contracts denominated in dollars and euros will survive in the international markets.

Source: Ecobank, 2015, and Terazono, 2015.

3. Processing of cocoa beans

The processing stage typically encompasses roasting and grinding of cocoa beans. In the past, these operations were performed almost entirely in importing countries, but, as mentioned earlier, producing countries are also increasingly engaged in processing.

Roasting

Cocoa is roasted to reduce the water content and to obtain rich aromas and flavours from the beans. It can be done on the whole beans before shelling (i.e. bean roasting), or on the nib after shelling (i.e. nib roasting).¹³ Sometimes, the removed shell that covers the nibs is sold and used as agricultural mulch or by fertilizer producers, thereby providing opportunities for the development of cocoa by-products. After the beans are roasted, they undergo other processes, including alkalization with alkaline solutions such as potassium or sodium carbonate. Alkalization makes semi-finished cocoa products darker and reduces their acidity.¹⁴ The time and

¹³ The nib is the inside of the cocoa bean.

¹⁴ This alkalization treatment is also known as the "dutching" process, honoring the homeland of its inventor, the Dutchman

temperature for roasting the beans are key determinants of the flavour of the semi-finished products.

Grinding

After the beans have been shelled and roasted or roasted and shelled, the nibs are ground to produce fine cocoa liquor under high temperature.¹⁵ The cocoa liquor may be used directly as an ingredient for chocolate. Otherwise, it is pressed through a fine sieve or by using extraction solvents to obtain cocoa butter, leaving a solid material called cocoa cake or presscake. The extracted cocoa butter is then filtered and stored in tanks in liquid form for use in chocolate manufacturing. The cake is either broken into smaller pieces and sold in generic cocoa markets, or pulverised to produce a fine cocoa powder. Cocoa cake generally varies in terms of fat content, depending on how much fat has been pressed out. This determines its end use, ranging from drinking chocolate to bakery products and fillings.

CJ Van Houten. The treatment also permits semi-finished products such as cocoa liquor to stay longer in suspension in liquids such as milk.

¹⁵ Cocoa liquor is also designated as cocoa paste, cocoa mass, chocolate paste, or simply chocolate.

4. Manufacturing (industrial chocolate production) and distribution

Cocoa liquor and butter are mixed with inputs such as sugar, vanilla, emulsifying agents and milk. This mixture therefore undergoes a refining process through a series of rollers until a smooth chocolate is obtained. An additional process called conching may be performed, ranging from a few hours to several days to further develop its flavour and texture. The resulting mixture, often called industrial chocolate or “couverture”, is shipped in tanks, generally in liquid form, though also in solid form, or it is tempered and poured into moulds for utilization by the downstream segment of the chain, including confectioners, dairies and bakers. In some cases, where manufacturers are vertically integrated, the industrial chocolate is used in-house to produce consumer products.

5. Retailing to final consumers

The final step of the cocoa-chocolate value-chain includes packaging, commercial marketing and retailing. Chocolate products are sold through grocery retail channels, including supermarkets, super-markets and convenience stores, or through discounters; and, increasingly through online shopping. Furthermore, some chocolate manufacturers are now opening their own branded retail stores to improve their image and capture a larger consumer base. Chocolate retailing markets can

be categorized by types, including dark, milk or white chocolate; by sales categories, including every day, premium or seasonal chocolate; or by geographic location such as North America, Europe, Asia and the rest of the world. Each category provides specific market opportunities in terms of consumer buying behaviour.

B. CONCENTRATION IN THE COCOA VALUE CHAIN

1. Concentration at the global level

Cocoa value chains have become increasingly horizontally and vertically concentrated at the global level following a number of mergers and acquisitions. Some of these deals over the past five years are provided in Box 4.

a) Horizontal concentration

Cocoa trading

Concentration in cocoa trading is not a new development; from 1980 to the early 2000s, for example, the number of cocoa trading houses in London decreased threefold, from 30 to less than 10 players. Companies with widely diversified trading interests, such as Cargill and ADM, took over the

Box 4: Selected major merger and acquisition deals in the cocoa industry since 2010^a

2010: The United States-based company, Kraft Food, renamed Mondelez International in 2012, took over control of Cadbury, a confectionary TNC based in the United Kingdom.

2011: Nestlé SA of Switzerland purchased Dongguan Hsu-Fu-Chi Food Co Ltd, a big player in China's confectionery market – a deal that permitted Nestlé to strengthen its presence in China.

2013: The Swiss-based Barry Callebaut extended its businesses by purchasing the Cocoa Ingredients Division from Singapore-based Petra Foods Ltd., thereby making it the world's largest and most vertically integrated player along cocoa value chains.

2014: The Swiss-based Ecom Agroindustrial Corp. Ltd, a global commodity trading and processing company focusing on coffee, cotton, and cocoa, bought the commodities trading arm of the United Kingdom-based Armajaro. The acquisition deal was approved by the European Commission (EC) in May 2014.

In September 2014, Switzerland-based Archer Daniels Midland (ADM) announced an agreement to sell its global chocolate business to Cargill of the United States. The EC approved the proposed deal in July 2015 on the condition that Cargill divest ADM's largest industrial chocolate plant in Europe (located in Mannheim, Germany) to a competitor in order to keep the global chocolate market competitive.

In December 2014, Olam International Limited reached an agreement with ADM to buy the latter's global cocoa business, including processing facilities in Mississauga (Canada), Koog aan de Zaan and Wormer (Netherlands), Mannheim (Germany), Ilhéus (Brazil), Abidjan (Côte d'Ivoire), Kumasi (Ghana) and Singapore. ADM's buying stations in Brazil, Cameroon, Côte d'Ivoire, and Indonesia, as well as the company's deZaan and UNICAO brands were also included in the deal. The deal was approved by the EC in June 2015.

^a For a list of selected major deals in the cocoa industry in the 1990s and early 2000s, see UNCTAD, 2008a: 57–60.

role of some trading companies specialized in cocoa and sugar trading, such as Gill & Duffus, Berisford and Sudden (UNCTAD, 1999). The concentration pattern has accelerated over the past years, thanks to several mergers and acquisitions. As a result, estimates suggest that in 2013 the three biggest cocoa trading and processing companies – Barry Callebaut, Cargill and ADM – traded roughly 50 to 60 per cent of the world's cocoa production.¹⁶

A major driver of this consolidation in the trading segment of the cocoa GVC is, surprisingly, trade liberalizing reforms. Liberalization in producing countries was expected, among other objectives, to increase competition in domestic intermediation and in the export of cocoa beans by increasing the number of players. However, high operating costs, including transport costs, have contributed to strengthening the position of TNCs, which have better access to resources (finance and technologies) than small traders and buyers. As a result, most small players have been squeezed out of cocoa marketing channels or have merged with TNCs which took control over their activities (Gilbert, 2009; Traoré, 2009).

¹⁶ Authors' estimates based on data from Reuters (See: Cargill on verge of buying ADM cocoa unit, at: <http://www.reuters.com/article/2013/10/02/us-cargill-cocoa-adm-idUSBRE99102B20131002>, accessed 24 February 2015).

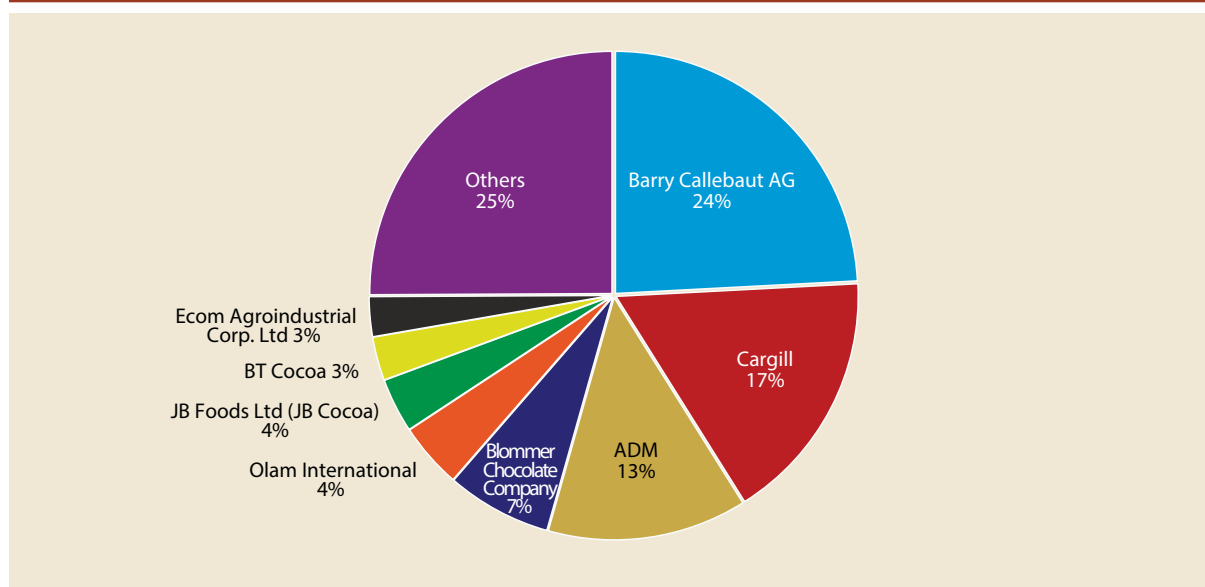
Cocoa processing

The cocoa processing segment has also witnessed high market concentration. In 2006, four big companies, namely Barry Callebaut, Cargill, ADM and Blommer Chocolate Company, controlled about 50 per cent of world cocoa grindings (UNCTAD, 2008a), but they now control about 61 per cent of this market (Figure 6).¹⁷

Consolidations in cocoa processing over the past few years have been driven primarily by the recent boom in commodity prices. High prices of inputs, including cocoa beans and energy, have increased production costs for processing companies, resulting in narrower margins for most of them (Hardman & Co, 2014). Therefore, merger and acquisition strategies in the segment were used by existing players as a means to increase cost efficiency and attain greater economies of scales. This is particularly true for cocoa processors, as they compete primarily on costs (Gilbert, 2009). Moreover, cocoa processing is capital-intensive with high sunk costs, which might also have discouraged potential new entrants.

¹⁷ If the acquisition of ADM's cocoa processing business by Olam International Ltd in 2015 is included, four processing companies could well be controlling more than two thirds of the global cocoa grindings market at present.

Figure 6: Grinding capacities across the cocoa processing industry as a share of total grindings



Source: Based on data from Hardman & Co, 2014, and ICCO, 2015.

Note: Calculations of the shares are based on grinding capacities of cocoa processors (data from Hardman & Co, 2014) divided by the average global grindings of cocoa over the period 2011/12–2013/14 (data from ICCO, 2015).

Retailing of chocolate products

Traditionally, chocolate companies were oriented towards the domestic market, and most of them were owned by families. At present, a number of confectionery and branded companies operate in global markets; some of them are still family-owned brands, such as Mars and Ferrero, which are among the top 10 manufacturers of chocolate bars and other candies listed in Table 3. These top 10 companies account for a significant share of global chocolate markets (see Figure 7). In 2013, for example, their total sales of chocolate bars and other candies amounted to 42 per cent of global confectionery sales that were estimated at \$196.6 billion. Chocolate products sold through modern grocery retail channels, including hypermarkets and supermarkets, accounted for 56 per cent of the total global sales.¹⁸ Some chocolate manufacturers are now opening their own branded retail stores, a phenomenon which has led to increased brand exposure and image improvements, which in turn have enhanced their share of value along the GVC.

b) Vertical concentration

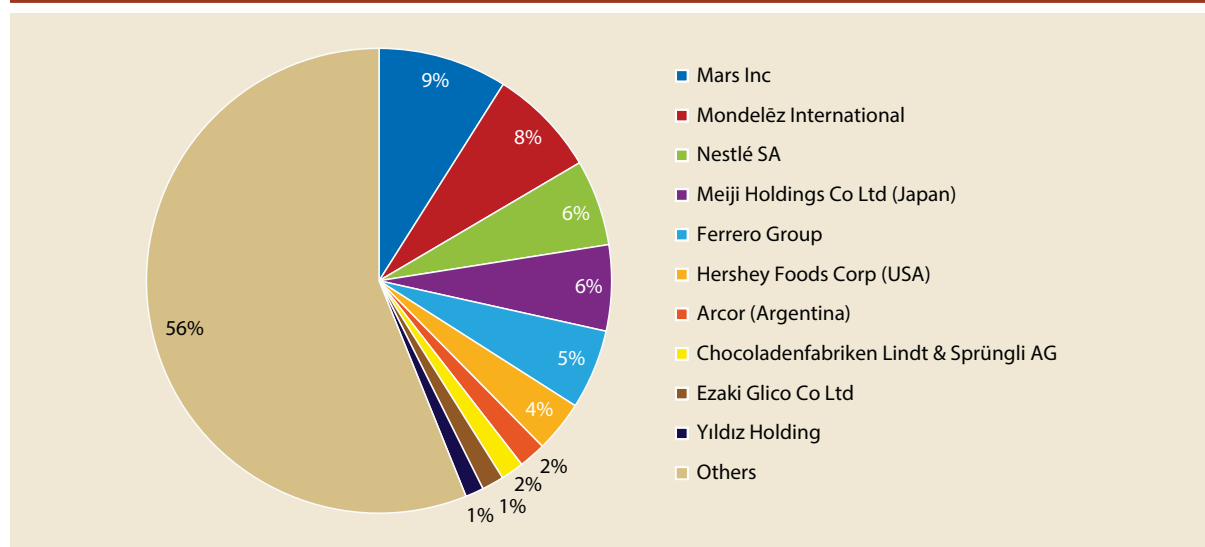
The global cocoa industry has also experienced significant vertical integration, with companies expanding their activities from sourcing beans to producing chocolate products. This pattern is not new per se. In the past, a number of big chocolate

producers used to manage a large part of the cocoa value chain themselves, from buying beans to processing cocoa butter and powder to finally making chocolate (Gilbert, 2009). Thereafter, many cocoa-chocolate business entities (re-)positioned themselves on specific segments of the value chain, with many of them exiting, for example, from the less profitable grinding segment (UNCTAD, 2008a). However, an increasing number of mergers and acquisitions in recent years has resulted in a high degree of vertical integration in the industry. This integration pattern stems partly from the motivation of big companies to gain a tighter control of cocoa and chocolate products to satisfy demand in terms of quantity, quality and traceability (Ménard and Klein, 2004).

Indeed, the operations of some trading or processing companies have extended down to the farm level (directly via cocoa-buying stations or indirectly through agency relationships). This has created a blurred boundary between trading and processing companies, as major trading TNCs are now also engaged in cocoa processing and vice versa. Of the eight biggest companies, which control about 70 per cent of global cocoa processing, seven play a significant role in terms of cocoa origination, handling and trading (Hardman & Co, 2014). Companies such as ADM and Cargill were historically traders of cocoa beans, but have now diversified their activities into grindings and production of cocoa liquor, powder, butter and chocolate manufacturing, thereby achieving significant vertical integration in the industry.

¹⁸ See *Candy Industry*, January 2014 and June 2014 issues.

Figure 7: Market shares of the leading chocolate manufacturers in total global confectionery sales, 2013



Source: Based on data from *Candy Industry*, 2014, January and June.

Table 3: Top 10 global manufacturers (confectionery brand owners) of chocolate bars and other candies

Company	Country headquarters	Net sales 2013 (\$ million)	Share of net sales in total sector sales (%)
Mars Inc.	United States	17 640	9
Mondelēz International	United States	14 862	8
Nestlé SA	Switzerland	11 760	6
Meiji Holdings Co Ltd	Japan	11 742	6
Ferrero Group	Italy	10 900	6
Hershey Foods Corp	United States	7 043	4
Arcor	Argentina	3 700	2
Chocoladenfabriken Lindt & Sprüngli AG	Switzerland	3 149	2
Ezaki Glico Co Ltd	Japan	3 018	2
Yıldız Holding	Turkey	2 500	1

Source: Based on data from Candy Industry, 2014, January.

Other companies have expanded their activities to other segments of the value chain, from production of semi-finished cocoa products to cocoa beans sourcing on one hand, and to consumer chocolate production on the other. For example, Barry Callebaut and Blommer Chocolate Company, which used to process beans and produce semi-finished cocoa products for chocolate manufacturers, have developed interests from sourcing the beans to the production of chocolate. Large chocolate manufacturers and brand owners, including Nestlé and Mars, are now sourcing cocoa beans from farmers. As a result of these developments, only a few companies remain that have operations in only one specific segment of the value chain. In cocoa beans trading, for instance, these include Continaf BV, Novel Commodities and Touton at the international level, while at the country level, Saf-Cacao operates in Côte d'Ivoire, Akuafu Adamfo in Ghana, and Roig Agro-Cacao SA in the Dominican Republic.

2. Concentration at regional and national levels

Concentration in the cocoa industry is not limited to the global level. In many cocoa producing or chocolate consuming countries, a small number of companies account for large market shares.

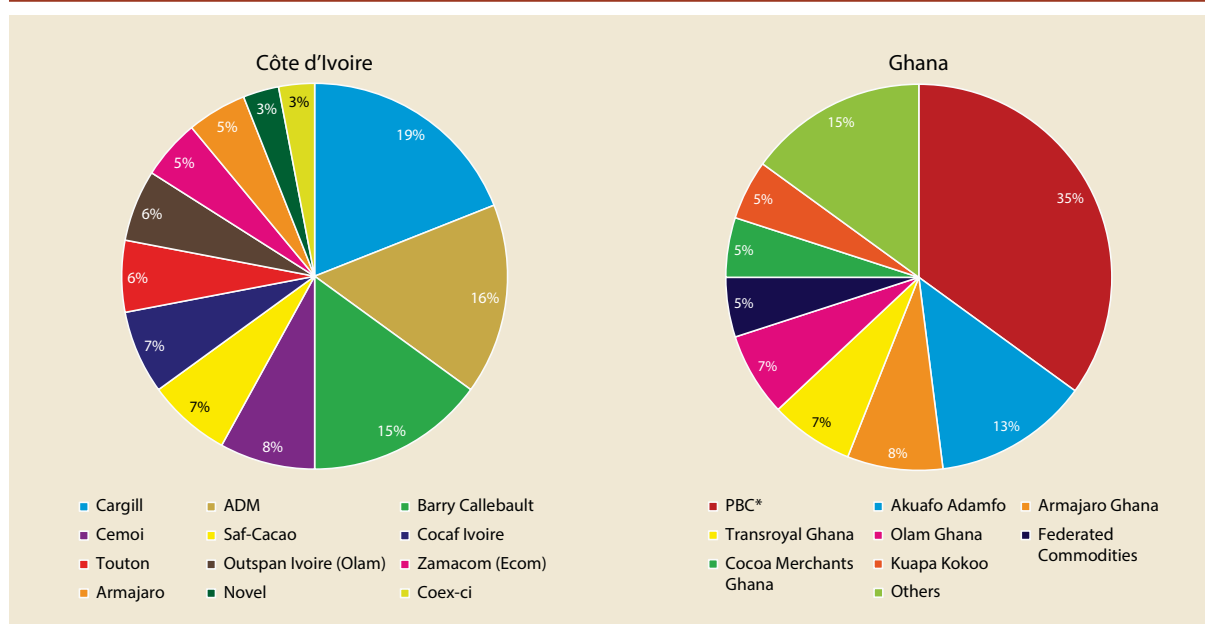
In most producing countries, marketing channels for cocoa beans are controlled by a limited number of players. In Côte d'Ivoire for example, three international

companies, through their local agencies, bought about 50 per cent of the cocoa produced during the 2011/12 crop year. Over the same period, in Ghana where trading in cocoa beans is dominated by local firms and the country's Cocobod, the three largest players controlled over 55 per cent of the trading sector. The biggest player is the Produce Buying Company (PBC), which accounted for over 35 per cent of the market in the 2011/12 crop year (Figure 8). In other countries, such as Indonesia, where a large proportion of cocoa beans is processed locally, four companies accounted for about 75 per cent of cocoa grindings in 2011 (Figure 9).

There is also increased concentration in the national markets of consuming countries, driven largely by the importance of global brand recognition and commercial marketing strategies (UNCTAD, 2008a). This implies that the huge investments required for new entrants to promote their brand probably constitute a serious barrier to market entry, in particular for small players. In addition, like cocoa processing, the chocolate manufacturing segment is capital-intensive, which requires large investments by new entrants. These factors have resulted in a few chocolate manufacturing companies enjoying significant market shares. In France, for example, the main chocolate confectionery companies in 2014 were Ferrero (19 per cent of the market), Lindt & Sprüngli (13 per cent) and Nestlé and Mondelez (11 per cent each)¹⁹. In the United States, the

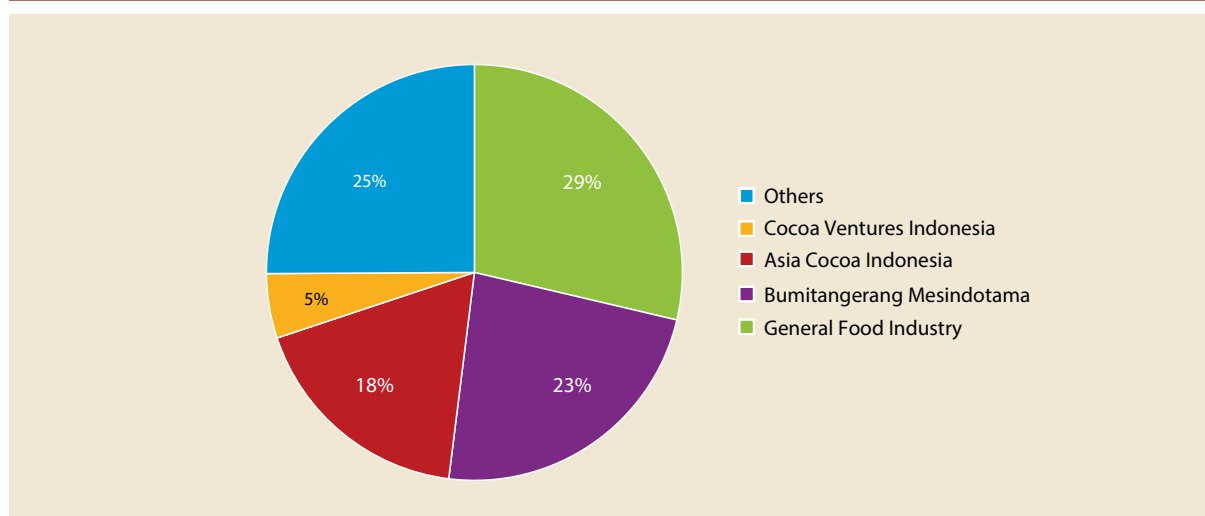
¹⁹ Source: *Euromonitor International*, Country report: Chocolate confectionery in France, November 2014.

Figure 8: Share of leading companies in total cocoa purchased, by volume, in Côte d'Ivoire and Ghana, 2011/12



Source: Based on data from Ecobank, 2012

Figure 9: Share of grinding capacity of major companies in Indonesia in total installed capacity, 2011



Source: Based on data from BT Cocoa Indonesia (undated).

chocolate confectionary market is highly diversified in terms of suppliers, including TNCs, and national, regional and local companies. In contrast, the top two chocolate manufacturers, namely Hershey and Mars, accounted for 65 per cent of the sector's sales in 2014. None of their competitors were able to exceed a 5 per cent share.²⁰

²⁰ Source: *Euromonitor International*, Country report: Chocolate confectionery in the US, November 2014.

C. POTENTIAL IMPACTS OF CONCENTRATION IN COCOA GVC

Concentration in the agro-industry contributes to a better allocation of resources and economies of scale along its value chains. These ultimately increase cost efficiency along the chains, with benefits passed onto various stakeholders. A fair distribution of the benefits - which may not have the same meaning among the

various stakeholders - along the chains is therefore a key determinant of success of concentration patterns. In the case of cocoa, the increased consolidation may have permitted the attainment of economies of scale (Fold, 2001; Traoré, 2009), and, as such, contributed to improving efficiency in the industry. Moreover, vertical integration in the cocoa industry has helped TNCs ensure traceability and quality required by customers. For example, Barry Callebaut claims to be able to ensure full traceability of cocoa sourced through its subsidiary, Biolands International, based in the United Republic of Tanzania.²¹ Some market players, including integrated buyers, view the consolidation process favourably as it reduces the number of competitors.

This notwithstanding, concentration may become problematic, especially when it fosters oligopsonic/monopsonic or monopoly/oligopoly behaviour in the industry. Such behaviour increases the bargaining power of big and integrated players to the detriment of small actors, including small producers (i.e. farmers) and small traders as well as purely chocolate manufacturers (Dobson et al., 2001; Goodwin, 1994; Menkhaus et al., 1981). It is common for concentration in a segment of agro-industry value chains to lead to similar changes in other segments. This permits the balancing of bargaining power along the value chains (Humphrey and Memedovic, 2006). However, in the cocoa industry, while there is considerable concentration in the processing and distribution segments of the GVC, the supply segment (i.e. production of cocoa beans) remains typically fragmented among scattered small farmers.²² This situation creates an oligopsonic structure in the cocoa market, and therefore a favourable environment for the exercise of market power by well-integrated and big players. As a result, farmers are entrenched in a low bargaining position, which reduces them to “price takers” at a time when they have limited access to finance, market information and agricultural inputs such as improved seeds and fertilizers (ILRF, 2014).

Results from empirical studies on the potential exercise of oligopsony or oligopoly power through the cocoa value chain have been inconclusive. Ajetomobi (2014) found no evidence of major export firms in Nigeria exerting market power on cocoa farmers in the form

of incomplete price transmission over the period 1986 to 2009. Similarly, Anang (2011) examined market structure and competition in Ghana’s cocoa sector after the introduction of trade liberalizing reforms, and concluded that, despite domination by a few large firms, the market has remained competitive. Wilcox and Abbot (2004) used an econometric approach to estimate the degree of market power prevailing in the cocoa bean markets of Nigeria and Côte d’Ivoire. They found no evidence of market power being exerted by multinational exporters or processors on cocoa farmers in Nigeria, but it seemed to prevail in Côte d’Ivoire. Traoré (2009) argued that increased concentration in cocoa trading in exporting countries, especially in West Africa, has reduced competition among buyers, and this author noted that the cost savings resulting from improved efficiency in the sector are rarely passed onto farmers.

Moreover, in chocolate producing countries, high integration – vertically along the value chain or horizontally at the cocoa processing segment – is likely to shrink the input supply options for purely chocolate manufacturing enterprises. A long-term impact of this could be the closure of these enterprises or their acquisition by major consolidated companies. Indeed, the EC argued that the proposed merger of Cargill and ADM in 2014,²³ by eliminating an important competitor, could reduce the choice of suitable suppliers in the already concentrated markets, which could lead also to price increases with a negative impact on consumers.²⁴ As a result, in July 2015 the EC only approved the deal on the binding condition that Cargill divest the ADM’s largest industrial chocolate plant in Europe to a competitor to allow chocolate markets to remain competitive.

Increasing consolidation along the cocoa GVC also increases the risks of anti-competitive practices, and tacit or formal collusive behaviour among big players (Losch, 2002; Kaplinsky, 2004). That was the main argument presented by the Canadian company Comwest Industries in 2008 when it initiated legal proceedings in the United States against some big players, including Hershey, Mars and Nestlé. Comwest accused these companies of anti-competitive practices through price agreements on the global chocolate market (Cappelle, 2008).

²¹ Source: Barry Callebaut, *Annual Report 2013/2014*.

²² In Côte d’Ivoire for example, between 80 and 85 per cent of cocoa is produced by individual farmers who are not members of any cooperative or organization (ILRF, 2014).

²³ See box 4

²⁴ EC Press release – Mergers: Commission opens in-depth investigation into Cargill and ADM’s proposed industrial chocolate merger, 23 February 2015 (accessed on EC website on 26 February 2015).

The discussion so far suggests that market concentration has become a “new-normal” in the cocoa industry, with potentially positive and negative impacts on the stakeholders along the value chains. The situation of small farmers, who are the backbone of world cocoa production, is thus of particular concern for a sustainable cocoa economy, as their power has been significantly weakened.

Whereas trade liberalizing reforms have contributed to fostering consolidation patterns in the cocoa

industry, as discussed earlier, how have farmers been affected by these developments, especially with regard to their integration into world markets? The following section discusses cocoa farmers’ integration into international markets by analysing the linkages between the prices farmers receive from selling their crops (i.e. domestic prices) and the prevailing cocoa prices in global markets in the context of trade reforms.

IV.

Cocoa farmers and

global markets:

How have trade

policy reforms

affected farmers'

integration into

the cocoa GVC

The discussion in this section draws on a recent study undertaken by Gayi and Tsowou (2016).²⁵ Cocoa farmers participate in the GVC through their production and trading of cocoa beans. The price they receive generally mirrors levels of cocoa prices that prevail in world markets (ITC, 2001). Therefore, their integration into the global markets may be assessed through the linkage between the world cocoa price and producer prices (i.e. domestic prices paid to cocoa farmers). The discussion in this section also attempts to explain the levels of cocoa farmers' revenues and the sustainability of their farming business, as the price they receive is a key determinant of their willingness to produce cocoa.

Figure 10 presents the evolution of world and producer prices of cocoa in Cameroon, Côte d'Ivoire, Ecuador, Ghana and Indonesia between 1966 and

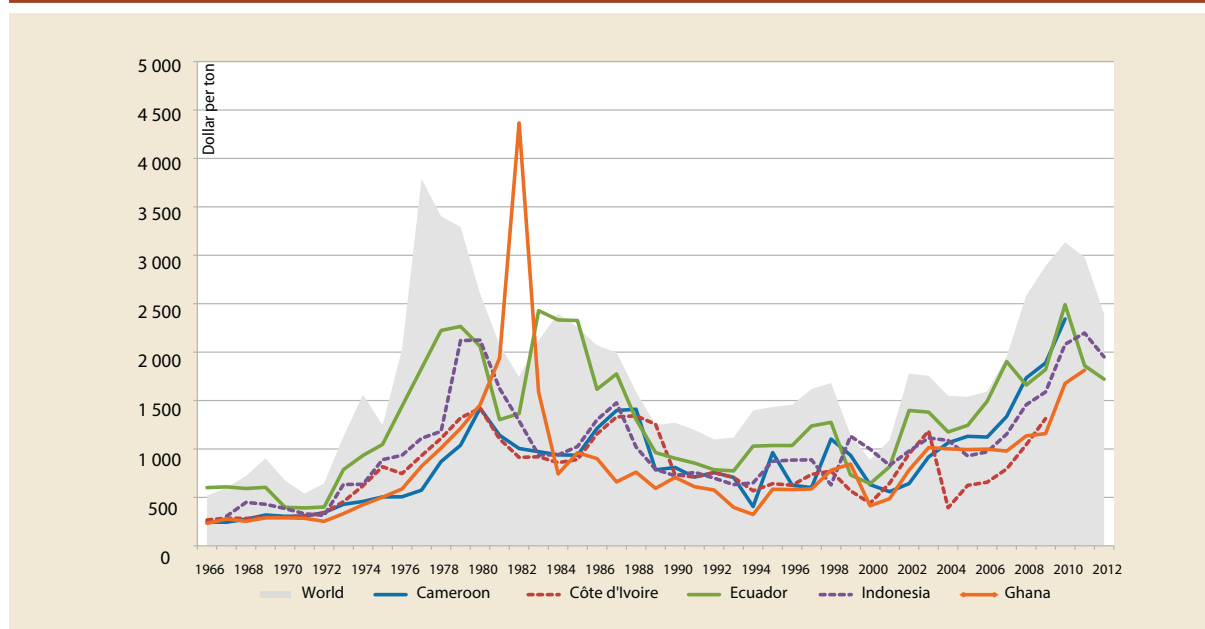
2012. Trends in producer prices compared to world prices of cocoa vary by country, though they tend to demonstrate a similar pattern. More interestingly, producer prices for all the selected countries seem to track more closely the world price of cocoa from the mid-1990s compared to the 1970s and 1980s. These improvements in price transmission have been partly due to trade liberalization undertaken by developing countries in the 1980s and 1990s.²⁶

The empirical investigation by Gayi and Tsowou (2016) suggests that transmission from world cocoa prices to producer prices has generally increased with trade liberalization in cocoa producing countries. For example, in the case of Cameroon, for a given change in world prices, there was on average 40 per cent of price adjustment per annum in the period preceding trade reforms. In the post-reforms period, the percentage of price adjustment increased to nearly 90 per cent. Similar improvements were also observed in Côte d'Ivoire and Ecuador (Gayi and Tsowou, 2016). The reforms might thus have been considered successful if their sole objective was to

²⁵ The study analyses the integration of cocoa farmers into world markets through the linkages between producer and world prices of cocoa in a context of trade liberalizing policies. The empirical framework uses time series techniques, especially the error correction model (ECM). The ICCO annual cocoa beans price is used as a proxy for the international cocoa price. Producers' prices, collected from FAOStat, for countries (where and when data were available) are as follows: Cameroon (1966–2010), Côte d'Ivoire (1966–2009), Ghana (1966–2011), Ecuador (1966–2012) and Indonesia (1967–2012).

²⁶ The degree of liberalization of cocoa markets has differed in the various producing countries and also in terms of when such liberalization took place (see, for example, Gayi and Tsowou, 2016 and UNCTAD, 2008a).

Figure 10: Producer prices in selected cocoa producing countries in relation to world prices of cocoa



Source: Based on UNCTADstat, FAOstat and ICCO database.

^a It is important to underline the abnormal value of the cocoa producer price in Ghana in 1982, which exceeded world prices significantly. This was primarily due to a highly overvalued exchange rate, combined with an increase in producer prices in Ghana in the early 1980s (Kolavalli and Vigneri, 2011). In the study by Gayi and Tsowou (2016), the effect of this abnormal value was captured by a dummy variable.

create better transmission between farmers and world markets. However, they were also expected to benefit the farmers by providing them with a higher share of producer prices relative to world prices. This outcome of the reforms has been mostly disappointing so far.

The shares of producer prices relative to the international prices of cocoa vary within and across countries (Figure 11). In Côte d'Ivoire, for example, the post-reform period has not been associated with a higher share of cocoa prices accruing to farmers. The average share of the world price paid to Ivorian producers fell from roughly 70 per cent during the period 1986–1990 to 54 per cent over the first half of the 1990s, i.e. before the reforms. Despite the reforms, it declined further and remained below 50 per cent during the following years. In Ghana, the share accruing to farmers increased in the 2000s compared to the 1990s, though it remained relatively low (between 50 and 55 per cent) from 2001 to 2011. By contrast, in Cameroon, Ecuador and Indonesia, cocoa farmers received a relatively higher share of world prices, especially after 2000. Ecuadorian cocoa farmers, for example, received more than 70 per cent of world cocoa prices over the period 2001–2012.

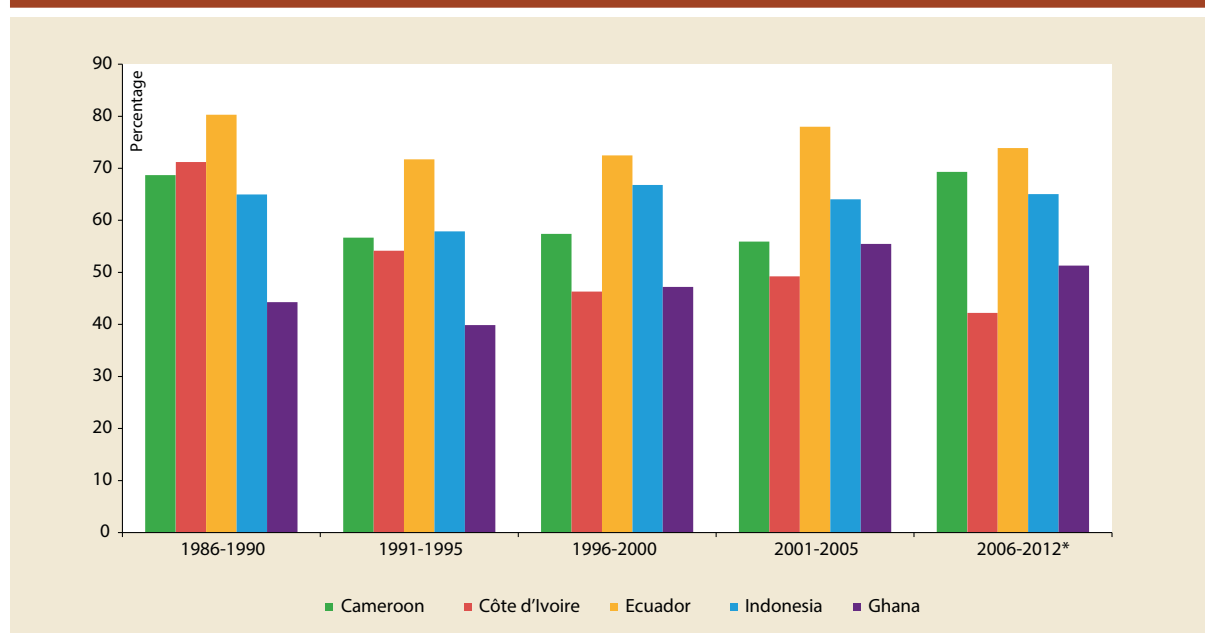
The contrasting evolution in the share of producer prices relative to the world price of cocoa suggests that prices paid to farmers may be influenced by domestic

factors. For example, in Ecuador, higher prices paid to farmers have been driven by efficient marketing system (Collinson and Leon, 2000) and national policies, such as the setting of a minimum reference price for cocoa beans²⁷ as well as the high quality of the beans produced in the country.²⁸ In Cameroon, reduced taxes on cocoa bean exports might have contributed to higher prices paid to farmers (UNCTAD, 2008a). In Indonesia, cocoa producer prices have been supported by an unregulated national cocoa market with limited government policy intervention (Panlibuton and Lusby, 2006), at least before 2010 when a sliding tariff of up to 15 per cent was introduced on exports of unprocessed beans; this was primarily aimed at supporting supply to domestic processing (Neilson et al., 2013). Meanwhile, in Côte d'Ivoire, the domestic cocoa sector has been subject to high taxation, estimated at between 25 and 30 per cent over the period 2002–2009 (Kireyev, 2010), which could have contributed to the downward pressure on prices paid to the country's cocoa farmers. In Ghana, low prices received by cocoa farmers have been partly attributed to high levels of inflation and distortions in the exchange rate (Kolavalli and Vigneri, 2011).

²⁷ See WTO, Ecuador Trade Policy Review, documents WT/TPR/S/148/Rev.1 and WT/TPR/S/254 (available at: <http://www.wto.org>, accessed 14 November 2014)

²⁸ The Forastero "Amenolado", a high quality cocoa bean variety is cultivated primarily in Ecuador.

Figure 11: Cocoa producer prices as a percentage of the world price in selected countries, 1986–2012



Source: Based on data from UNCTADstat, FAOstat and ICCO database.

* Cameroon: 2006–2010; Côte d'Ivoire: 2006–2009; Ghana: 2006–2011; Ecuador and Indonesia: 2006–2012.

Moreover, the overall increased transmission of world cocoa prices to producer prices also implies that reforms have resulted in a greater exposure of cocoa farmers to volatile international markets. The resulting price fluctuations may adversely affect farmers by introducing uncertainty in the farming business. This may exacerbate difficulties for farmers to make optimal production decisions, particularly at a time when they lack access to affordable finance and price risk mitigation instruments. For example, farmers are likely to incur losses if they increase investments during periods of high prices while harvesting during periods of low prices. As a result, they would be discouraged from making additional investments, or would simply switch to more profitable crops, as happened in Ghana during the late 1970s and early 1980s when cocoa farmers switched to the cultivation of more profitable oil palms.

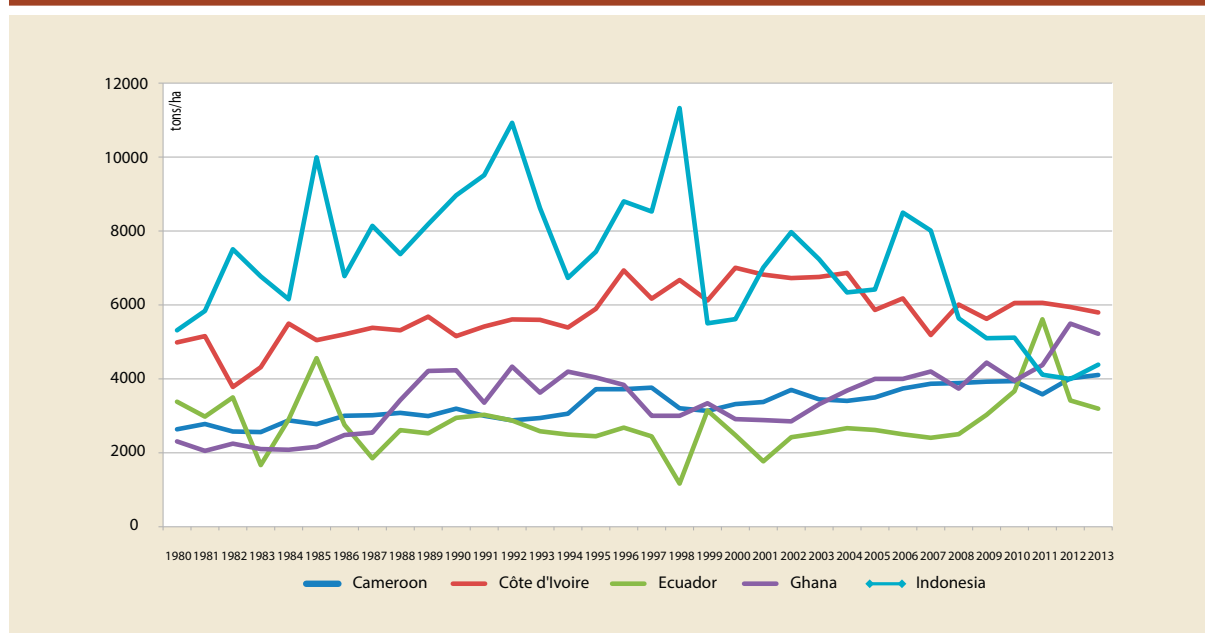
The discussion in this section so far points to some interesting observations. First, trade liberalizing reforms have evidently increased farmers' exposure to international markets. As such, they have become more vulnerable to volatile international cocoa prices at a time when they have limited access to finance and risk management instruments. These challenges are exacerbated by their "atomized" nature in the context of a highly integrated industry, as discussed, which leaves farmers with little, if any, room for negotiation. Second, a better linkage of cocoa producers to international markets through increased adjustment

between producer prices and international prices thanks to trade policy reforms does not necessarily guarantee higher prices to farmers.

The discussion also implies that several factors specific to the national macroeconomic environment affect the prices received by cocoa farmers. These include, as discussed earlier, national macroeconomic policies, such as fiscal and monetary policies, and the structure of the national cocoa market, which potentially favours big buyers rather than small and atomized traders and farmers. Other factors, such as farmers' poor access to finance and market information, also affect their incomes, weighing down on the prices they receive from selling their products. For example, poor access to credit has led cocoa farmers in Cameroon to enter into partnerships with traders who provide them with the money they need during the planting season in exchange for their crops, often on very unfavourable terms for the farmers (Kamdem et al., 2010).²⁹ In cases where farmers might not be well integrated into the cocoa supply chain, they have to deal with a large number of small- and medium-sized intermediaries - who often work for large-sized intermediaries - in national markets. This also contributes to eroding farmers' margins, as each intermediary tends to capture a share of profits that could have been passed onto farmers if the latter had direct access to exporters.

²⁹ These and other issues which usually prevent farmers from getting higher prices from their participation in markets are examined in some detail in UNCTAD (2015) and ILRF (2014).

Figure 12: Cocoa yields in selected producing countries, 1980–2013 (tons/ha)



Source: Based on data from FAOStat database (accessed in December 2015).

In key cocoa producing countries, farmers' situation is often exacerbated by low productivity. For example, the yield of cocoa farms in Côte d'Ivoire has been historically low, below 0.7 tons/ha between 1980 and 2013. The figures are even lower in Ghana and Cameroon. Even in Indonesia, where cocoa productivity was relatively high before 2000, it has decreased significantly since then (Figure 12).³⁰

These are multifaceted issues which require a holistic approach involving all stakeholders along the cocoa GVC. Policy options to address these issues and others, and to support cocoa farmers on whom the lives of millions of people depend, as well as the future of the global cocoa economy are discussed in the following section within the framework of this approach.

³⁰ Analysing the reasons for such low productivity is beyond the scope of this study, but suffice it to say that it is often associated with biological factors such as pests and diseases, socio-economic factors (including low prices paid to farmers), lack of labour or its high cost in rural areas, and adverse weather conditions as well as ageing trees.



V.

Policy perspectives

A major question arising from the discussions in this report is how to ensure that all stakeholders along the cocoa GVC capture a fairer, and in the case of smallholder farmers a higher, share of the total values generated along the chain in the context of a highly integrated industry. The contention in this paper is that, as cocoa farmers are the backbone of global cocoa production, supporting their farming businesses is critical to the attainment of a sustainable cocoa economy. To be able to produce efficiently and improve their earnings so as to sustain themselves and their families, cocoa farmers should be paid a price for their beans that not only covers their costs of production but also enables them to realize a fair profit margin. This would ultimately contribute to achieving some of the new United Nations Sustainable Development Goals with their commitment to “leave no one behind”.

This section discusses three sets of policy options that could produce these outcomes if properly implemented. First, macro level policies, which would consist of global level policies as well as those that could be implemented by regional economic commissions and national governments. The second set, meso level policies, would contribute to supporting the players along the cocoa GVC so as to bring adequate benefits to cocoa producers. And the third are micro level policies, which would be centred on cocoa farmers. This policy framework is conceived of as a “sustainable cocoa tree” (Figure 13), the idea being that the set of micro policies would provide a conducive environment for the tree to grow while the set of meso and macro policies would nurture it to produce abundant “fruit”. In this conceptual framework, the “fruit” would take the form of enhanced profitability, which will contribute to making cocoa farming an economically sustainable activity for cocoa growers.

A. MACRO-LEVEL POLICIES

The oligopsonic structure of the cocoa industry increases the risk of anti-competitive behaviour, as has happened in other industries (Dobson et al., 2001; Goodwin, 1994; Menkhaus et al., 1981; Shepherd, 2004), even if empirical evidence is inconclusive, so far, along the cocoa GVC.³¹ It is therefore extremely important to keep the cocoa industry under close scrutiny to ensure it remains competitive. Thus, the first component of macro level policies should ensure proper implementation

³¹ The risk of such behaviour led by well-integrated players is high, even in the absence of strong evidence as to the possible exercise of market power and its adverse price impacts on farmers.

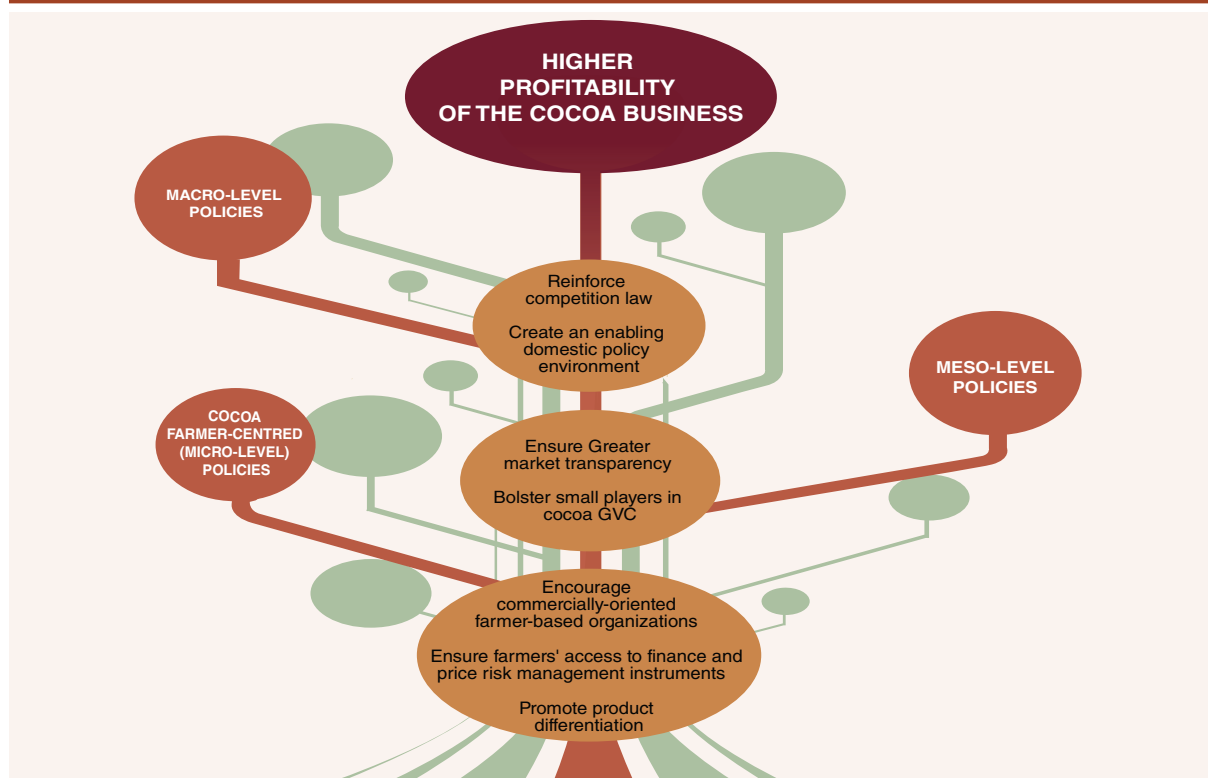
of competition laws and policies at the national and global levels, and, possibly, their harmonization at the appropriate levels. Second, considering that the efficiency and profitability of the cocoa sector, and other sectors of the economy, are affected by overall national macroeconomic conditions, there is need for prudent macroeconomic management covering such areas as fiscal, monetary and exchange rate policies. The aim is to ensure macroeconomic stability, in particular avoiding real currency overvaluation and high levels of inflation that might otherwise undermine prices paid to cocoa farmers in the local currency.

1. Reinforce competition law and policy at national and international levels

The current structure of the cocoa industry, which is highly concentrated, as discussed in the previous sections, results in power imbalances between highly integrated big players and the other stakeholders comprising atomized farmers and small traders. If the consolidation pattern continues unchecked, it will effectively undermine competition in the cocoa-chocolate value chain. This would possibly increase the risks of anti-competitive practices, such as tacit or formal collusion among big players. For example, each firm may become aware of and recognize the other's sphere of influence and tacitly agree not to compete in each other's dominant area (UNCTAD, 2008a). Although these types of behaviour may not affect international cocoa markets where pricing mechanisms appear to be quite transparent, they may result in downward pressure on prices paid to farmers at a time when trade liberalizing reforms have increased their exposure to international markets, as discussed earlier. The main argument here is that a limited number of traders almost certainly reduces the bargaining room for small and atomized farmers. The risks of anti-competitive practices could also prevail in the downstream markets of cocoa liquor and other semi-finished products. High concentration, as discussed in this report, especially vertical concentration of the cocoa GVC, may effectively narrow the sources of supply for small or purely chocolate manufacturers.

Creating a level playing field, by ensuring competitive markets at all levels, is critical to addressing these issues. Typically, this would entail reinforcing provisions under competition law in producing and consuming countries so as to limit the potential market power of highly integrated players. Those provisions should aim, above all, at limiting or preventing abuse of

Figure 13: Sustainable cocoa tree



market power by trading or processing companies which source beans from farmers.

Competition laws already exist in most cocoa traditional importing areas. For example, the EU's Merger Control regime gives the European Commission the power to prohibit mergers and acquisitions which fall within the EU's merger rules and which are likely to reduce competition in the single market.³² Similar regulatory frameworks exist in many cocoa importing countries in Europe and North America. Thus, the issue for this group of countries would seem to be an unrelenting enforcement of competition laws, not only at the national levels, but also at the regional and international levels in order to prevent too many mergers or acquisitions, which could result in excessive power imbalances between TNCs and small players.

Conversely, the main cocoa producing countries are seeking to enact strong competition laws, but still have a long way to go. For example, the competition policy of the West African Economic and Monetary Union (WAEMU), which aims, among other things, to promote competition, influence market structures and distribute

economic power more widely, has had limited results to date (UNCTAD, 2008b). For cocoa producing countries, the challenge with respect to competition laws is at two levels. First, how to enact and enforce these laws; and second, how to address the challenge faced by legislators due to the "extraterritorial characteristic" of national markets. The latter challenge stems from the fact that, major TNCs active in cocoa trading or processing do not fall under the jurisdiction of producing countries. Thus, achieving a competitive cocoa GVC would almost certainly require harmonization of rules dealing with anti-competitive practices, as well as cooperation among competition agencies at the global level with effective oversight by an international body.

2. Improving the domestic policy environment

A global sustainable cocoa economy should start with meeting the requirements of small farmers around whom the cocoa economy revolves. This would specifically require a domestic policy environment that promotes stable and remunerative prices to the farmers. Considering that national level policies partly influence the evolution of prices paid to cocoa

³² European Commission, Merger control procedure, at: http://ec.europa.eu/competition/mergers/procedures_en.html (accessed March 2015).

farmers, as argued in this report, a favourable domestic policy environment would comprise a stable macroeconomic framework and predictable trade and agricultural development policies. Trade policies should be designed and implemented to support the development of cocoa farming, and to support increases in farmers' incomes.

Governments of cocoa producing countries have always relied on cocoa export taxes not only to develop the sector, but also to support other national development priorities. Over the years, however, these taxes have increased to near punitive levels, and have been identified as one of the national policies that undermine the cocoa sector. As such, reducing those taxes has been a major policy focus of trade liberalizing reforms in the cocoa producing countries. However, it has been argued that in a context of increasing consolidation of the cocoa market, which creates an oligopsonistic structure in the cocoa GVC, cocoa export taxes are a potential tool for producing countries to extract rents from the sector (Sexton et al., 2007). If these revenues are efficiently invested, they can effectively benefit cocoa communities. Thus, the main issue for governments is to determine an optimal level of taxation which will contribute to supporting national development policies, without excessively eroding small farmers' incomes.³³

Over the years, governments have also introduced a system of minimum farm-gate prices paid to farmers in the agricultural food sector. In the case of cocoa, a properly implemented policy, without other potential distorting measures, could ensure that farmers receive a remunerative price for their crops. For example, reform of the cocoa sector in Côte d'Ivoire during the 2011/12 cocoa crop year introduced a fixed minimum farm-gate price aimed at paying cocoa farmers at least 60 per cent of the average international price. However, at the same time the country also imposed a regulated port price for cocoa beans, which prevents exporters from paying above a government-fixed price scale for the beans arriving at the ports of Abidjan and San Pedro.³⁴ While such a measure may aim at keeping small-scale traders within the cocoa marketing channels, it nonetheless limits the margins for traders, who may be reluctant to pay more than the

minimum reference price to farmers, irrespective, for example, of the quality of the cocoa beans. This raises the question as to the effectiveness of a policy that purports to guarantee minimum farm-gate prices to secure adequate revenues for farmers when it is combined with other trade policies such as regulated prices paid at ports.

In cases where macroeconomic policies (e.g. monetary policy) have led to distortions in a country's exchange rate (e.g. real currency overvaluation), as well as unstable and high rates of inflation, these may undermine prices paid to farmers. This was the case in Ghana during the 1980s and 1990s. The situation is often exacerbated by the fact that the country's Cocobod determines farmers' prices at the beginning of the season without any adjustments in line with the rate of inflation thereafter. For example, with the inflation rate increasing during 2014 in a context of a depreciating local currency (the Ghanaian cedi), the country's cocoa farmers smuggled their crops to Côte d'Ivoire to capture higher prices. Thus, prudent macroeconomic management aimed at avoiding distortions in the exchange rate, combined with moderate rates of inflation, is critical to improving cocoa farmers' situation. Otherwise, prices paid to farmers may have to be linked to the rate of domestic inflation in order to avoid an unnecessary erosion of their real incomes.

B. MESO-LEVEL POLICIES

In addition to these macro level policies, there is a need to create a level playing field for the various entities along the cocoa GVC through what may be termed as meso level policies. These include promoting greater transparency in cocoa markets at global and national levels, and creating a supportive environment that fosters the development of small players in cocoa markets – particularly in producing countries – to keep the industry competitive.

1. Promoting greater transparency in cocoa markets

A transparent cocoa market is beneficial to every stakeholder along the value chain, including farmers, traders, processors, chocolate manufacturers and consumers. Regarding cocoa farmers, who are the focus of this section on policy, it allows them to gain better access to information on price trends, consumer demands and quality requirements in order to make optimal planting and marketing decisions. In Cameroon, improved access to such information

³³ Without doubt, such an optimal rate depends on a variety of factors, including elasticity of export demand and the degree of market competition (Essoh, 2014), which are specific to each country. However, discussion of this issue is beyond the scope of this paper.

³⁴ For the 2012/13 crop season, the regulated price of cocoa beans at these ports was 938 CFA Francs per kilogram while the minimum reference price paid to farmers was set at 725 CFA Francs per kilogram (Com-Watch Africa, 2014).

has contributed to enhancing the capacity of cocoa farmers to negotiate better prices for their beans (Wilcox and Abbott, 2006).

Unfortunately, for most cocoa farmers, the market is often not transparent, as they encounter difficulties in accessing reliable market information on demand, prices and quality, whereas buyers have better access to such information (Deardorff and Rajaraman, 2009). This asymmetry, which favours buyers and traders, is probably one reason for the low levels of prices offered to farmers (Wilcox and Abbott, 2004). Recent developments in the use of mobile phones and other new information and communications technologies (ICTs) have enhanced the means of linking farmers to markets. However, information asymmetry continues to prevail in most countries, largely because their governments have not identified this as a priority issue.

Appropriate investments and support from private and public sectors could facilitate and enhance farmers' access to markets, such as the CocoaLink pilot project in Ghana.³⁵ This initiative helped to provide timely marketing, farming and social information (e.g. good farming practices, disease prevention, post-harvest production, crop marketing, farm safety and child labour issues) to Ghana's cocoa farmers through SMS text and voice messages.³⁶ Another successful agriculture market information system, which is not, however, a purely cocoa-linked initiative, is Esoko. Launched in 2005 with funding from international donors, Esoko is now a profit-making business entity with private investors providing agriculture information services to farmers in countries such as Ghana and Kenya. These success stories and others which have contributed to improving farmers' access to information should be shared and replicated elsewhere, taking into consideration the specificities of each community.

2. Creating opportunities for the development of small players in the cocoa industry in producing countries

As discussed in this report, the increasing concentration in the cocoa industry is partly driven by difficulties for small

players, such as small traders and grinders, to compete fairly with TNCs, as the latter have better access to resources such as finance and technologies. This implies that small players along the cocoa value chain need a level playing field and a supportive environment to remain in business and operate with big and well-integrated players. In producing countries, keeping these stakeholders in the industry would help to improve its competitiveness while improving more value added activities locally, which in turn could result in higher prices paid to cocoa farmers.

A significant share of processing is being undertaken by TNCs or their subsidiaries at the point of origin in the cocoa producing countries, which may limit its potential benefits for the domestic economies. Therefore, there is need for more support to local players, in particular local small and medium-sized enterprises (SMEs). Policies for private sector development to sustain the cocoa economy in producing countries should address high costs of finance, high taxes on grinding operations and tariff escalation on processed cocoa (ACET, 2014; Ecobank, 2014). Lessons can be learnt from the Malaysian cocoa sector, which has successfully moved away from its considerable dependence on cocoa bean exports in the 1990s to local value-added businesses today in which several local entrepreneurs are directly involved. This was possible thanks to systems of incentives, including an investment tax allowance or partial tax exemption for locally-owned cocoa processing and chocolate manufacturing companies (ACET, 2014). In most cocoa producing countries, promotion of local value-added processing would also necessitate improving access to reliable and cost-effective energy and developing better road and port infrastructure.

Moreover, a growing middle class in cocoa producing countries offers promising market opportunities for domestic or regional processors and manufacturers of cocoa and chocolate products. This trend has recently been evidenced by French chocolate maker CEMOI's investments in a chocolate factory in Côte d'Ivoire targeting West Africa's growing middle class consumer market. In China and India, good demand prospects for chocolate may also serve cocoa producing countries in Asia. For national and regional SMEs to seize these growing market opportunities, they would require favourable private sector development policies as outlined above.

Developing local SMEs in the cocoa sector would also permit farmers to face competitive markets for their products. To be successful however, actions supporting these SMEs should be built on greater transparency, as discussed earlier. For example, to support local

³⁵ In its pilot phase from 2011 to 2013 the project involved collaboration between the World Cocoa Foundation, World Education, the Ghana Cocoa Board and the Hershey Company. In the first quarter of 2015, the project was officially handed over to the Ghana Cocoa Board to ensure its sustainability.

³⁶ Source: World Cocoa Foundation, CocoaLink – Connecting Cocoa Communities (available at: <http://www.worldcocoafoundation.org/cocoalink/>).

traders, the Government of Côte d'Ivoire issued a decree in September 2015 which requires TNCs to export a proportion of their purchased beans through domestic exporters chosen by country's regulatory board (i.e. le Conseil du Café Cacao). Whereas such a measure could benefit the domestic cocoa community by keeping local players in business and promoting a competitive market, the process of selecting domestic exporters is not transparent (Ecobank, 2014). This may frustrate some players and discourage potential new investors from starting a business in the Ivorian national cocoa market.

C. MICRO-LEVEL POLICIES CENTRED ON COCOA FARMERS

Policies at the macro and meso levels, discussed above, would have to be complemented with policies at the micro level, typically designed to support cocoa farmers. The latter set of policies would include, first, promoting commercially viable farmer-based organizations (FBOs); second, facilitating farmers' access to finance and price risk management instruments; and, third, fostering the differentiation of cocoa products.

1. Facilitating the formation of commercially oriented cocoa farmer-based organizations (FBOs)

As discussed earlier, the increasing concentration of traders and processors in the cocoa sector coexists with a large number of dispersed and small farmers in producing countries. The scattered nature of the farmers, the small scale of their activities and their weak organization place them in a weak bargaining position vis-à-vis buyers, and prevent them from taking advantage of scale economies in cocoa marketing (Quarmine et al., 2012).³⁷

Organizing farmers into strong FBOs would help to address their problems of dispersion, enabling members to aggregate output and to benefit from scale economies thereby counteracting buyers' power. Strong cocoa FBOs have helped their members, for example in Cameroon, to negotiate better prices for their crops, and

allowed them to attain economies of scale in supplying cocoa beans while limiting quality-related risk (Wilcox and Abbott, 2006). FBOs not only facilitate their members' access to output markets, but also assist farmers to procure inputs such as seeds and fertilizers in bulk; they also provide them with better access to finance and extension services (ILRF, 2014), which in turn reduces their costs of production and increases their productivity, thereby increasing their profit margins.

Furthermore, strong FBOs could play a crucial role in representing and protecting the interests of their members within the cocoa community. In Côte d'Ivoire and Ghana, for example, the underrepresentation of farmers in the national cocoa price setting committee has meant that they are denied a voice in matters that affect them. In Côte d'Ivoire, only three out of the twelve members who set farm-gate prices in the country are farmers. The situation is even worse in Ghana, where only one farmers' representative, referred to as a "chief farmer", participates in the meetings of the Committee that reviews the minimum price paid to the country's cocoa farmers (ILRF, 2014).³⁸ As a result, the representation mechanism, which should work to unite and identify farmers' real needs and opinions to counteract the power of cocoa buyers, is weak in these countries due to the underrepresentation of farmers.

Despite all the benefits FBOs can potentially bring to farmers and other players along the cocoa GVC, their formation and effective functioning in cocoa producing countries are frustrated by several impediments. These include a weak enabling environment, and a lack of resources. Where FBOs exist, their activities may be hampered by factors such as unrealistic objectives, mismanagement, a gender gap, corruption and political interference (Wiggins et al., 2011; ILRF, 2014).

Governments, the private sector, NGOs, and donors all have a role to play in assisting the formation of strong FBOs. First, governments should provide an enabling environment, including a strong regulatory and institutional framework to support the emergence and growth of effective FBOs. They should also improve the technical and managerial capacities of farmers, while encouraging them to set modest and achievable goals for their FBOs. Working in concert with NGOs, and donors, including the private sector, governments

³⁷ Nevertheless, some cocoa producing countries have well-organized FBOs that have been supporting their members. These include, for example, Union Générale des Producteurs de Café-Cacao in Côte d'Ivoire, General Agricultural Workers' Union in Ghana and Cameroon Cocoa and Coffee Farmers Association in Cameroon.

³⁸ The committee is composed of government representatives, Cocobod representatives, representatives from licensed buying companies and one farmers' representative (ILRF, 2014).

should give priority to the development of FBOs within their agricultural development programmes, while identifying successful FBO business models based on their country-specific characteristics. Considering that small farmers often lack the seed capital and managerial skills necessary for establishing FBOs, governments, NGOs and donors should preferably promote sustainable business models for FBOs under public, private and producer partnerships (PPPPs), providing, for instance, subsidized seed capital, while reducing subsidies over time (Thompson et al., 2009).

Furthermore, evidence suggests that gender-balanced FBOs are the most effective in terms of delivering benefits to members and managing resources (Pandolfelli et al., 2007). While there are some FBOs in which women are very active, as in Mali, where membership in a number of FBOs consists almost entirely of women, there are equally communities in which women constitute only a small minority of FBO members. Thus, there is a need to explicitly tailor policies to foster women's participation in FBOs in order to close the gender gap. Furthermore, studies have found that at a given income level, women farmers typically have less access to agricultural services, productive assets and markets, which suggests that they have potentially more to gain from collective action (Mehra and Rojas, 2008; Baden, 2014). Developing a more equal gender mix of farmer representatives in the FBOs in these communities is therefore crucial to narrowing the gender gap and promoting sustainable livelihoods for all.

2. Improving farmers' access to finance and price risk management instruments

Access to financial resources and price risk management instruments can be an important determinant of the profitability of cocoa farming in a context where trade reforms have increased cocoa farmers' exposure to volatile international markets. Affordable finance would enable cocoa farmers to procure sufficient inputs for their farms in order to enhance productivity, reduce the costs of production and, thereby, increase their profit margins from their existing low revenues. Risk management instruments would benefit small farmers in several ways, such as enabling better management of price risks, expansion of their farming business and improving their access to credit.

Affordable finance is a strong lever for improving agricultural productivity, as it facilitates the adoption of

new technologies. Policies for new financing mechanisms are particularly needed to encourage cocoa farmers to establish commercial business entities. Some of the practical ways to improve finance and risk management tools for farmers would be to introduce, or expand, innovative financing mechanisms such as warehouse receipt systems, credit guarantees by governments and agricultural insurance provided through PPPPs.

In many cocoa producing countries, farmers have limited access to finance. The main reasons, which are not specific to the cocoa sector, include shallow financial depth, lack of collateral (such as titled land), unstable revenue flows, and the risky nature of farming activities (Salami et al., 2010). The paucity of financial services reduces farmers' capacity to negotiate better prices for their output, and some are even forced to make post-harvest distress sales to meet their cash flow needs.

Moreover, as farmers have become increasingly exposed to volatile international markets, it is crucial to devise risk management instruments, including insurance services, to guarantee a steady flow of revenue. Risk management mechanisms, such as forward sales, would help cocoa farmers protect themselves from uncertainty in the prices of cocoa beans. The main advantage of this kind of sale is that the seller and buyer know more or less the financial flows at the time the hedge is initiated. As a result, farmers would need to worry less about fluctuations in cocoa bean prices. Forward sales in Ghana, and more recently in Côte d'Ivoire, have enabled governments in these countries to guarantee a market for cocoa farmers' crops, and have helped determine minimum farm-gate prices, thereby contributing to reducing volatility in farm-gate prices. Innovative financing mechanisms, such as contract farming arrangements (CFAs), could also be an effective tool to make prices more predictable for small farmers, while ensuring a stable supply of raw product to buyers (Sivramkrishna and Jyotishi, 2008). In Ghana, CFAs contributed to increasing cocoa farmers' incomes by helping secure higher and predictable prices and boosting productivity (Fromm and Aidoo, 2013).

Risk management instruments which may be used directly by cocoa farmers are generally absent or poorly developed in several cocoa producing countries. For example, in a sample of 300 small-scale farmers considered by Fromm and Aidoo (2013), only 17.33 per cent were farming under CFAs. The authors attribute this low figure to mistrust between farmers and buyers, and limited access of the farmers to market information.

Other impediments to risk management tools in cocoa producing countries include the high cost of hedging, limited technical and managerial expertise, lack of experience of local financial institutions in providing hedging services, underdevelopment – or nonexistence – of local commodity exchanges, as well as a poor institutional and legal framework. Nevertheless, there are also several successful examples of the use of risk management instruments in developing countries. Structured risk management instruments, such as derivatives, are available for producers of agricultural commodities in some countries, such as South Africa and India, through national commodity exchanges. With adequate support and proper training, the capacity of various stakeholders to devise policies and use market-based risk management instruments could be developed or enhanced in cocoa producing countries.

3. Promoting product differentiation for farmers to benefit from higher prices

Concerns about food safety, child labour and environmental conservation, as well as the need to ensure higher and fairer prices for cocoa farmers, have been driving demand and supply for differentiated cocoa products. The promotion of certified schemes for cocoa, such as geographical indications, organic, or Fairtrade cocoa, enables farmers to fetch premium prices, while ensuring appropriate safety standards in the production of cocoa products and fostering the adoption of good farming practices. For example, geographical indication offers an effective way to leverage a unique identity for a cocoa product from a particular place of origin, which conveys an assurance of quality and distinctiveness of that product. It enables farmers to obtain higher prices for their output, as does Fairtrade certification, which requires cocoa producers to meet specific environmental and social standards. The higher revenues contribute to improving the well-being of their communities.³⁹ Additional advantages to promoting differentiated products include preserving biodiversity and increasing resilience to the effects of climate change in cocoa production by encouraging crop diversification. It also

³⁹ According to the Fairtrade Foundation, Fairtrade standards “include protection of workers’ rights and the environment, payment of the Fairtrade Minimum Price and an additional Fairtrade Premium to invest in business or community projects” (see: Fairtrade website <http://www.fairtrade.org.uk/en/what-is-fairtrade/what-fairtrade-does>, accessed 24 December 2015).

provides the opportunity to address child labour issues in the cocoa sector, reduce health risks caused by possible mishandling of agrochemicals and improve traceability.

Unfortunately, however, differentiated cocoa production is still struggling to take off. Organic cocoa, for example, represents less than 0.5 per cent of total cocoa production, even though it is in high demand.⁴⁰ The production of certified Fairtrade cocoa beans averaged 48,600 tons annually over the period 2012–2013,⁴¹ which is very low compared with about 4 million tons of cocoa beans produced globally over that period. A number of factors prevent farmers from adopting differentiated cocoa production. These include insufficient financial compensation (i.e. prices paid for such products compared to their production costs), limited government support, a lengthy learning process and high costs of certification, or simply ignorance of the existence of these schemes.

Compliance with standards for cocoa differentiation often requires considerable financial and technological resources and knowledge, which farmers often lack. This obstacle could be overcome through group certification schemes that would also enable them to benefit from economies of scale. But such schemes can only succeed if there are strong FBOs, as discussed earlier, which can provide farmers with the requisite skills, including management, planning, technical know-how, marketing and record-keeping. At present, in a number of countries, even government officials in charge of the certification of export quality standards do not have the required expertise or infrastructure. Private sector entities have therefore assumed the responsibility for developing and administering a system of costly certification. In some instances, a number of certification entities with overlapping schemes make the certification process confusing and costly for farmers or their cooperatives (ILRF, 2014).⁴² These suggest that a private-public partnership is needed to make cocoa differentiation an opportunity, rather than a trade barrier, for farmers. To enhance farmers’ access to existing programmes, and to make them more effective, the various schemes could be harmonized at the national, regional and international levels.

⁴⁰ See ICCO website at: <http://www.icco.org/about-cocoa/chocolate-industry.html> (accessed in December 2015).

⁴¹ See Fairtrade International, *Annual Report 2013-2014* (http://www.fairtrade.net/fileadmin/user_upload/content/2009/resources/2013-14_AnnualReport_FairtradeIntl_web.pdf, accessed in December 2015).

⁴² For example, three major certifying entities – Fairtrade, Rainforest Alliance and UTZ Certification – are providing certification for mostly overlapping criteria. (Hardmand & Co, 2014).



VI.

Conclusions

The cocoa industry is characterized by increasing vertical and horizontal integration at all stages of its GVC. This has blurred the boundaries between trading and processing companies. The largest cocoa traders and processors on international markets have developed interests ranging from trading cocoa beans to the manufacture of industrial chocolate, leading to significant vertical integration in the industry. A limited number of TNCs now control a large share of the global cocoa market. This concentration pattern may have contributed to a high level of efficiency if the objective was solely to attain economies of scale. However, the extent to which cost savings resulting from these developments have been passed onto other stakeholders, especially small farmers, is questionable. Moreover, concentration on the demand side for cocoa beans may lead to oligopsonistic or monopsonistic behaviour in cocoa purchasing. Such a development also weakens the bargaining power of small stakeholders, including small-scale farmers and small traders, effectively reducing them to price takers. If such situation continues unchecked, these farmers, who constitute the backbone of the cocoa economy, are likely to be squeezed out of the cocoa GVC. In order to ensure a sustainable cocoa economy, it is therefore necessary to design and implement appropriate policies at the national, regional and international levels, as discussed in this report.

This study also discusses the extent of integration of cocoa farmers into international markets through an assessment of the transmission of international prices of cocoa to the prices paid to the farmers. The transmission which exists, and has increased with trade liberalizing reforms undertaken by cocoa producing countries in the last two or three decades, has had mixed outcomes, so far. The reforms have increased farmers' exposure to the vagaries of international markets, but they are not associated with a significant, if any, increase in the share of world prices of cocoa accruing to farmers, especially in major producing countries such as Côte d'Ivoire and Ghana. This is due to a number of factors, as discussed in this study, which proposes some policies that could address this situation.

To promote a sustainable cocoa economy in line with the Global Cocoa Agenda adopted by the global cocoa community at the first World Cocoa Conference in 2012, and assure better prices for farmers, a number of challenges should be addressed. This in turn would contribute to increasing cocoa productivity in the key producing countries. At the macro level, policies should seek to reinforce competition laws at national, regional and international levels. National trade and agricultural development policies also need to be designed to provide better support to cocoa farmers. At a meso-level, there is a need to create a level playing field for the various players along the cocoa GVC. To achieve this objective, making cocoa markets more transparent for all players is critical just as creating opportunities to bolster small players. At a micro level, facilitating the formation of commercially oriented FBOs to empower cocoa farmers; improving farmers' access to finance and price risk management instruments; and, promoting product differentiation to enable cocoa growers to obtain higher prices cannot be overemphasized. These are crucial elements for sustaining small-scale cocoa farming and attracting the younger generation to the cocoa business. To be effective, each of these policy options should be based on a multistakeholder approach, engaging governments, the private sector, civil society and international organizations, as well as farmers, in order to tap into the specific comparative advantage of each entity. In this context, promoting national public private partnership platforms, as agreed at the first World Cocoa Conference in 2012, is crucial. Such platforms, which aim at formulating and monitoring national cocoa development plans based on common strategies and better coordination of initiatives in the cocoa sector, have already been set up in some cocoa producing countries such as Côte d'Ivoire, Ghana and Indonesia (ICCO, 2014). The platforms should be actively promoted and their recommendations effectively implemented and monitored to realize the full potential of a sustainable cocoa economy. The private sector could also play a vital role in this regard by promoting good corporate social responsibility tailored to the needs and interests of cocoa farming communities.

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