



German Cocoa and Chocolate Value Chains

Analysis of the distribution of value, costs, taxes, and net margins along the German cocoa and chocolate value chains



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BASIC

Bureau d'Analyse Sociétale
d'Intérêt Collectif

The study was initiated by individual stakeholder groups of the German Initiative on Sustainable Cocoa (GISCO). It was closely monitored by a steering committee consisting of individual members of GISCO (German Federal Government - BMZ and BMEL, German confectionery industry and German civil society), the EU-DG INTPA, the Food and Agricultural Organization (FAO), the International Cocoa Organization (ICCO) and the European Cocoa Association (ECA). Furthermore, a number of GISCO members from the confectionery industry and civil society participated in bilateral interviews. The German food retail sector within GISCO had signalled at an early stage that it expected hardly any new findings from the study due to existing publications and therefore did not participate due to a lack of resources.

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Introduction

Estimating and understanding the distribution of value, costs, taxes, and net profit margins¹ along cocoa/chocolate chains is both very scarcely documented and of growing interest to the stakeholders of the sector in the current context of international discussions around living income of farmers and fight against deforestation and child labour.

This is especially true for Europe as this region represents 55% of the world consumption of chocolate and roughly 40% of cocoa grinding. Because of the high interconnection and integration of its end-consumer markets and cocoa/chocolate industry, and in the context of the Sustainable Cocoa Initiative fostered by the European Commission, addressing this issue would require a pan-European approach to provide meaningful results.

In 2019, the European Commission's Directorate-General for International Partnerships (DG INTPA), the Investment Centre of the Food and Agriculture Organisation (FAO) and the European Cocoa Association (ECA) initiated a first step in this direction by commissioning the development of a first model on the creation and distribution of value, costs, and net profit margins for chocolate products marketed in France, which results were published in July 2020.

Following the publication of this study, the secretariat of the German Initiative on Sustainable Cocoa (GISCO) contacted BASIC to develop a similar model and study for the German market in order to investigate and objectify its commonalities as well as its differences with the French context.

This document presents the results of this work which was jointly commissioned by BMZ (German Federal Ministry for Economic Cooperation and Development, the European Commission's Directorate-General for International Partnerships (DG INTPA), and the Investment Centre of the Food and Agriculture Organisation (FAO).

The main objectives of this study were:

1. To estimate:
 - the detailed **distribution of value, costs, tax & net profit margins from cocoa farmers** in West Africa (Cote d'Ivoire, Ghana, Cameroon, and Nigeria) and Latin America (Ecuador) **down to consumers in Germany**,
 - **for a range of chocolate final products**: dark and milk chocolate tablets (plain and with ingredients) as well as case studies of confectionery bars and breakfast powder,
 - **in the conventional market as well as the certified market** (analysing 3 certification schemes: organic, Rainforest-UTZ and Fairtrade),
2. Based on these, to **investigate the drivers which influence value & costs distribution**:
 - dynamics of the end-consumer market and the structure of the chain (including regulation by public authorities)
 - origin and national context of cocoa production (agronomic, social, public regulation...)

¹ The net profit margin is the remaining after all identified costs and taxes have been deducted from value

Scope and methodology

The scope of the study is made up of 2 parts:

1. The following 4 categories of “conventional” value chains:
 - Plain dark chocolate tablets sold in supermarkets, of single-origin and mixed-origins cocoa, made with Ivorian, Ecuadorian, Ghanaian, Nigerian and/or Cameroonian cocoa.
 - Plain milk chocolate tablets sold in supermarkets, of mixed-origins cocoa, made with Ivorian, Ecuadorian, Ghanaian, Nigerian and/or Cameroonian cocoa.
 - Case study of chocolate confectionery made with a mix of Ivorian, Ecuadorian, Ghanaian, Nigerian and/or Cameroonian cocoa.
 - Breakfast cocoa powder sold in supermarkets, with sugar, made with a mix of Ivorian, Ecuadorian, Ghanaian, Nigerian and/or Cameroonian cocoa.
2. The influence of the following certification schemes on the above-mentioned value chains:
 - Rainforest Alliance / UTZ
 - Fair Trade²
 - Organic³
 - Combination of Fair Trade & Organic⁴

To be credible and meaningful, the methodology and the approach used to develop the model of quantitative estimates has been founded on 3 key elements:

- extensive and relevant publicly available data at key points in the value chain: producer countries, import/export with producer countries and within the European Union, market of processed cocoa ingredients, consumer sales in Germany, companies’ financial accounts...
- a good understanding of the business dynamics and structural features of the German chocolate market and German cocoa/chocolate value chains (in Business to Consumer as well as Business to Business levels),
- extensive rounds of interviews and concertation with all actors of the cocoa/chocolate chains to provide relevant and commonly agreed results.

Operationally, the diagram on the following page summarizes the main stages of the methodological process used for the study (details are provided in Appendix 8.1 of the present report).

² the main Fair Trade scheme in the chocolate market – and more widely used in food products – is by far the Fairtrade International’s label & certification system, but we also took into account other labels which are recognized by Fair Trade networks such as the “small producer symbol” (<https://spp.coop/the-spp/what-is-the-spp/?lang=en>), the “Gepa Fair+” scheme (<https://fair-plus.de/fair.html>) and the WFTO label (<https://wfto.com/our-fair-trade-system>).

³ Organic is to be understood as the European Union organic logo & control system which applies not only to agricultural goods produced in the EU but also organizes and controls the recognition of organic certification schemes outside the EU which are considered as equivalent (https://agriculture.ec.europa.eu/farming/organic-farming/organic-logo_en).

⁴ This corresponds first and foremost to the combination of Fairtrade International’s and the European Union organic’s labels, but also takes into account other combination of Fair Trade labels with the EU organic scheme as well as combined approaches such as the Naturland Fair label (<https://www.naturland.de/en/naturland/what-we-stand-for/>).

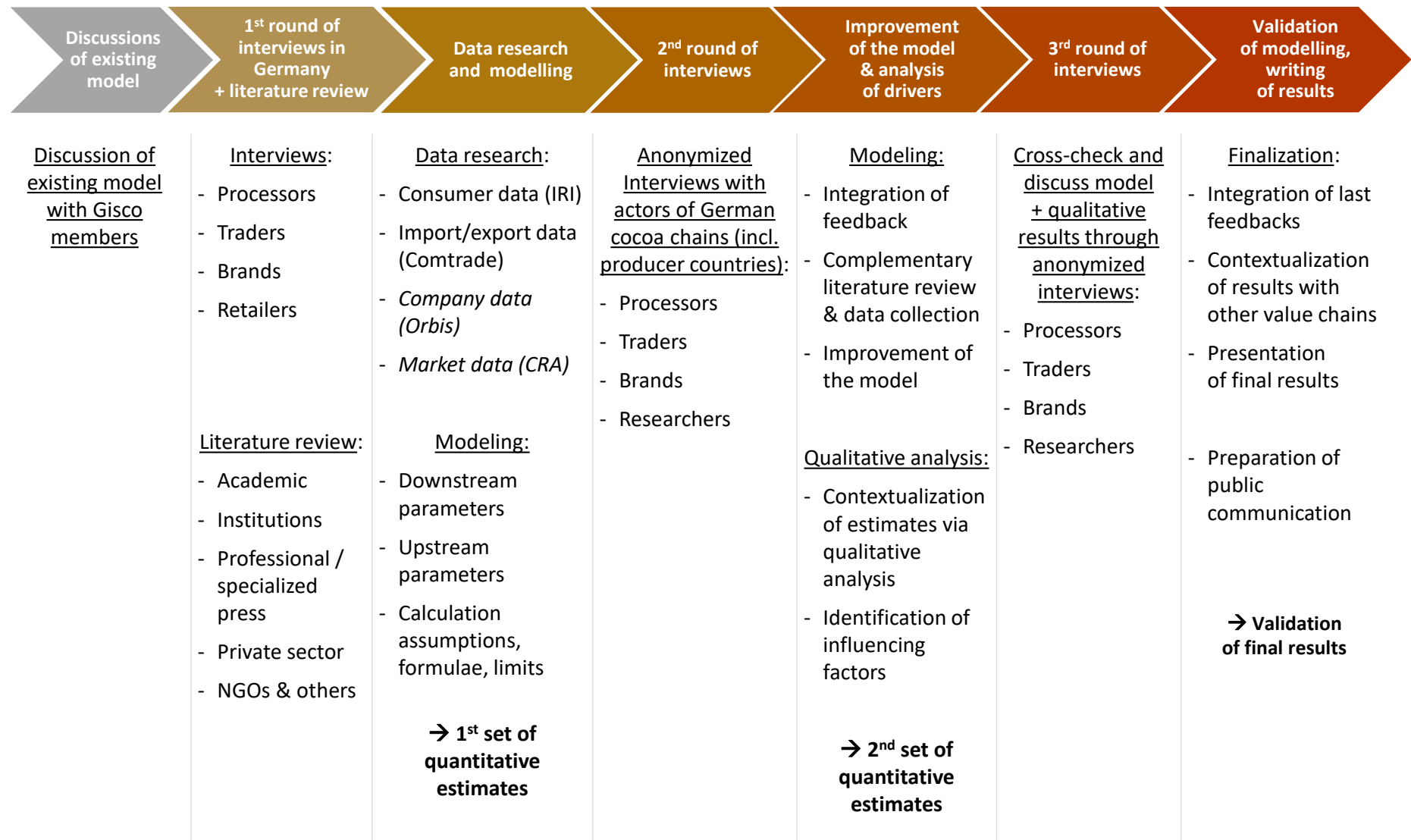


Figure 1. Overview of the methodology developed and used to conduct the study. Source: BASIC, 2022

Full results and assumptions are available in an online tool accessible at the following link:

<http://cocoavaluechain.lebasic.com>

The model developed is fully based on publicly available databases (free of charge and fee-charging).

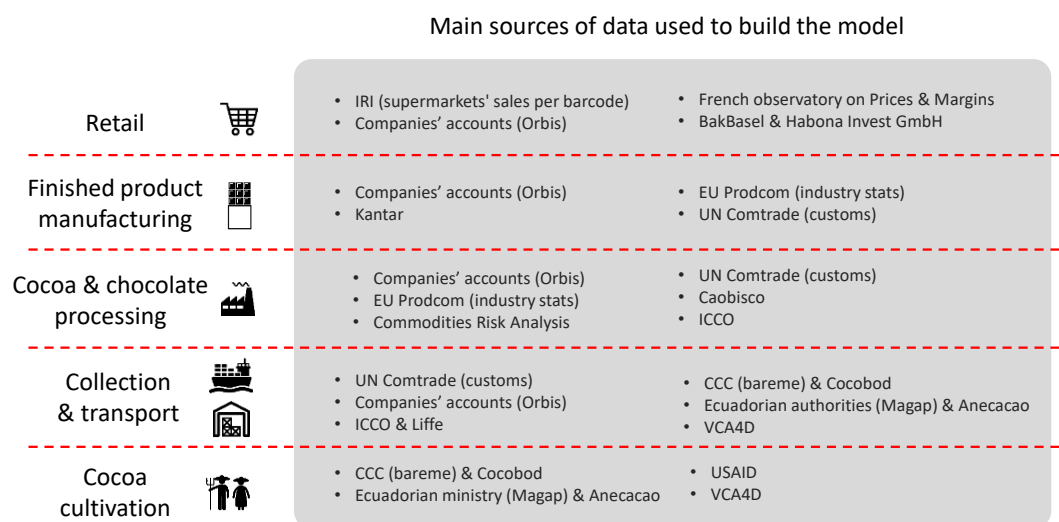


Figure 2. Overview of the main sources of quantitative data used for the building the model for the study. Source: BASIC, 2022

As illustrated above, the main databases and sources of data we have used for this study are:

- **At the retail level**, our modelling for German retailers is based on German specific data: we have used IRI (Information Resources, Inc.) to collect and process detailed consumer purchases of chocolate products in all the stores of German retailers and discounters for the year 2020 (at a barcode level), and we have used the Orbis database to collect and process the annual accounts of German retailers and discounters so as to estimate their global costs and margins. In order to allocate these costs to the chocolate section of retailers' and discounters' stores, we have started by using the data from the "French Observatory on Prices and Margins of Food Products" as a starting point for our modelling. We have then confronted and amended this draft model with more precise data on costs per aisle of German retail stores, in particular (but not only) building on a Swiss study which has made a detailed comparison of the costs and functioning of German, French and Swiss retail chains⁵.
- **Regarding the finished product manufacturing as well as the cocoa and chocolate processing**, we have first used the UN Comtrade (United Nations statistics data base of international trade) which is the main international reference for imports-exports statistics so as to collect and process data on volume and value exchanged with cocoa producing countries and within the European Union. In addition, we have used several databases and sources of information on the volume and value manufactured in Germany and at the

⁵ BAK Basel Economics AG, Die Kosten des Schweizer Detailhandels im internationalen Vergleich – Eine Studie im Auftrag der Swiss Retail Federation, 2017

European Union level: the data published yearly by Caobisco (Association of Chocolate, Biscuit and Confectionery Industries of Europe) as well the sectoral accounts published in the ProdCom database (managed by Eurostat) for data on cocoa processing and chocolate manufacturing, and the market data published by CRA (Commodities Risk Analysis) to estimate prices of cocoa semi-processed ingredients (cocoa paste/liquor, butter and powder). Finally, as for retail, we have used the Orbis database to collect and process the annual accounts of German chocolate manufacturers, cocoa processors and importers.

- **Regarding the part of the cocoa value chain occurring in producing countries,** we have firstly used the data published by the ICCO (International Cocoa Organisation) yearly and quarterly, as well as an extensive set of recognized country-specific information sources: CCC (Conseil Café Cacao) & Bareme in Côte d'Ivoire, Cocobod, VCA4D (Value Chain Analysis for Development), etc. We have complemented and cross-checked this data with the quantitative information provided through recent research and report conducted by the FAO (Food and Agriculture Organization), USDA (United States Department of Agriculture), the BCEAO (central bank of western African states), the Ministry of agriculture and Anecacao on Ecuador, the KIT (Dutch Royal Tropical Institute/ Koninklijk Instituut voor de Tropen) on Côte d'Ivoire and Ghana, CIRAD (French Agricultural Research Centre for International Development), etc.

In terms of assumptions, the first one relates to the mix of cocoa beans origins used in the finished products that we have modelled in our database. This mix of cocoa origins is representative of the percentage of each producing country in the European imports of cocoa beans (because of the high level of import-export of cocoa products between Germany and its neighbouring countries). It is also coherent with the land area of certified cocoa in each country. The default percentage of each cocoa origin can be changed in the online tool we have developed (<http://cocoavaluechain.lebasic.com>). Another assumptions relate to costs and value at farm level which are averages reflecting each country, producer set-up (small farmers, plantations, etc.) and markets (conventional, organic, etc.).

Most importantly, the model of estimates that we have built using this data and all key assumptions have been discussed, challenged and improved through 3 rounds of interviews (24 interviews in total) which have been conducted with experts and all categories of actors of the chain except retailers and discounters who did not participate nor gave their feedback despite our attempts (cf. Appendix 8.1).

The results are expressed in terms of distribution of value, costs, tax and margins along cocoa/ chocolate value chains. Regarding costs, the model we have built is founded on estimates of detailed components of expenses – the main ones – at each stage of the chain (see examples below). In the rest of the report, only the total amount of costs at each stage will be displayed for clarity purposes.

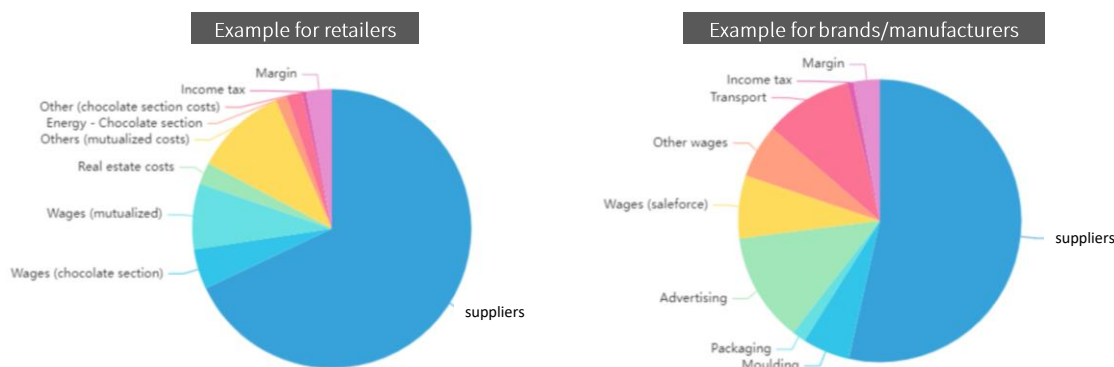


Figure 3. Examples of costs components estimated through the model for retailers and brands/manufacturers. Source: BASIC, 2022

Limitations

The main challenge of the study has been to collect detailed and credible public data (either paid or free of charge) along value chains from producers up to retailers, without relying on confidential business information, and to counter-verify the relevance of our estimates. To address this challenge, we chose to:

- Start by collecting and analysing available statistics from public and private databases (IRI, DeStatis (the German Federal Statistical Office), UN Comtrade, CRA, ICCO, World Bank, research institutes, ministries...)
- Combine this quantitative data with the qualitative analysis emerging from a wide range of literature (sociologic, economic, historic...) and a large set of interviews in order to build a credible and comprehensive model of value & costs distribution along the cocoa chains,
- Cross-check and enrich this information/analysis through an extensive set of anonymised interviews with experts from the sector, in particular professionals working for companies of all stages of cocoa/chocolate chains as well as academics.

Another critical issue of our approach has been to develop a robust model to estimate the distribution of value, costs, and profits along the cocoa/chocolate chain. To achieve this, we have modelled all the relevant categories of final products on the market that were required to represent business dynamics, separating between:

- Traditional retailers' vs. Discounters' shops/channels
- Private labels vs. international/national brands.
- Low, medium and premium segments of chocolate tablets.
- Dark vs. milk chocolate tablets
- Plain tablets vs. tablets with hazelnuts
- Conventional tablets without label vs. Certified tablets (UTZ/Rainforest, Fair Trade & Organic)

Additionally, we have modelled for each category all the necessary characteristics that enable to link each final product to its cocoa beans content through a set of semi-processed products (cocoa liquor/paste, cocoa butter, chocolate couverture), associated recipes (i.e. percentages of ingredients and origins which are parameterised) and standard conversion and dilution factors.

In reality, a wide variety of other organisational frameworks can be found for each product analysed, leading to potential variations in the value distribution estimates. However, the prices and costs levels and trends calculated in this study provide first orders of magnitude and a sound basis for discussion among actors and stakeholders of the cocoa/chocolate sector.

1. Context of global & German cocoa value chains

1.1. Global context of cocoa and chocolate value chains

1.1.1. Global cocoa production and global chocolate consumption

Cocoa cultivation has probably been discovered 3000 years ago in Central America and coca was first consumed by Mayas then Aztecs as a bitter cold beverage mixed with various spices.⁶ The consumption of cocoa expanded beyond Mesoamerica when Spanish settlers arrived in Mexico and progressively introduced it in colonial cuisine, adapting it to European taste.⁷

At the turn of the 20th century, cocoa production was moved by the European colonial powers from the newly independent Latin American countries to their colonies which quickly became the world's leading producing region for cocoa – first in Ghana, then Côte d'Ivoire and Nigeria – within the so-called “cocoa belt”, a narrow stretch situated 10 degrees either side of the equator.⁸ The world production of cocoa became massive in these countries so as to meet the ever-expanding consumer demand for chocolate: from 140 000 tonnes yearly produced in 1830,⁹ production rose to 250 000 tonnes per year at the end of the 19th century, 500 000 tonnes in 1920, 2 million tonnes in the 1980s up to more than 5 million tonnes in 2020 (hence a multiplication by 20 since 1900).¹⁰

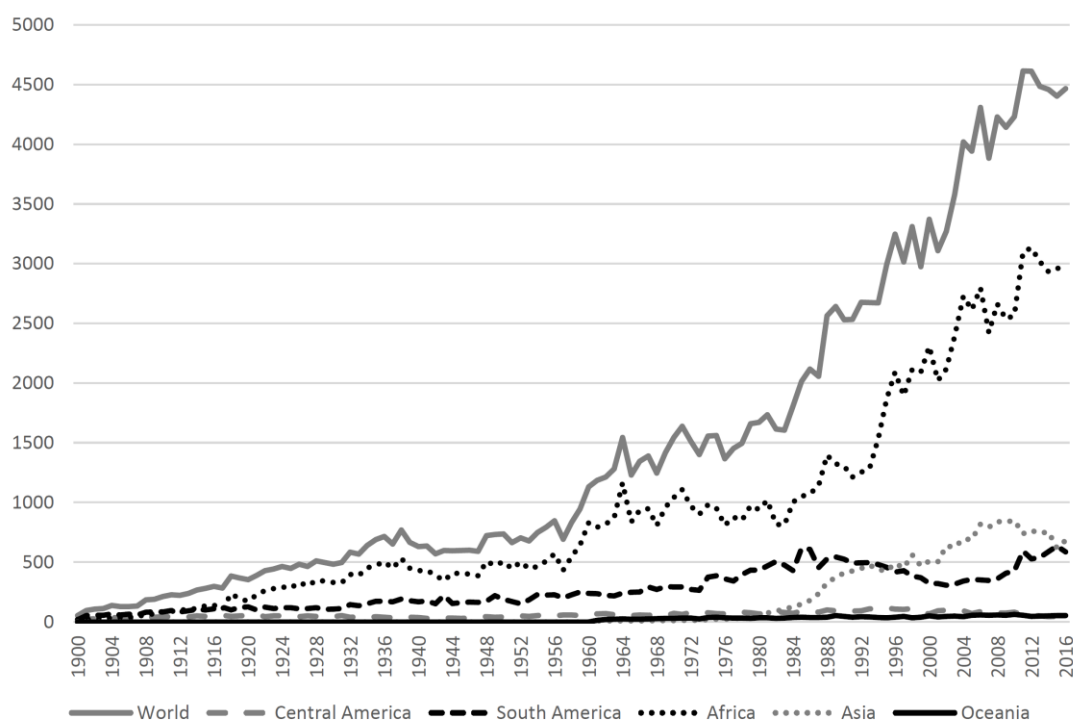


Figure 4. World cocoa production & consumption since 1900. Source: LMC International Ltd., World Cocoa Outlook, 2010

⁶ S. D. Coe & M. D. Coe, The True History of Chocolate, 3rd edition, Thames & Hudson, 2013

⁷ Ibid.

⁸ The cocoa trees require humid tropical climate with regular rains and a short dry season, coupled with even temperatures between 21 and 23°C. S. D. Coe & M. D. Coe, The True History of Chocolate... op. cit.

⁹ N. Harwish, Histoire... op. cit.

¹⁰ LMC Int. Ltd., The World Cocoa Market Outlook, 2000 and ICCO, World cocoa bean production, grindings & stocks, 2022

In comparison to other agricultural commodities, the industrial processing and manufacturing of chocolate at large scale started quite early, at the beginning of the 19th century, when the first “chocolate factories” were set up in Europe (by Cailler¹¹ and Suchard¹² in Switzerland and Meunier¹³ in France)¹⁴. In 1828, a turning point took place in the Netherlands when Van Houten¹⁵ discovered the process for separating the cocoa butter from the powder through hydraulic pressure. This invention opened the way towards massive production of chocolate, affordable by the many. Other major industrial innovations took place in the aftermath, their inventors still being widely known today in the chocolate industry, such as Henri Nestlé and Rudolph Lindt.¹⁶

At the beginning of the 20th century, Swiss, British and American manufacturers brought to the market emblematic confectionery products that are still largely present in today’s supermarkets’ shelves and amongst the best sales of retailers: milk chocolate tablet (first launched by Nestlé in 1875), Dairy Milk bar of Cadbury (first marketed in 1905), Toblerone (launched in 1905), Milky Way and Mars bars (respectively launched in 1923 and 1932), Kit Kat bar and Smarties (first marketed in 1935 and 1937).¹⁷

Today, chocolate has become a common food item throughout the world available in a wide variety of forms (spreads, sweets, chocolate tablets, truffles, etc.), and the geographical distribution of its consumption as well as of the one of cocoa cultivation is a result of its history (see below).

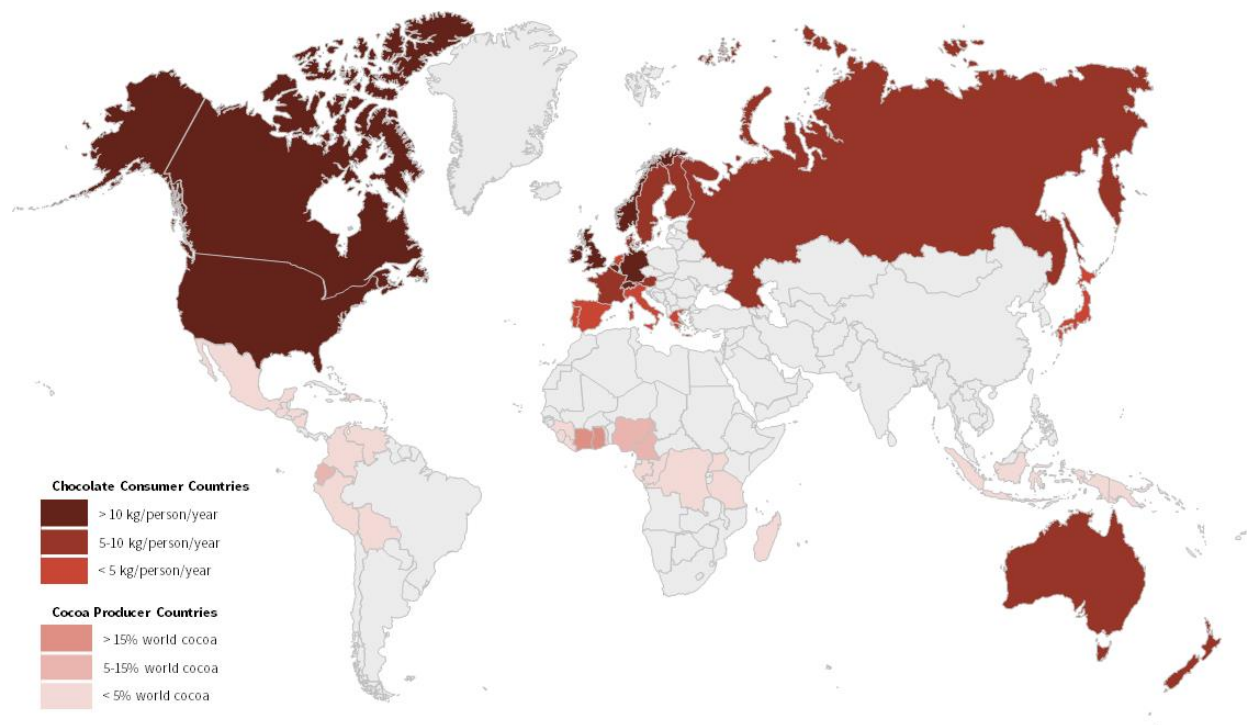


Figure 5. World map of chocolate consumption and cocoa production. Source: BASIC, based on ICCO and ICA data (2020)

¹¹ Owned by Nestlé since 1929. Some Nestlé products are sold under the Cailler name exclusively in Switzerland.

¹² Suchard is the creator of the brand Milka in 1901. Both once bought and owned by Kraft Foods and then Mondelez International, the latter sold Suchard to Eurazeo in 2017 but kept the Milka brand.

¹³ First bought by Rowntree Mackintosh in 1971, Menier is now a brand owned by Nestlé since 1988.

¹⁴ N. Harwish, *Histoire du chocolat*, 2008

¹⁵ Van Houten is still one of the most renowned chocolate powder, owned since 2000 by Barry-Callebaut.

¹⁶ Henri Nestlé discovered in 1867 the producing process for milk powder to use in the making of milk chocolate. And in 1879, Rudolph Lindt invents the conching process that significantly helped to improve the quality of solid chocolate.

¹⁷ N. Harwish, *Histoire...*, op. cit.

Global sales of chocolate-based confectionery products are estimated at 110 billion USD worldwide.¹⁸ Behind these global numbers, important shifts in demand are happening, both in terms of geography and in terms of consumers' tastes and expectations.

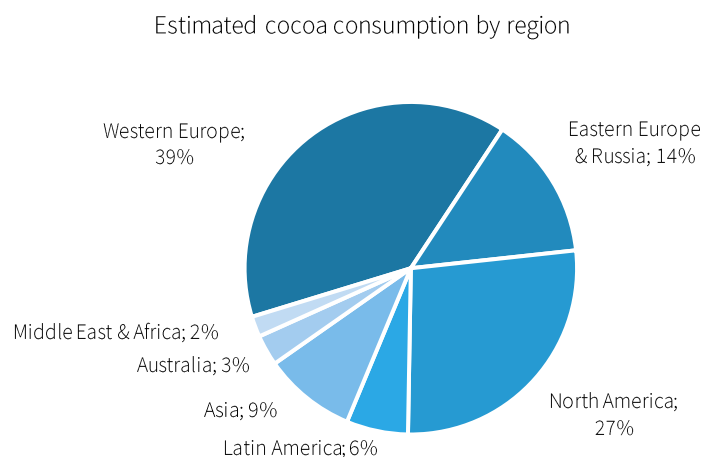


Figure 6. Main world cocoa consuming regions. Source: BASIC, based on Eline Poelmans, et Johan Swinnen. « A Brief Economic History of Chocolate », 2019

Consumption in traditional markets in Europe and North America, which are the 2 largest chocolate consumer regions with a higher income population, tend to stagnate and even decline, although yearly consumption remains higher than in the other world regions.¹⁹ Yearly consumption per capita varies a lot within this region: from 11kg of chocolate per capita and per year in Germany, 9,7kg in Switzerland and 7,3kg in France, down to as low as 3kg per capita and per year in Portugal and Italy.²⁰

These markets are said to be “mature” and characterised by a high degree of segmentation, the brand being one of the most important criteria for consumers' choice. In recent years, health issues and organic have starting to gain increasing importance²¹, with differences between markets. In some countries such as France, consumers are increasingly shifting towards higher quality chocolate with more cocoa and less sugar²², organic and fair trade products, specialty chocolate based on “fine flavour” cocoa in which an origin and a recognised *savoir-faire* are valued.²³ In other countries such as Germany, these trends are just only emerging and sometimes stagnating or not yet detectable.

Meanwhile, demand in emerging countries, especially in Asian markets such as China and India, remains small although it has been accelerating in the past few years due to the emergence of the

¹⁸ <https://www.prnewswire.com/news-releases/139-94-billion-chocolate-market--global-growth-trends-and-forecast-2019-2024--300876212.html> accessed on 30th March 2022

¹⁹ Eline Poelmans, et Johan Swinnen. « A Brief Economic History of Chocolate », 2019

²⁰ Caobisco in Syndicat du chocolat, « Les chiffres clés 2018 des industries de la chocolaterie », 2019

²¹ In particular, global demand for organic chocolate is forecast to growing at a forecast 3% per year 2020-until 2024 <https://www.businesswire.com/news/home/20200304005323/en/Organic-Chocolate-Market-2020-2024-Health-Benefits-Organic> retrieved on 30th March 2022

²² World Bank, Le cacao en Côte d'Ivoire, 2019

²³ Ibid. and <https://www.reuters.com/article/us-cocoa-demand-innovation/chocolate-makers-innovate-to-entice-health-conscious-consumers-idUSKBN1ED1PZ> retrieved on 30th March 2022

middle class and the evolution of consumers' taste (60g/year/capita in China and 35g/year/capita in India).²⁴

At the beginning of the chain, over 5 million smallholder farmers and their families located in the tropical 'cocoa belt' along the equator produce more than 90% of world's cocoa. These farmers cultivate cocoa on farms smaller than 10 hectares, as most large plantations in South-East Asia struggle to demonstrate any economic advantage.

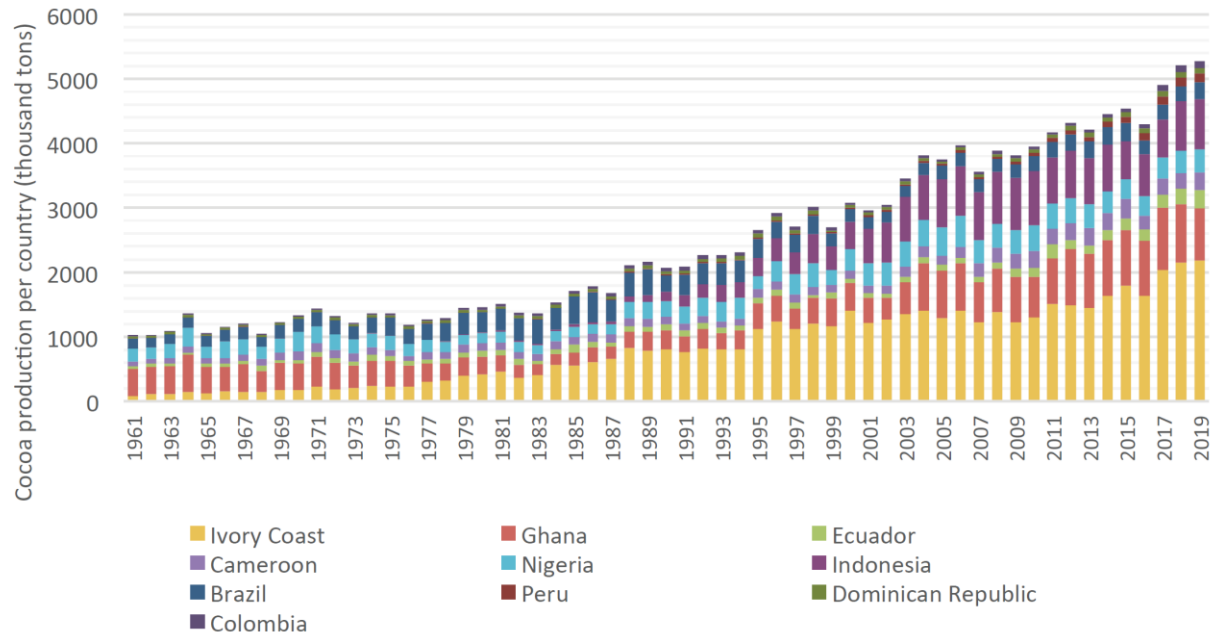


Figure 7. Country cocoa production trend from 1961 to 2019 (in thousand metric tonnes). Source: USDA 2021

Most of the cocoa beans produced worldwide comes from African countries, amounting to an estimated 3.7 million metric tons for the 2021/22 crop year (75% of the world production).²⁵ Côte d'Ivoire is leading the African countries' production (and by far the leader in cocoa beans production worldwide) with a little than 2.2 million metric tons of cocoa for 2019, followed by Ghana with 800,000 metric tons the same year.²⁶ Nigeria and Cameroon respectively rank 4th and 6th in worldwide cocoa production.²⁷ Countries from Latin and Central Americas and the Caribbean had an estimated production of 940,000 metric tons (19%). Asia and Oceania had an estimated production of 264,000 metric tons for the crop year 2021/22.²⁸

²⁴ World Bank, 2019, op. cit.

²⁵ ICCO Quaterly Bulletin of Cocoa Statistics, Vol XLVIII, N°2, Cocoa Year 2021/22

²⁶ Ibid.

²⁷ Ibid.

²⁸ Ibid.

1.1.2. Structure of cocoa/chocolate value chains

In between cocoa cultivation and consumption of chocolate-based products, the main stages of the value chain can be sketched as follows:

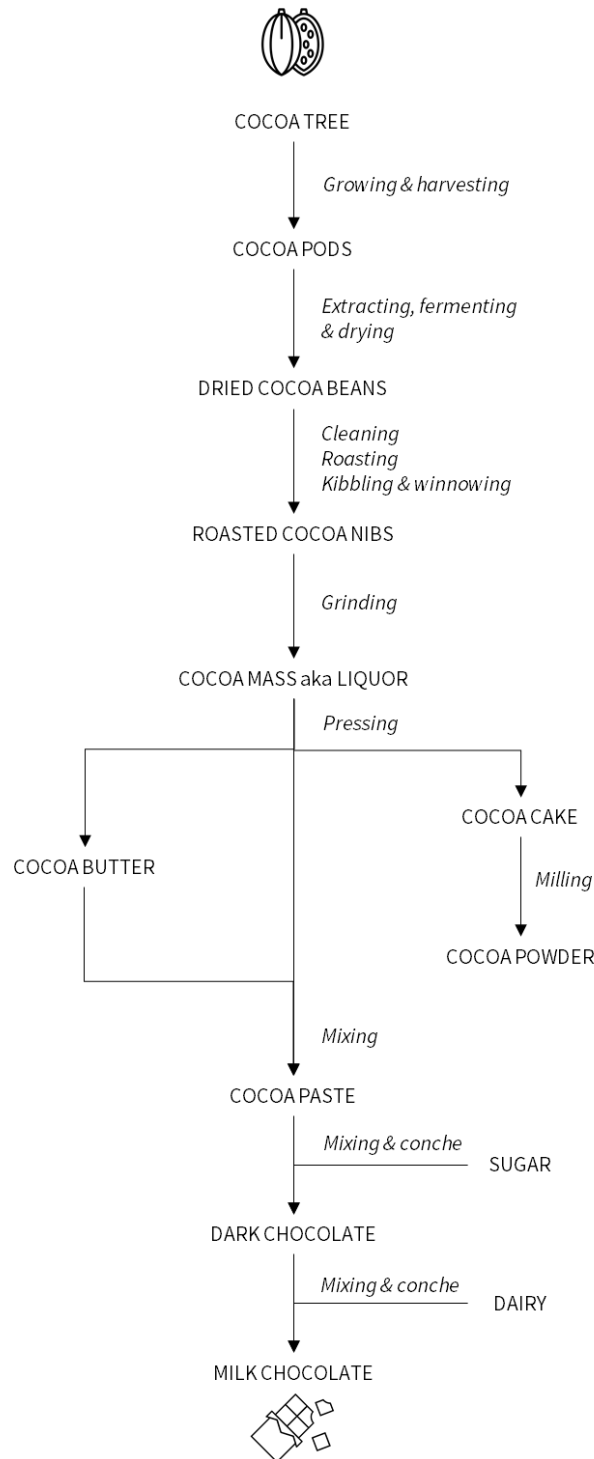


Figure 8. From the cocoa tree to the chocolate tablet. Source: BASIC 2022

Note: this diagram does not show the physical flow of a given bag of cocoa beans down to the final chocolate bar, but a simplified and schematic vision of the sequencing of stages between the cultivation of cocoa and the manufacturing of a chocolate bar.

Most of the global cocoa production comes from family-sized farms, whose number is estimated at above 5 million²⁹. These farms are generally small in surface, between 2 and 10 hectares³⁰. Bigger cocoa plantations, historically set in Asia and South America are still dynamic in Ecuador and are progressively losing importance in Malaysia and Indonesia; together they make up a minority of the production and represent less than 10% of world production³¹. Small-holder cocoa farmers most often sell their beans to small traders who sell to wholesalers, who in turn resell the beans to international traders or cocoa grinding companies.

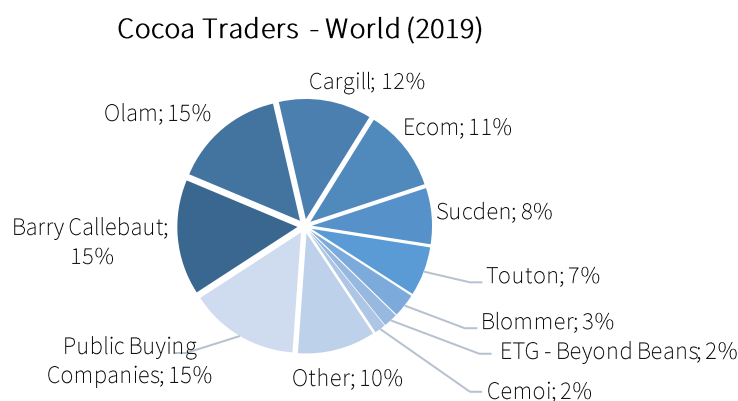


Figure 9. Main world's cocoa traders. Source: BASIC, based on Cocoa Barometer, 2020

The trading sector is quite concentrated: the 4 largest cocoa traders – Barry Callebaut, Olam, Cargill, and Ecom – account for 53% of the global cocoa trading market (a small number of cocoa farmers' cooperatives also have the capacity to export directly, but represent a very low market share, except in specific countries like Peru or Dominican Republic). Between these actors and cocoa farmers, fluctuations of supply and demand on the physical market have led to the creation of cocoa exchange markets. The first of them was set-up in New York in 1925, followed by the London cocoa exchange in 1928³². In order to function, they fostered the standardisation of the cocoa bean, via the establishment of technical norms that facilitate its purchase and resale and guarantee the homogeneity of quality³³. These standards have enabled to reduce transaction costs to a minimum³⁴ and transform cocoa beans into an interchangeable traded commodity. To stabilize international prices, a first International Cocoa Agreement between producer and consumer countries was signed in 1972, under which producer countries have set quotas and established buffer stocks, and which led to the creation of the International Cocoa Organisation (ICCO) to carry out the negotiated clauses. Faced with the failure of its implementation, this agreement was suspended as of 1988³⁵, alongside a wave of dismantlement of cocoa stabilisation funds in the main producing countries promoted by the International Monetary Fund and the World Bank. Only Ghana has maintained its cocoa

²⁹ M.P. Squicciarini & J. Swinnen, *The Economics of Chocolate*, Oxford University Press, 2016

³⁰ Ibid.

³¹ Ibid.

³² Centre du Commerce International, *Cacao : Guide des pratiques commerciales*, 2001

³³ B. Daviron & I. Vagneron, « From Commoditisation to De-commoditisation... and Back Again: Discussing the Role of Sustainability Standards for Agricultural Products », *Development Policy Reviews*, 2011

³⁴ C. Shapiro & H. R. Varian, « The art of standards wars », *California Management Review*, 1999

³⁵ N. Harwish, *Histoire... op. cit.*

stabilisation board, a public monopoly on exports, and a public control of private traders and processors operating in the country³⁶.

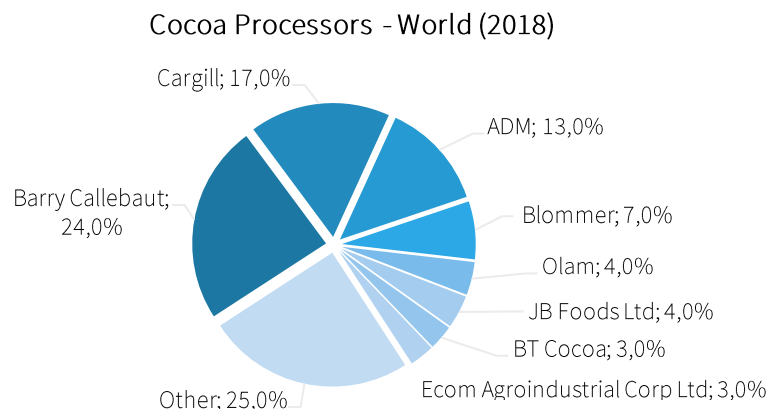


Figure 10. Main world's cocoa processors. Source: BASIC, based on Gayi, 2018

Downstream, the major processors also operate in a concentrated market: the 4 main grinders would make up more than 60% of the global cocoa first processing according to estimates.³⁷ This can be explained by the nature of cocoa processing, which sells a narrow range of products – mainly cocoa butter, paste and powder – and is structured by the pursuit of economies of scale. The Netherlands used to be the leading country due to its numerous maritime ports and warehouses. Today, grinders are also developing their facilities in the cocoa producing countries and Côte d'Ivoire has become the number one country for cocoa grinding worldwide.

Similarly to cocoa trading, major structural changes happened to the cocoa processing and chocolate manufacturing stages since the 1990s: the introduction of more advanced technologies by leading companies coming from the grain trade sector (bulk transport, flat storage, etc.) led to the emergence of large-scale processors in the middle of the cocoa chain, with vertically-integrated operations from the warehousing of beans in producing countries down to the manufacturing of “industrial chocolate” (chocolate couverture) sold to international brands and retailers as well as to most independent artisans and chocolatiers who mould it and mix it with other ingredients.³⁸

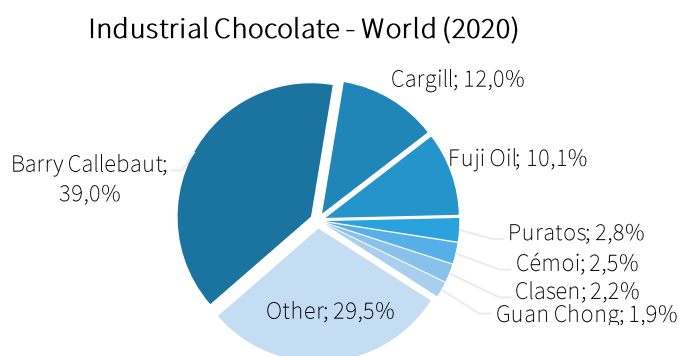


Figure 11. Main world's chocolate manufacturers. Source: BASIC, based on Barry Callebaut, 2021

³⁶ M.P. Squicciarini & J. Swinnen, *The Economics...* op. cit.

³⁷ Voice, *Cacao Barometer*, 2020

³⁸ Araujo Bonjean & J. F. Brun, « Concentration and Price Transmission in the Cocoa-Chocolate Chain », in M.P. Squicciarini & J. Swinnen, *The Economics of Chocolate*, 2016

As a result, the leading cocoa grinders are also chocolate manufacturers: Barry Callebaut, Cargill and Olam are among the most important actors on the chocolate couverture open market, making up 60% of the world market. As opposed to grinding factories, chocolate manufacturing facilities need to be situated close to end-consuming markets.

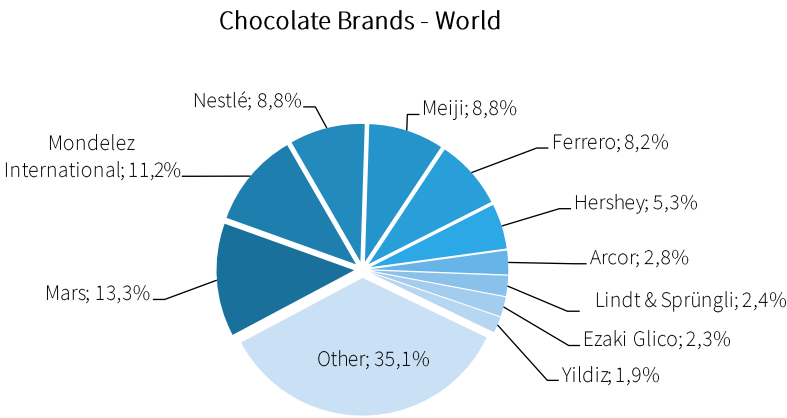


Figure 12. Main world's confectionery brands. Source: BASIC, based on Candy Industry, 2019

At the end of the chain, whereas consumers are familiar with a large number of chocolate brand names, the majority of them are owned by global companies, the 6 leading ones – Mars, Mondelez, Nestlé, Ferrero, Hershey and Lindt & Sprüngli – making up jointly 55% of the global market. Some of these companies outsource cocoa processing and chocolate couverture manufacturing to external suppliers for part of their product lines, refocusing on research & development, marketing and advertising whereas others have maintained an important internal capacity to manufacture chocolate and process cocoa so as to limit their dependency on outsourced providers.³⁹

Market share of main food retailers in the European Union & UK

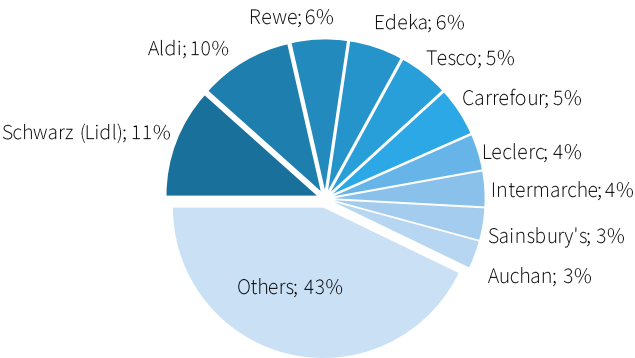


Figure 13. Main European supermarket chains. Source: BASIC, based on Retail-Index and Eurocommerce, 2020

At the level of retail, supermarket chains are by far the leading distribution channel, representing more than 70% of total sales of chocolate and confectionery products in Europe and North America (the rest being sold in convenience stores, independent small grocers and artisans' shops, duty free

³⁹ N. Fold, « Lead Firms and Competition in 'Bi-Polar' Commodity Chains: Grinders and Branders in the Global Cocoa-chocolate Industry », Journal of Agrarian Change, vol. 2 n°2, April 2002

and petrol station shops). This sector is quite concentrated at regional level: in Europe, the 10 biggest retailers (4 German – the largest ones-- 4 French and 2 British) represent almost 57% of all food retail sales. These retailers sell thousands of products containing chocolate (the largest sales being related to confectionery bars well before chocolate tablets) both under international/national brands and under their own brands (which are called Private Label products).

1.1.3. Certified cocoa value chains

In reaction to the raising awareness of consumers on the negative impacts of cocoa cultivation, agri-food companies have developed internal standards to improve their practices but also those of their suppliers (e.g. Cocoa Life Sustainability Program of Mondelez international, Barry Callebaut's Cocoa Horizons, Nestlé Cocoa Plan, etc.). These programs focus on different issues, with main components concentrating on issues such as cocoa production so as to increase the productivity and profitability of farms (financing new cocoa seedlings, training of producers on agricultural practices, etc.), child protection, and price premiums (certification and otherwise). The underlying argument is that these increases will allow producers to earn a better living by producing more cocoa volumes, thus supporting the fight against child labour and deforestation.

In addition to these initiatives, several independent certification schemes have developed since the 1990s with the objective to promote the production and consumption of products produced to higher social and/or environmental standards than the market norm.⁴⁰

Three main certification schemes are in use in the cocoa sector: Rainforest Alliance (which has merged with UTZ since 2020), Fairtrade and organic.

Combined, these 3 labels certified at least 2.7 million hectares of cocoa in 2019, representing 23% of the global cocoa-growing area.⁴¹



Figure 14. Key figures on main certifications in the cocoa sector. Source ITC & IISD, 2022 (<https://standardsmap.org/en/trends>)

⁴⁰ B. Daviron et I. Vagneron, « From Commoditisation to De-commoditisation... » op. cit.

⁴¹ <https://standardsmap.org/en/trends> accessed on July 25th 2022

Over 2 million hectares are UTZ/Rainforest certified, the largest cocoa area among the 3 certifications, a globally stable figure between 2018 and 2019⁴². UTZ/Rainforest is more developed in the African continent (Côte d'Ivoire, followed by Ghana, Nigeria, DRC and Cameroun, together representing more than 90% of the total certified cocoa area). This standard covers both the reduction of forest degradation and protection of biodiversity through good agricultural practices as well as the respect of the core conventions of the ILO. There is no guaranteed minimum price for certified products but a small premium of about 70 USD/tonne⁴³, and the certification tends to increase yields, thus incomes of farmers.

Another certification initiative, Fair Trade, is based on commitments of business actors aiming at enabling small-holder farmers and workers to make a dignified living out of their work and invest collectively in the long run. In 2019, Fairtrade International, the leading Fair Trade certification system, certified over 1.3 million hectares of cocoa (an increase of 16% between 2018 and 2019), constituting 11% of the global cocoa area.⁴⁴ Five countries combined accounted for 95% of the total Fairtrade International cocoa area: Côte d'Ivoire, Ghana, Dominican Republic, Peru and Ecuador.

Finally, organic cocoa is the smallest but also the fastest developing certification in the cocoa/chocolate sector in mature consumer countries. In 2019, organic cocoa represented 3% of the global cocoa area, or 360,000 hectares (estimated harvested area), an increase of 13% between 2018 and 2019.⁴⁵ This certification is more developed in Latin America and smaller origins in Africa, the 5 countries with the largest area being the Dominican Republic, followed by Sierra Leone, the Democratic Republic of Congo, Peru, Ghana and Ecuador which together represent 75% of the total cocoa organic area worldwide.

⁴² Ibid.

Even though the two labels UTZ and Rainforest Alliance were not yet merged for the year of last statistics (2019), we nevertheless have considered that it made more sense to merge the figures into one consolidated group for meaningful comparisons with other labels.

⁴³ <https://www.rainforest-alliance.org/business/certification/cocoa-sustainability-differential/>

Even though the two labels UTZ and Rainforest Alliance were not yet merged for the year of last statistics (2019), we nevertheless have considered that it made more sense to merge the figures into one consolidated group for meaningful comparisons with other labels.

⁴⁴ Ibid.

⁴⁵ Ibid.

1.2. The German cocoa and chocolate sector

1.2.1. Overview of the German food retail sector

1.2.1.1. The 4 leading German retailers and discounters and their influence on agricultural and food value chains

Germany is the biggest market for food and beverages in the European Union with over 83 million consumers. According to Lebensmittel Zeitung, the 30 largest food retailers in Germany generated 256 billion euros of sales in 2018, an estimated 4% more than in 2017.⁴⁶

The German grocery market is saturated and highly consolidated: in 2020, the 4 leading groups of retail made up 80% of the total food sales in the country (see below): Edeka-Group (Edeka and Netto), Schwarz-Group (Lidl and Kaufland), REWE-Group (REWE and Penny) and Aldi (Süd and Nord),⁴⁷ with potential impacts for consumers, as well as for suppliers on tougher negotiations' conditions.⁴⁸

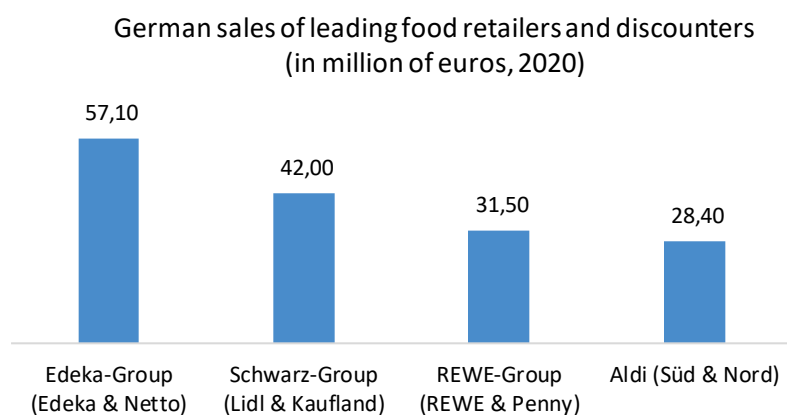


Figure 15. Sales of major food retailers & discounters in Germany (million euros). Source: BASIC, based on Savills 2021

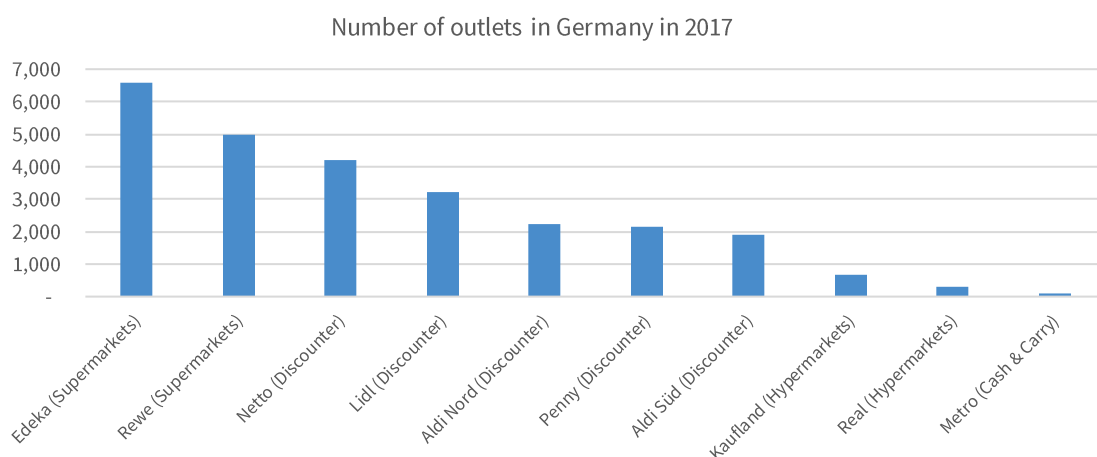


Figure 16. Number of outlets per Grocery retailers in 2017 in Germany. Source: BASIC, based on Lebensmittelzeitung, 2018

⁴⁶ Lebensmittel Zeitung, "Top 30 Lebensmittelhandel Deutschland 2019", March 7th, 2019

⁴⁷ USDA, "Expanding Grocery e-Retail Market in Germany", 2019. While Edeka & Rewe are positioned on the 2 distribution formats - supermarkets/hypermarkets and discounter stores - Lidl and Aldi are focused on discounter outlet only.

⁴⁸ Dyfed Müller Loesche, « Dominante Supermärkte », Handelsblat, no 197 (2018): 032

Historically, the food sector was dominated by traditional grocery retailers, in particular the Edeka-Group and the Rewe-Group. Although both are still major players in the Germany grocery retail (see figure above), they have been challenged over the years by the discounters Aldi-Group (Süd and Nord) and Schwarz-Group (which owns Lidl).

Discounters have been a prominent feature of the German retail market for the past 30 years: their market share has grown from 12% in the 1980s to 30% and above since the early 2000s, one of the highest shares in world's food retail (there is on average one discounter for every 5,231 people in Germany, within a 10-15 minutes-drive of every German home).⁴⁹

The success of discounters can be explained by their decision to historically focus on selling private labels' products⁵⁰ in their stores while reducing the diversity of references available⁵¹ so as to maintain low costs of logistics and become very cost efficient. The more limited assortments of products they offer, combined with their lean management strategy has enabled discounters to reduce their time and energy, therefore their costs, spent on unloading trucks and refilling shelves all the more than products are delivered in boxes which can be put as such on the shelves (whereas traditional retailers display product by product).⁵²

With their unique costs structure and marketing strategy, German discounters were thus able to challenge the traditional food retailers by offering to German consumers similar products at low(er) prices. In reaction to this competition, traditional food retailers have strongly developed their private labels, creating whole ranges of products from low-priced to high quality premium products.⁵³ in 2019, EDEKA's private labels' sales represented an estimated 25% of its revenues.⁵⁴ Retailers and discounters' private labels now amount to important market shares across products (see below for examples on the German chocolate sector).⁵⁵

This appeals to the price-sensitivity of German consumers, which are said to be much more price-conscious than other European consumers (Germans spend on average less than 11% of their income on food and beverages in 2017 compared to 20% in France).⁵⁶ Whether it is the discounters and retailers that shaped the mind of the consumers to be highly focused on price or the reverse, competition on prices is high among major German food retailers and this puts under stress the food and agricultural value chains.

The influence of German food retailers and discounters on agricultural and food value chains has been further reinforced over the past decade as all the leading groups have begun to vertically integrate the manufacturing of some of their key private label products: both EDEKA and REWE now

⁴⁹ Euromonitor International, Fresh Food in Germany, 2012

⁵⁰ According to interviewees, brands were introduced in discount stores since 2017 only.

⁵¹ Interviewees estimate that a Lidl or Aldi store sells on average 11,000 different products while a Rewe store sells over 100,000 products.

⁵² Interviewees with chocolate brands and discount retailers (field mission and observations in Germany in Sept 2022)

⁵³ « Handelsmarken werden mittlerweile strategisch im LEH eingesetzt, sie sollen gezielt auf die Retail Brand der Händler einzahlen », *Rundschau für den Lebensmittelhandel*, no 06 (2019): 16.

⁵⁴ « Handelsmarken werden mittlerweile strategisch im LEH eingesetzt, sie sollen gezielt auf die Retail Brand der Händler einzahlen », *Rundschau für den Lebensmittelhandel*, n° 06 (2019): 16.

⁵⁵ Ibid

⁵⁶ USDA, "German Food Retail", 2018

own several factories processing meat and manufacturing bread and baked goods⁵⁷ while the Schwarz-Produktion at Lidl supplies an increasing number of its private labels, including the chocolate tablets now manufactured in its Solent factory in Übach-Palenberg⁵⁸ (it is forecasted that Schwarz-Produktion will soon become one of the major food manufacturers in Germany).⁵⁹

According to experts, the impacts of this new state of play can be damaging for suppliers in Germany: while the brands depend on a shrinking diversity of retailers and discounters, the latter rely less and less on the brands to supply their stores and increasingly more on their own supply chains.⁶⁰ This unbalance in the relationships' dynamic between the retail sector and its suppliers may influence the power dynamic in negotiating prices, all the more than retailers and discounters have acquired a larger knowledge of the supply chain costs' structures thanks to the vertical integration of their own private labels.⁶¹

1.2.1.2. Recent trends: the stagnation of the competition between retailers and discounters, and the increasing volatility of consumers

In recent years, the competition between traditional grocery retailers and discounters has begun to change as the latter's growth started to stagnate⁶² and discounters even recently lost 2% of market share in the food retail sector, from 38% in 2019 to 36% in 2020.⁶³ Experts explain this stagnation partly because of the high competition between brands and private labels, which blurred the differences for the consumers and lowered their loyalty to any specific product or brand.⁶⁴ This results in higher volatility in shopping habits of consumers, more likely to change shops as they please and to constantly shift between brands and private labels.⁶⁵ According to experts of the food retail sector, this was particularly damaging for the discounters as one of the key components of their long-term strategy was to retain clients on the sole appeal of their private labels.

To find new leverages for growth, discounters have had to adapt their strategy. Firstly, Lidl, closely followed by Aldi, has conducted an "upgrade strategy" which consisted in modernizing their existing stores⁶⁶ and starting to open smaller shops located in town-centres with more organic, local and sustainable products, thereby directly competing with traditional retailer like REWE⁶⁷ to attract new consumers.⁶⁸ In parallel, they also invested large amounts in advertising their renewed image.⁶⁹ Lidl and Aldi invested respectively 479 million euros and 472 million euros in advertising in 2021 while the

⁵⁷ Ibid

⁵⁸ <https://schwarz-produktion.com/produktion/solent/> accessed on 25th July 2022

⁵⁹ Mario Hielscher Brück et Mario Hielscher Brück Henryk, « In Lidl's Gigafactory », *WirtschaftsWoche*, no 043 (2020): 014.

⁶⁰ Herr Lademann, « „Der Handel drängt die Industrie in die Defensive“ », *Lebensmittel Zeitung*, 2022, 3.

⁶¹ Ibid

⁶² Wolfgang Adlwarth, « Discountpolitik drosselt Private Labels », *Lebensmittel Zeitung*, May 13th 2016

⁶³ Florian Kolf, « Die Discounter schlagen zurück », *Handelsblatt*, n° 207 (2021): 018

⁶⁴ Wolfgang Adlwarth, « Discountpolitik drosselt Private Labels », *Lebensmittel Zeitung*, May 13th 2016

⁶⁵ Ibid

⁶⁶ Nils Jacobsen, « Lidl: Der Handelsriese positioniert seine Marke neu », *Absatzwirtschaft*, n° 03 (2017): 108.

⁶⁷ Dennis Schwarz, « Die neuen Strategien der Discounter », *Handelsblatt*, n° 026 (2021): 027

⁶⁸ Nils Jacobsen, 2017, op. cit.

⁶⁹ Catrin Bialek, « Lidl schlägt Aldi », *Handelsblatt*, n° 050 (2018): 026

whole German food retail industry spent an estimated 2.6 billion euros,⁷⁰ which apparently successfully translated in changes of perceptions by the consumers.⁷¹ In 2020, Lidl's annual results were considered as "exceptional", with a growth of 10% of their total revenue, although it is difficult to separate the impacts of the upgrade strategy from the Covid-19 pandemic.⁷²

Another major change of the German discounters' strategy was the referencing of key branded products in their stores (Red Bull, Lenor, Leibniz, Oreo, Milka etc.) this time initiated by Aldi then followed by Lidl.⁷³ This move has been interpreted as an "earthquake" by experts of the food retail sector.⁷⁴ It was a disruption from their long-term strategy of offering only private labels, in the hope to attract new consumers not only driven by cheap price but also appealed by brands' reputations.⁷⁵ Back in 2016, this introduction of branded products was still very marginal in Aldi Süd's referencing, representing only 3% of their total sales, but it led to an estimated 10% growth of its revenues the same year.⁷⁶ This movement was closely followed by Lidl which also started to integrate branded products, while the traditional retailers like EDEKA and REWE, reacted by launching aggressive promotional strategy on the products which were now also sold in discounters' shops.⁷⁷ At one point, the rumour that one brand might appear soon on Aldi's shelves led to anticipated aggressive promotions on said brand by Lidl or the traditional retailers.⁷⁸ Overall, it is difficult to establish what are the long-term consequences of the brands' referencing in discounters' shops: some experts estimate that the impact on prices has been compensated by the higher volumes of sales,⁷⁹ while others estimate that this strategy only helped Aldi to stabilize but not to return to long-term growth,⁸⁰ notably because part of the brands' sales are at the expense of private label sales.⁸¹

Interestingly, if these new strategies led by the discounters seem to have forced traditional retailers to react and adapt, they also impacted structurally Aldi and Lidl. The higher care given to stores' displays, the growing advertisement's spendings, and the referencing of brands indeed has direct impacts on their lean management strategy as well as their marketing costs and logistical costs which are increasing because of complexified supply chains.

1.2.2. The German consumer market for chocolate products

The German market for chocolate is one of the biggest one in the world, along with the USA. With an estimated 9kg of chocolate eaten every year by 83 million German consumers, it is an inescapable key market for all the major chocolate and cocoa companies, although it bears significant challenges.

⁷⁰ Jörg Konrad, « Food-Handel dreht den Geldhahn auf », *Lebensmittel Zeitung* 74, n° 4 (2022): 55-56,

⁷¹ Catrin Bialek, « Lidl schlägt Aldi », *Handelsblatt*, no 050 (2018): 026

⁷² Florian Kolf, « Lidl eilt Aldi davon », *Handelsblatt*, no 184 (2021): 022

⁷³ Wolfgang Adlwarth, « Discountpolitik drosselt Private Labels », *Lebensmittel Zeitung*, May 13th 2016.

⁷⁴ Ibid

⁷⁵ Lisa Maria Neumeyer, « „Ikonen rücken in den Mittelpunkt“ », *Lebensmittel Zeitung*, July 3rd 2015

⁷⁶ Wolfgang Adlwarth, 2016, op. cit.

⁷⁷ Ibid

⁷⁸ Ibid

⁷⁹ « Aldi peppt sein Sortiment weiter auf », *Rundschau für den Lebensmittelhandel*, February 1st 2017

⁸⁰ Matthias Queck, « Aldi irritiert », *Lebensmittel Zeitung*, October 25th 2019

⁸¹ Iris Tiezte, « Werteverfall », *Lebensmittel Zeitung*, January 29th 2016

1.2.2.1. Key figures on chocolate consumption in Germany

In 2020, German consumers have spent 1.312 billion euros on chocolate tablets in retailers' and discounters' stores according to IRI data (corresponding to a total volume of more than 156,360 tonnes of chocolate).⁸²

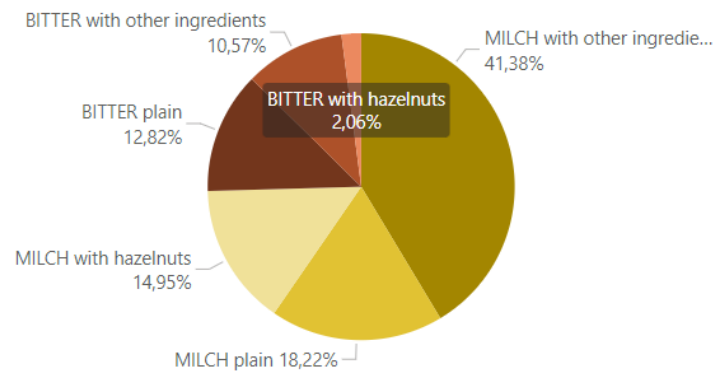


Figure 17. German consumer sales according to recipes, all retail & discount stores, all ranges. Source: BASIC based on IRI 2020 data

In terms of recipes, German consumers are mostly drawn towards milk chocolate which account for 75% of sales, with a strong appetite for milk chocolate with hazelnuts (15% of total sales – see above).

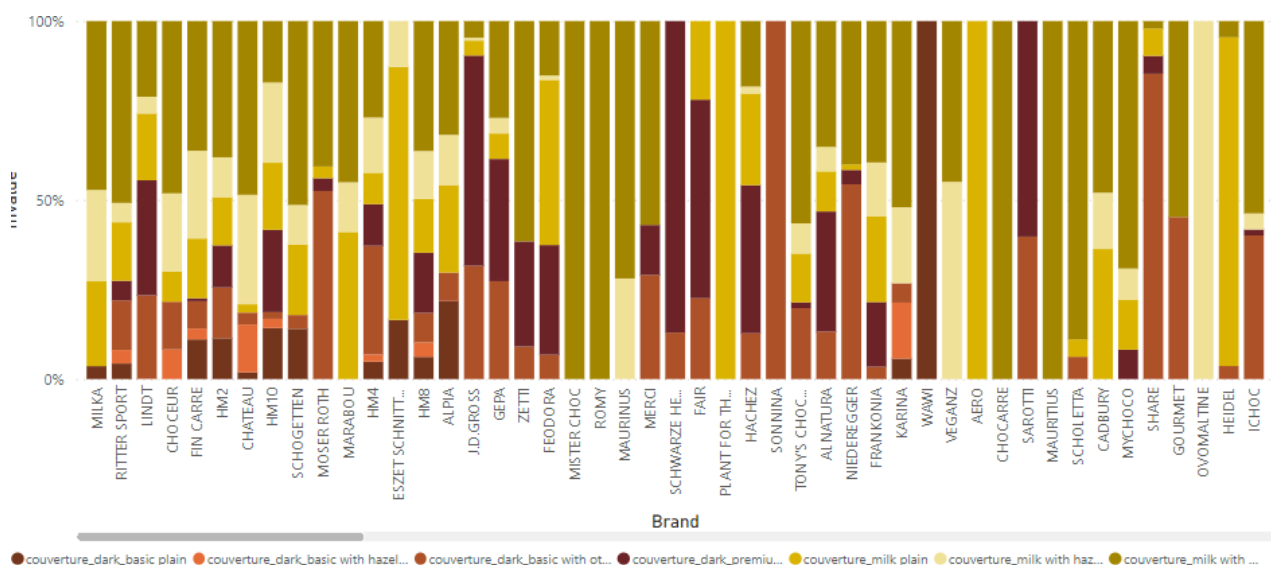


Figure 18. Portfolio of tablets per National Brand and Retailer's Private Label according to recipes (sorted from largest brand on the left to smallest brand on the right), all retail & discount stores, all ranges. Source: BASIC based on IRI 2020 data

As a consequence of this sweet tooth of German consumers, the chocolate brands' portfolio are mostly constituted of milk chocolate, with hazelnuts or other ingredients, rather than dark chocolate (see above). This diagram also demonstrates another important characteristic of the German chocolate tablet market: among the top 5 brands, the first 3 are well-known international brands

⁸² This study focuses mostly on chocolate tablets, dark and milk, plain and with hazelnuts.

(Milka, Ritter Sport and Lindt) while the last 2 are respectively Aldi's main private label (Choceur) and Lidl's main private label (Fin Carré).

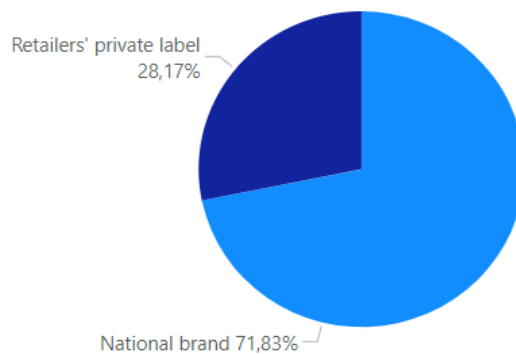


Figure 19. Share of chocolate tablet'' sales divided between National Brands and Retailer'' Private Labels categories, all recipes (dark, milk, with hazelnuts), all retail & discount stores. Source: BASIC, based on IRI 2020 data

As evidenced in the above figure, private labels amounted for more than 28% of the chocolate tablets' sales in Germany for the year 2020, while national brands accounted for almost 72%. Although national brands still take the lion's share of the chocolate tablets' sales, the weight of the private labels is quite unique and specific to the German market (in comparison, it is less than 20% in France).

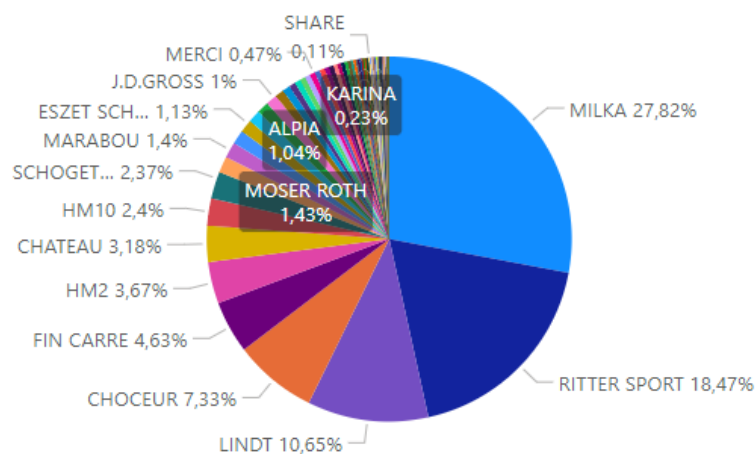


Figure 20. Share of chocolate tablet'' sales by name of National Brands and Retailers' Private Label, all recipes (milk, dark, with hazelnuts), all retail & discount stores. Source: BASIC based on IRI 2020 data
[Note: the term HM refer to Private Label products of REWE and EDEKA on which no details are available]

Having an in-depth look at the names behind the categories of National brands and Private Labels, the above figureshows that Milka alone (a brand owned by Mondelēz International) amounts to more than 27% of the total chocolate tablets' sales in Germany in 2020, followed by Ritter Sport at nearly 19% and Lindt & Sprüngli at almost 11%. These 3 National brands account for more than 57% of the total tablet market. Six of the following 7 brands are Private labels⁸³ amounting together to more than 23% of the market, with Aldi's Choceur at 7% and Lidl's Fin Carré at 5%. Some other independent brands can be found lower down the list such as Schogetten (Trumpf Schokolade by Ludwig

⁸³ HM are Retailers' Private Label on which no details are available

Schokolade, owned by the German food manufacturer Krüger Group), Marabou (Mondelēz International), Alpia and Eszet (both brands of Stollwerck).

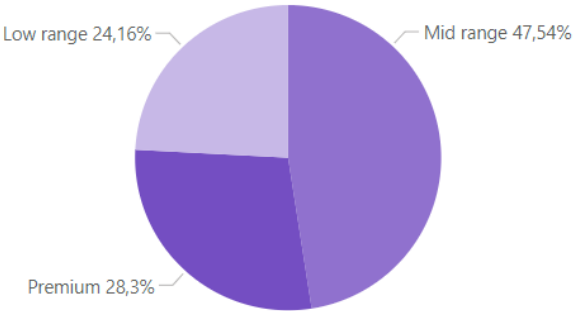


Figure 21. Share of chocolate tablet'' sales divided between low, mid, and premium ranges, all recipes (dark, milk, with hazelnuts), all retail & discount stores, National brands & Retailers' Private Labels. Source: BASIC based on IRI 2020 data

When analysing the chocolate tablets’ market per product ranges – low, mid, and premium⁸⁴ - we observe that the mid-range account for almost half of total sales (48%) while low and premium ranges make up around one quarter each (24% of total sales for the former and 29% for the latter).

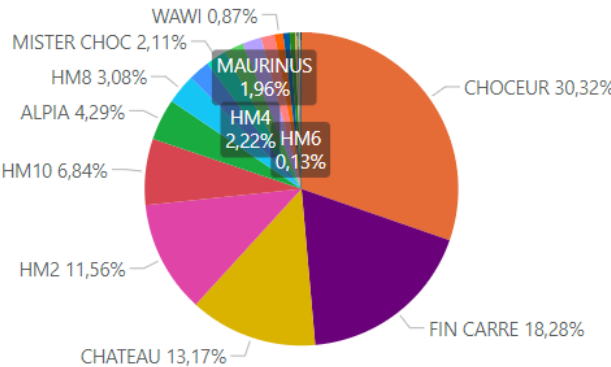


Figure 22. Share of low range chocolate tablet'' sales by brand name, all recipes (dark, milk, with hazelnuts), all retail & discount stores, National Brands & Retailers' Private Labels. Source: BASIC based on IRI 2020 data

When looking more closely at the low range of products, it appears the top 5 brands are Private labels that jointly account for over 80% of the sales in 2020. Again, the first 3 are Aldi’s brands (Choceur and Château at respectively 30% and 13%) and Lidl’s brand (Fin Carré at 18%).

⁸⁴ Low range products are characterised by consumer prices lower than or equal to 7 €/kg, mid-range products have a consumer price greater than 7 €/Kg and lower than 12 €/Kg. Premium range products have a cocoa content greater than 65% and a consumer price above 12 €/kg.

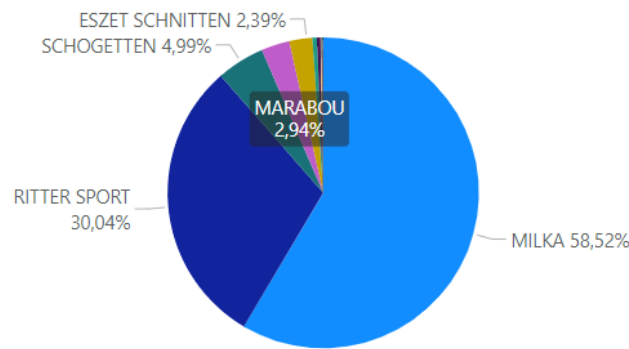


Figure 23. Share of mid-range chocolate tablet⁸⁵ sales by brand name, all recipes (dark, milk, with hazelnuts), all retail & discount stores, National Brands & Retailers' Private Labels. Source: BASIC based on IRI 2020 data

The analysis of the mid-range chocolate tablets' sales offers quite a different picture (see above). All brands are National ones. Among the top 5, we find 2 Mondelēz International's brands, Milka and Marabou amounting respectively to 59% and 3% of total sales and Ritter Sport's brand⁸⁵ which accounts for 30% of the market in 2020.

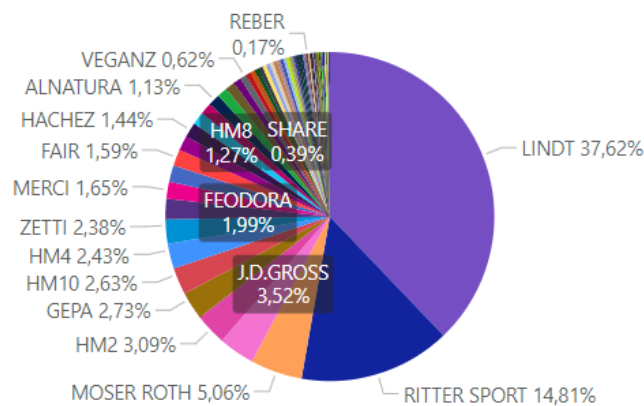


Figure 24. Share of premium range chocolate tablet⁸⁵ sales by brand name, all recipes (dark, milk, with hazelnuts), all retail & discount stores, National Brands & Retailers' Private Labels. Source: BASIC based on IRI 2020 data

Interestingly, the premium range of chocolate tablets appear to be more diverse than the two previous segments, with leading National brands being followed by challenging Private labels. Lindt & Sprüngli holds a strong leading position – accounting for 38% of the total sales of premium chocolate in 2020— followed by Ritter Sport at 15%. Although much more modest, Aldi's Moser Roth and Lidl's J.D. Gross are ranked 3rd and 4th with respectively 5% and 4% of the market in 2020.

⁸⁵ Ritter Sport is one of the few brands of the chocolate sector which we had difficulties to categorise as it developed a specific strategy based on two product ranges (and therefore two prices, 1.29 and 1.49 euro per tablet) which explains why Ritter Sport's products have been split between the mid and premium ranges.

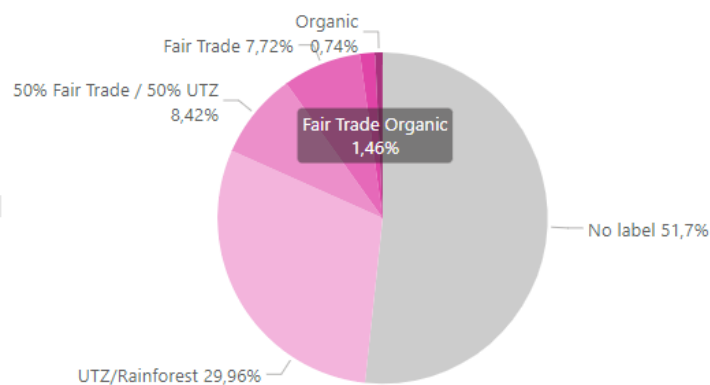


Figure 25. Share of chocolate tablet sales by certifications, all recipes (milk, dark, with hazelnuts), all retail & discount stores, National brands & Retailers' Private Labels. Source: BASIC based on IRI 2020 data

Regarding the certifications,⁸⁶ almost half of the chocolate tablets sold in 2020 in Germany are labelled (48%). The most important certification is UTZ/RFA⁸⁷ accounting for almost 30% of the sales of chocolate tablets, followed by Fair Trade at 8%. The organic certification (alone or combined with Fair Trade) appears to be still a very small niche, accounting for little more than 2% of the market (compared to more than 5% in France after having doubled between 2014 and 2018).

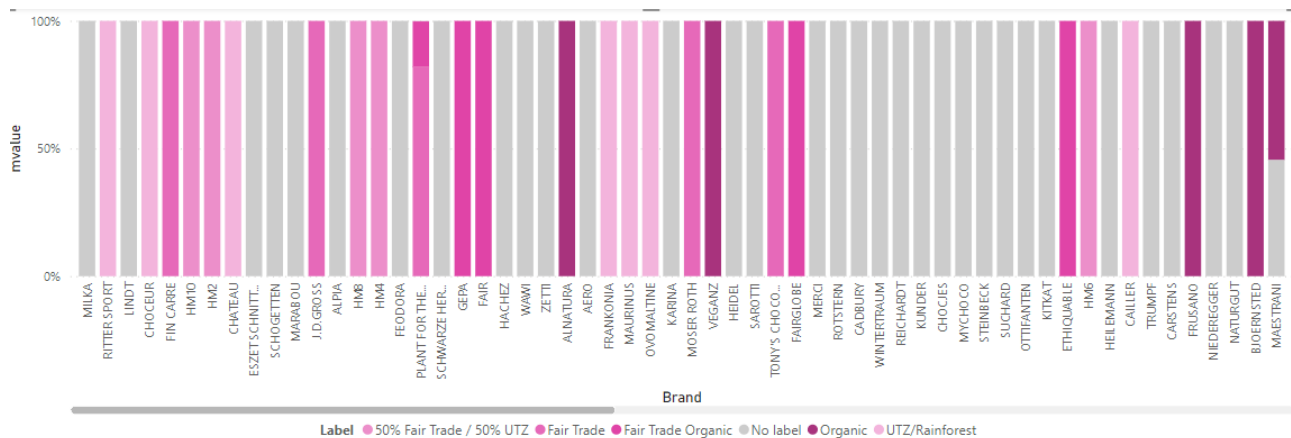


Figure 26. Portfolio of tablets per National Brand and Retailer's Private Label according to certifications, all recipes (dark, milk, with hazelnuts), all retail & discount stores. Source: BASIC based on IRI 2020 data

Looking at the positioning of each National brand and Private label regarding certification, the above diagram shows that the majority of independent brands are not certified⁸⁸ – in particular the leaders of the market Milka and Lindt – with the exception of Ritter Sport which is now fully under UTZ/RFA. In contrast, most of the Retailers' Private Labels are certified such as Aldi's Choceur and Château which are fully certified by UTZ/RFA, or Aldi's FAIR and Lidl's FAIRGLOBE which combines Organic and Fair Trade labels (Lidl even stating that it is aiming at 100% Fair Trade certification in the mid-run).⁸⁹

⁸⁶ For the purpose of this study, we focused exclusively on independent certifications. Companies' sustainability programs are therefore not accounted nor analysed here.

⁸⁷ Following UTZ and Rainforest Alliance merger, the UTZ certification program and label gradually phased out in 2020. We decided for the purpose of clarity to simplify the data processing and not differentiate between the two.

⁸⁸ Both may have sustainability programs, but as stated before, we focused exclusively on certifications for this study.

⁸⁹ <https://www.fairtrade.net/news/sustainability-and-cocoa-views-from-a-few-leading-brands> accessed on July 27th 2022

1.2.2.2. Analysis of the German chocolate sector

The weight of discounters and their Private Labels in the German chocolate sector

As detailed earlier, the development of private labels, both by discounters and traditional retailers plays a structural role in the German food market, the chocolate sector being no exception to that.

According to interviewees, private labels on the chocolate market, in particular those of Aldi and Lidl, have even become the main innovating leaders and a key leverage for the “upgrade strategy” of discounters.⁹⁰ Aldi and Lidl have diversified their chocolate tablets’ portfolio and now offer a wide diversity of tastes to their clients at different price levels: from low range (Fin Carré, Choceur) to the premium segment with finer cocoa quality and higher percentage of cocoa (J.D. Gross, Moser Roth).

This strategy now extends to the social and environmental quality of chocolate products: Lidl has fully switched its private labels Fin Carré under Cocoa by Fair Trade, J.D. Gross and Way To Go under Fair Trade certification while Aldi certified Choceur under UTZ/Rainforest Alliance, Moser Roth under Fair Trade and FAIR under Fair Trade and organic certifications. Lidl now ambitions to switch a large part of its chocolate private labels to organic, inspired by this thriving market: in 2019 and 2020, the revenues of the German discounters on organic products are estimated to have tripled.⁹¹

A pricing strategy led by the food retailers and discounters

Thanks to the development of their private labels, and sometimes their vertical integration of chocolate manufacturing, German food retailers and discounters have developed over the years a detailed knowledge of cocoa/chocolate supply chains, which reinforces their bargaining position towards brands and their capacity to question the costs of their suppliers.

In addition, as retailers’ and discounters’ sales do not solely rely on brands but also on private labels, it enables them to afford to discontinue products of major brands for a long period of time if negotiations on prices reach an impasse. To exemplify, back in 2018, a conflict opposing EDEKA and Nestlé led to the dereferencing of over 200 products representing about 30% of Nestlé revenues.⁹² Another example, the dereferencing of Milka tablets by EDEKA during 18 months over a conflict on the buying price asked by Mondelēz International was facilitated according to experts by the fact that EDEKA’s strategy and revenues in chocolate do not depend exclusively on national brands.⁹³

⁹⁰ Marcelo Crescenti, « Das Discount-Segment ist stark im Wandel: Aus den einstigen schnörkellosen Billiganbietern mit Hang zur Eigenmarke sind innovative Vollversorger geworden, die auf Marke und Nachhaltigkeit setzen », Rundschau für den Lebensmittelhandel, no 04 (2019): 22.

⁹¹ « Bio-, Fair Trade- sowie vegane und vegetarische Sortimente sind im Aufwind. Unter anderem das neue Konsumverhalten der jungen Generation treibt den Wandel hin zu mehr Nachhaltigkeit in den Regalen voran. », Rundschau für den Lebensmittelhandel, no 05 (2020): 46.

⁹² Handelsblatt, "So viel haben wir noch nie zugelegt", April 11th 2018

⁹³ Hendrik Varnholt, « Mondelēz streitet mit Edeka », Lebensmittel Zeitung, no 5 (2022): 12.

As a result, according to experts of the food retail, price setting in Germany, including in the chocolate sector, is mostly in the hand of the food retailers and discounters.⁹⁴ This explains why chocolate brands seem to struggle to impose their recommended prices to the retailers and discounters,⁹⁵ and to transfer the sharp increases of costs that occurred in the aftermath of the Covid-19 pandemic and the war in Ukraine (+350% for energy, +50% for milk and sugar, +400% for maritime freight, +10% for packaging, etc.). In early 2022, EDEKA and REWE publicly denounced the prices' increases asked by the chocolate manufacturers, accusing them of profiting from the Covid-19 crisis at the expense of the consumers.⁹⁶ According to retailers, the root cause of this state of play is to be found in the influence of discounters in the food market: "In Germany, the level of prices is low, because of the discounters' weight which is unlike anything else in Europe. They have a high market share. When Aldi or Lidl lower their prices, us retailers must react, because the clients expect us to."⁹⁷

The glass ceiling of the "line approach"

Another characteristic that sets apart the German chocolate consumer market from its European counterparts is the distinctive "line approach" performed by all major retailers and discounters. With this line approach, prices are set for a range of chocolate tablets and do not fluctuate depending on recipes, ingredients, or formats. For the consumers in retail stores, this translates into a single price level across chocolate products that largely differ in terms of recipes (and hence in terms of manufacturing costs): plain milk chocolate tablets, milk chocolate tablets with hazelnuts, milk chocolate tablets with caramel filling, etc. (see an example below).



Figure 27. Different chocolate tablets and recipes priced at 1.15 euros per tablet. Source: BASIC, picture taken in a retail store during field mission in Germany on September 22nd, 2021

⁹⁴ Dirk Murmann Lenders et Dirk Murmann Lenders Christoph Queck, Matthias Sachsenröder, Delphine, « Empfohlene Preise steigen – und gewinnen an Bedeutung », *Lebensmittel Zeitung*, no 48 (2021): 14.

⁹⁵ Rolf Schrickel, « DIE LETZTE PATRONE », *Absatzwirtschaft*, no 07/08 (2021): 044; Hendrik Varnholt, « Ritter wünscht sich 10 Cent mehr », *Lebensmittel Zeitung*, n° 42 (2021): 12.

⁹⁶ Müller Kolf, « Der Preiskampf eskaliert », *Handelsblatt*, no 24 (2022): 22

⁹⁷ Quote of Lionel Souque, REWE CEO in *Handelsblatt*, "Großer Aufwand für Unternehmen", 2018

In this context, it seems that Ritter Sport has been one of the few chocolate brands which managed to differentiate its chocolate tablets between two ranges, with two different set of prices to the consumers.⁹⁸ Their premium range of chocolate tablets is marketed as higher quality of cocoa (sometimes pure origin) as well as other ingredients (notably nuts and hazelnuts), leading to a higher price that Ritter Sport struggled to impose to the food retailers. They were finally convinced when they saw the impact on the sales,⁹⁹ Ritter Sport reporting a growth by 12% of its sales' revenues of 100g chocolate tablets in Germany.¹⁰⁰ Nonetheless, despite this interesting precedent, Ritter Sport says it has unsuccessfully tried to convince food retailers and discounters to increase its prices to the consumers by 10 cents to reflect their current costs' increase.¹⁰¹

Lindt & Sprüngli distinctive pricing and marketing strategy

In a chocolate sector strongly revolving around price, one brand clearly stands out: Lindt & Sprüngli.

Lindt & Sprüngli unique positioning can be seen quite quickly by any consumers shopping in a German retail store. Firstly, its products clearly stand out because they are either displayed in separated corners or identified through a golden decorating within the chocolate shelves. Secondly, the prices of its chocolate tablets do not appear on the shelves but directly on the packaging at the back of each product.

These two observations are the reflect of Lindt & Sprüngli long-term marketing and pricing strategy developed to set apart their products. Over the years, the company has highly invested in the display of their products within the retailers' stores: the group pays an extra fee to the retailers for their so-called golden "Lindt shops" as they require more care than the rest of the shelves.¹⁰² For Lindt & Sprüngli, these extra costs helped them to build their leading market share over the premium segment in retail stores and to side-line potential competitors.¹⁰³

Part of that unique marketing strategy is also the absence of price tags on the retail shelves which are replaced by printings of the recommended price on the back of each chocolate tablet. On top of the specific "Lindt shops" display, this further imprints in the minds of the consumers that when it comes to Lindt & Sprüngli, the main buying criteria should not be the price, but rather the quality.¹⁰⁴

Apparently because of this strategy, the company has never been referenced so far by the discounters Aldi and Lidl. Instead, both discounters have preferred to develop their own private labels' equivalent of Lindt & Sprüngli (Moser Roth, J.D. Gross etc.) despite its strong position in the premium range.¹⁰⁵

In the case EDEKA and REWE, it seems that the unique positioning of Lindt & Sprüngli is accepted because of the high volume and profitability of its sales: experts estimate that back in 2005 a traditional retailer needed to sell 18 mid-range chocolate tablets to reach the same level of profitability than 1 single Lindt & Sprüngli tablet.¹⁰⁶

⁹⁸ Roland Karle, « Quadrat mit Knick », Absatzwirtschaft, no Sonderausgabe FachPack (2018): 074.

⁹⁹ Ibid

¹⁰⁰ Hendrik Varnholt, « Ritter Sport steigert Marktanteil », Lebensmittel Zeitung, no 4 (2021): 18.

¹⁰¹ Hendrik Varnholt, « Ritter wünscht sich 10 Cent mehr », Lebensmittel Zeitung, no 42 (2021): 12.

¹⁰² Iris Tietze, « Dauerlauf mit Schokolade », Lebensmittel Zeitung, March 11th 2016

¹⁰³ Heidi Dürr, « Renaissance der Tafelschokolade », Lebensmittel Zeitung, January 28th, 2005

¹⁰⁴ Iris Tietze, 2016, op. cit.

¹⁰⁵ « Lindt: Setzt auf Premiumstrategie », LebensmittelZeitung.net, November 11th 2004.

¹⁰⁶ Heidi Dürr, 2005, op. cit.

Although the German chocolate sector is heavily influenced by the retailers and discounters' private labels, some key brands still largely lead the market. As evidenced in the former chapter, 3 National brands-- Milka, Ritter Sport and Lindt & Sprüngli-- account for 57% of the total sales of chocolate tablets in 2020 (see details in section 1.2.2.1).

However, when Milka and Ritter Sport brands were referenced by the German discounters, the consequence on their reputation was initially questioned: experts thought that it was going to strongly and irreversibly devalue their brands,¹⁰⁷ leading to aggressive promotions by the traditional retailers and altogether dissolve their margins.¹⁰⁸

A few years back, this referencing had become inescapable for these well-known chocolate brands in face of the increase of discounters' sales and share of the food market, otherwise they would have been cut out from a growing potential source of revenue.¹⁰⁹ The decision to go on with the referencing was also facilitated by the fact that discounters were actively moving away from the historical "warehouse ambiance" of their stores and investing to modernize their shops' displays: brands felt then that their brand reputation and image would suffer less in the new upgraded ambiance of the discounters' stores.¹¹⁰ Moreover, this renewed discounters' image also meant that new clients would be drawn to their stores, less focused on prices and more loyal to brands, in other words less willing to escape and fall in the hands of the discounters' private labels.¹¹¹

In the end, experts estimates that Milka and Ritter Sport overall benefited from being referenced by discounters, increasing the sales' volumes at the expense of the discounters' private labels competitors.¹¹²

1.2.3. A leading German chocolate manufacturing and cocoa grinding industry intertwined with neighbouring European industries

Upward in the chain, Germany is the leading chocolate manufacturing country in Europe: in 2021, the manufacturing of chocolate in the country was valued at around 5.9 billion euros, an increase of 5% in comparison with 2020.¹¹³ A major part of this production is exported throughout Europe which is worth an estimated 4 billion euros in 2020, mostly destined to neighbouring countries: France, Poland, the Netherlands, and Belgium but also the United Kingdom.¹¹⁴

¹⁰⁷ Iris Tiezte, « „Raus aus der Vergleichbarkeit“ », Lebensmittel Zeitung, January 29th 2016

¹⁰⁸ Ibid

¹⁰⁹ "It was becoming increasingly complicated to ignore the distribution canal of the discounters", quote of Uli Gritzuhn (Unilever) in Simone Salden, « Trüffelpasta und Chichi », Der Spiegel, September 24th 2016

¹¹⁰ Ibid

¹¹¹ Ibid

¹¹² « Aldi peppt sein Sortiment weiter auf », Rundschau für den Lebensmittelhandel, February 1st, 2017

¹¹³ Estimated figures for German Production of Chocolate Confectionery in 2021 by [BDSI](#)

¹¹⁴ Data retrieved from ComTrade for the year 2020, HS Code 1806 Chocolate and other food preparations containing cocoa

Germany also imports some of the chocolate consumed in the country: in 2020, an estimated 2 billion euros of chocolate products were imported in Germany,¹¹⁵ mostly from Belgium, Switzerland, Poland, and the Netherlands.

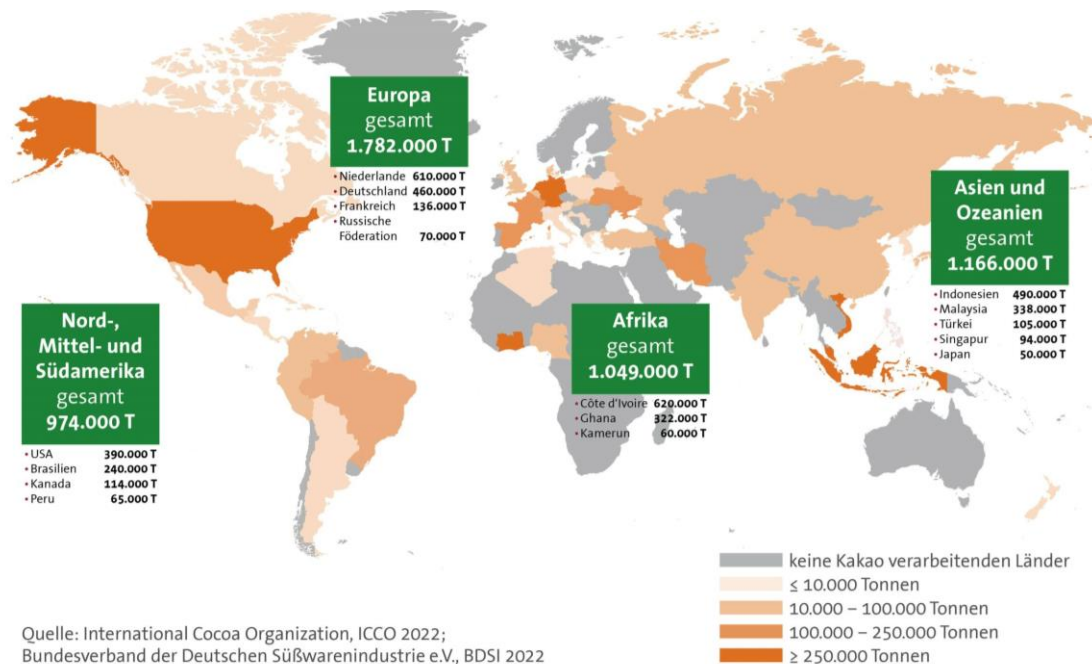


Figure 28. Mapping of world cocoa grinding capacities. Source: Schokoinfo, 2022

As shown in the above diagram, Germany is also the world's 4th-largest cocoa grinder, behind Côte d'Ivoire, the Netherlands, and Indonesia.¹¹⁶ The large grinding industry in Germany can be attributed to the presence of the major transnational cocoa grinders Barry-Callebaut, Cargill and Olam (the first two also manufacturing chocolate in the country) alongside important German companies grinding cocoa and manufacturing chocolate such as Storck and Stollwerck.

While Germany is home to one of the leading chocolate manufacturing and cocoa grinding capacities in the world, its industry is very much intertwined with European neighbouring countries. This can be explained by the development of integrated supply chains across Europe by the transnational companies operating in the sector. For instance, the factories located close to the Rhine River often get their beans or semi-finished goods supplied from other subsidiaries' warehouses and factories located in the Netherlands while the factories located in the North of the country are often more directly supplied through Hamburg's port before exporting their products to Central European countries.

Upstream, this supply chains' intertwined organisation is connected to the most important exporting countries of cocoa beans: Côte d'Ivoire, Nigeria, Ghana, Cameroon, and Ecuador being the 5 major origins accounting for almost 95% of volumes of cocoa beans imported in the country (see below).

¹¹⁵ Ibid

¹¹⁶ ICCO, Grindings QBCS XLVIII No. 2, 2022 - https://www.icco.org/wp-content/uploads/Grindings_QBCS-XLVIII-No-2.pdf

Share of cocoa bean volumes imported in Germany by origin

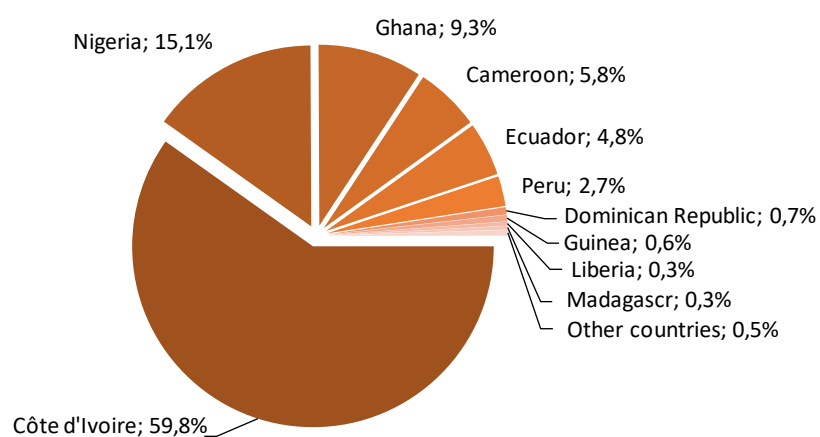


Figure 29. Share of cocoa bean volumes imported in Germany by origin in 2020. Source: BASIC, based on Comtrade data

2. Distribution of value, costs, taxes & margins along German cocoa/chocolate value chains

2.1. Introduction: reading guide for estimates

In order to better understand the estimates presented in the following sections, the diagram below summarises the main cost components which have been modelled for each stage of the chain.






	STAGE OF THE CHAIN	CONTENT OF THE SHARE OF VALUE
	Retail	<ul style="list-style-type: none"> - margin - payment of income tax & net VAT - financial expenses - annual payroll of employees (personnel of chocolate/confectionery section as well as mutualized personnel in stores & headquarters) - real estate costs (stores and offices) - other costs (central procurement, storage and logistics from regional distribution centres to local shops, advertising)
	Finished product manufacturing	<ul style="list-style-type: none"> - margin - payment of income tax & net VAT - financial expenses - annual payroll of employees (chocolate/confectionery sales force as well as mutualized personnel in headquarters, R&D...) - advertising costs - Industrial costs (moulding, packaging...) - other costs (logistics, Research & Development...)
	Cocoa processing (grinding, pressing, chocolate couverture manufacturing)	<ul style="list-style-type: none"> - margin - payment of income tax & net VAT - financial expenses - annual payroll of employees - costs of logistics and processing - amortization of machinery & buildings
	Non cocoa-based ingredients	<ul style="list-style-type: none"> - processed sugar - processed milk (when relevant) - other processed ingredients (palm oil, wheat flour, when relevant)
	Collection & export	<ul style="list-style-type: none"> - margin - payment of income & cocoa tax - financial costs to cover foreign-exchange risks - other financial expenses - annual payroll of employees - costs of warehousing and logistics (road & sea freight) - other costs (packaging...)
	Cocoa Cultivation	<ul style="list-style-type: none"> - margin (when income is above farmers' family needs for a decent life) - family income - wages and social contribution of seasonal or permanent workers - costs of fertilizers & pesticides

Figure 30. Overall framework used to estimate the value distribution along cocoa chains. Source: BASIC

As illustrated above, the share of value should not be mistaken for net profits or benefits: each actor along the chain uses its share of value in order to cover its internal costs, and potentially make a net benefit once all costs have been paid:

- The retailers' share of value is the money left when they have paid the products to their suppliers. They use this money to pay their employees (those dedicated to the chocolate/confectionery section and those mutualised at the level of shops as well as

headquarters), manage their stores (costs of real estate, electricity...), organise the procurement and logistics through their distribution centres, invest in advertisement campaigns, pay their taxes and financial expenses...and potentially make a net profit on top of it. The quantified estimates are based on the detailed analysis conducted each year by the “French Observatory on Prices and Margins of Food Products”¹¹⁷ which data are representative of the diversity of retailers’ modes of business organisation (network of independent stores, vertically integrated company – publicly listed or family-owned...)

- The share of value accruing to final product manufacturing (undertaken on the one hand by national & international brands, and on the other hand by manufacturers on behalf of retailers’ private label) is the amount of money they get after deduction of the payment of their own suppliers. They use this money to pay their employees (brands’ sales force to promote products on retailers’ shelves as well as mutualised personnel working in factories and in headquarters on R&D, marketing, finances, etc.), invest in annual advertisement campaigns (especially for brands’ best-seller products), cover their costs of manufacturing (energy, packaging, machinery) and logistics (to the distribution centres of retailers), pay taxes and financial expenses, plus a potential net profit. The annual discounts given back to retailers are accounted for as “other additional costs” of marketing.
- The share of value accruing to cocoa processing (grinding of beans to produce cocoa paste, pressing of the latter to produce butter and manufacturing of industrial chocolate couverture made from cocoa paste and butter as well as sugar) is the amount of money they get after deduction of the payment of their own suppliers. They use this money to cover their costs of production (energy, amortisation of machinery, logistics and warehousing...), pay their employees, pay taxes and financial expenses, plus a potential net profit.
- The costs of non-cocoa based processed ingredients are also borne by chocolate manufacturers and are identified separately in the charts: sugar (beet or cane), milk and hazelnuts as well as other ingredients for the confectionery products (wheat flour, palm oil.).
- The share of value accruing to cocoa trading in producing countries is the amount of money they get after deduction of the payment of their own suppliers. They use this money to pay for the costs of logistics and warehousing as well as packaging, cover the financial costs to cover foreign-exchange risks, pay their employees, pay taxes (namely government taxes directly related to cocoa trading, as well as income tax) and cover other financial expenses, plus a potential net profit.
- The small-holder farmers’ share of value in our estimates is what is left for them to make a living - for themselves and their family - after the payment of their workers (when seasonal or permanent hired labour is used on the farm) and costs of farm inputs (agrochemicals, water, energy...). We do model the labour costs of the family’s members as internal costs along the above mentioned costs. We consider that a net profit is made by farmers when they make more money than their families’ income needs for a decent standard of living, or when it is accounted for in agricultural plantations (after covering all production costs and workers’ wages). In most producing countries, the income generated by most cocoa farmers do not allow them to achieve a decent living for their families, hence we consider they make no profit.

¹¹⁷ <https://observatoire-prixmarges.franceagrimer.fr>

<http://cocoavaluechain.lebasic.com>

As illustrated above, a total of 62 chocolate tablets have been modelled through the present study (each rectangle corresponds to a different modelled product, its size being proportionate to its share of the market value). Together, these products account for approximately 630 million euros of consumer sales in 2020, i.e. half of the total retail market of chocolate tablets: the rest of the market consists of tablets with very diverse and complex fillings that we did not have time and resources to model.

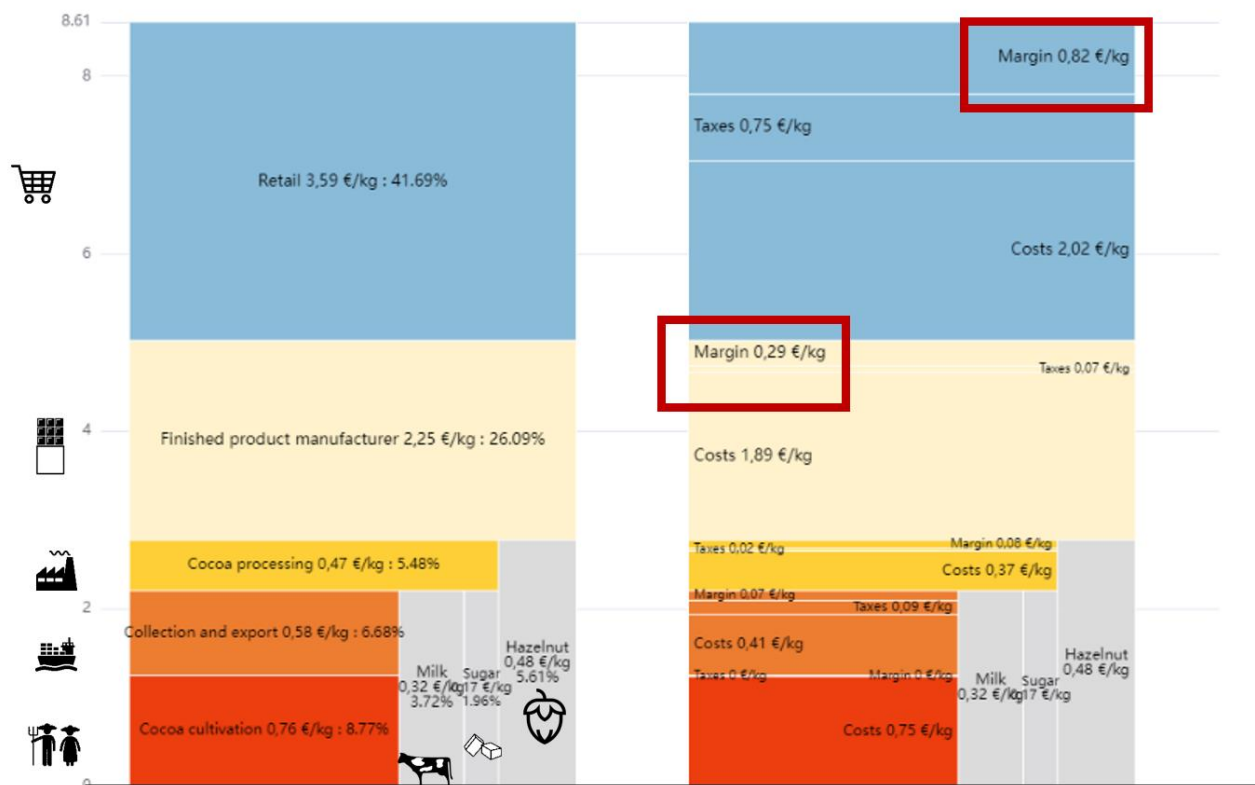
These tablets vary in terms of:

- recipe: dark and milk, plain or with hazelnuts
- segmentation of the market: low-range, mid-range and premium range
- type of brand: national brand or private label
- type of distribution channel: retailers' shops or discounters' shops
- type of certification: no label, UTZ/Rainforest, Fair Trade, Organic, Fair Trade & Organic

All the results of the 62 modelled finished products can be found on the following public website: <http://cocoavaluechain.lebasic.com/>.

A majority of the modelled products are milk chocolate tablets, which account for more than 434 million euros of consumer sales. In the above diagram, milk chocolate tablets are recognizable in yellow colour, while dark tablets are indicated in brown, the colour variations signalling the different segment from low range to premium range. In addition, the different logos shown above indicate the certification used (when there is one) and the presence of hazelnuts as an ingredient.

Weighted average consumer price: 8.61 €/kg



Total market value of modelled products: 630 Mn €

Figure 32. Distribution of value, costs, taxes and margins for the aggregation of all 62 chocolate tablets modelled on the German market. Source: BASIC, 2022

The above diagram shows the results of our estimates – weighted average of the distribution of value (bar on the left) and costs, taxes and margins (bar on the right) – for the aggregation of all 62 chocolate tablets described earlier.

The bar on the left hand side shows the distribution of value between the different stage of the chain from cocoa farmers (at bottom in red) up to collection and transport (orange), cocoa processing and chocolate manufacturing (yellow), finished product manufacturing and branding (light yellow) and retail (blue). This bar also includes the non-cocoa ingredients i.e. sugar and milk (indicated in grey below cocoa processing as they enter in the manufacturing of chocolate together with cocoa paste and cocoa butter) and hazelnuts (indicated in grey above cocoa processing as they are used by final product manufacturers to make the packaged tablets sold to consumers).

In mirror position, the bar on the right hand side shows the breakdown between costs, taxes and net margins for each component/share of value indicated on the left (noting that the non-cocoa ingredients indicated in grey on the left are only linked to costs on the right because the structure of the value chain of sugar, milk and hazelnuts was not analysed and remains outside the scope of the present study).

Finally, the black numbers on top indicate the weighted average consumer prices while the ones at the bottom give the total value for 2020, both for the portfolio of final products related to the 2 graphs.

The first main observations that can be made from the diagram are the following:

- According to our estimates, **the retailing stage performed by both retailers and discounters generates the highest net margin** compared to all other actors in the cocoa/chocolate chain: 0.82 €/Kg which corresponds to **10% of the end consumer price**;
- When looking at the percentage of margin generated by the different actors along the cocoa/chocolate chain (calculated as a ratio of the selling price to their clients), our estimates tend to show that **the retail stage also stands out: while the retailers & discounters generate 10% of net margin over their selling price to consumers**, the brands & finished goods manufacturers generate 6% of margin, the cocoa & chocolate processors generate 3%, the traders & collectors 4%. Upstream, the cocoa farmers generate almost no margin, when accounting for the costs that the latter face to achieve a decent living for their families;
- At the beginning of the chain, **only 9% of the end consumer value of chocolate tablets accrue to cocoa farmers** after deduction of the value accruing to all other stages of the chain and other ingredients used for the manufacturing of products.

Starting from these global estimates, the following pages provide a first analysis of the drivers which influence the distribution of value and costs along the German cocoa/chocolate chains.

2.2.2. Influence of the distribution channel: Retail vs. Discount

Based on the analysis of the German consumer market for chocolate products detailed in chapter 1.2, the first factor to be investigated is the distribution channel. Indeed, given the influence exerted by discounters in the German food market, in particular in the chocolate sector, the question is

whether this is correlated with differences in the distribution of value, costs, taxes and margins along the cocoa/chocolate chains.

Thus, we have first compared the results of our estimates for the portfolio of chocolate tablets sold in retailers' stores on the one hand, and in discounters' stores on the other¹¹⁸ (see diagram below).

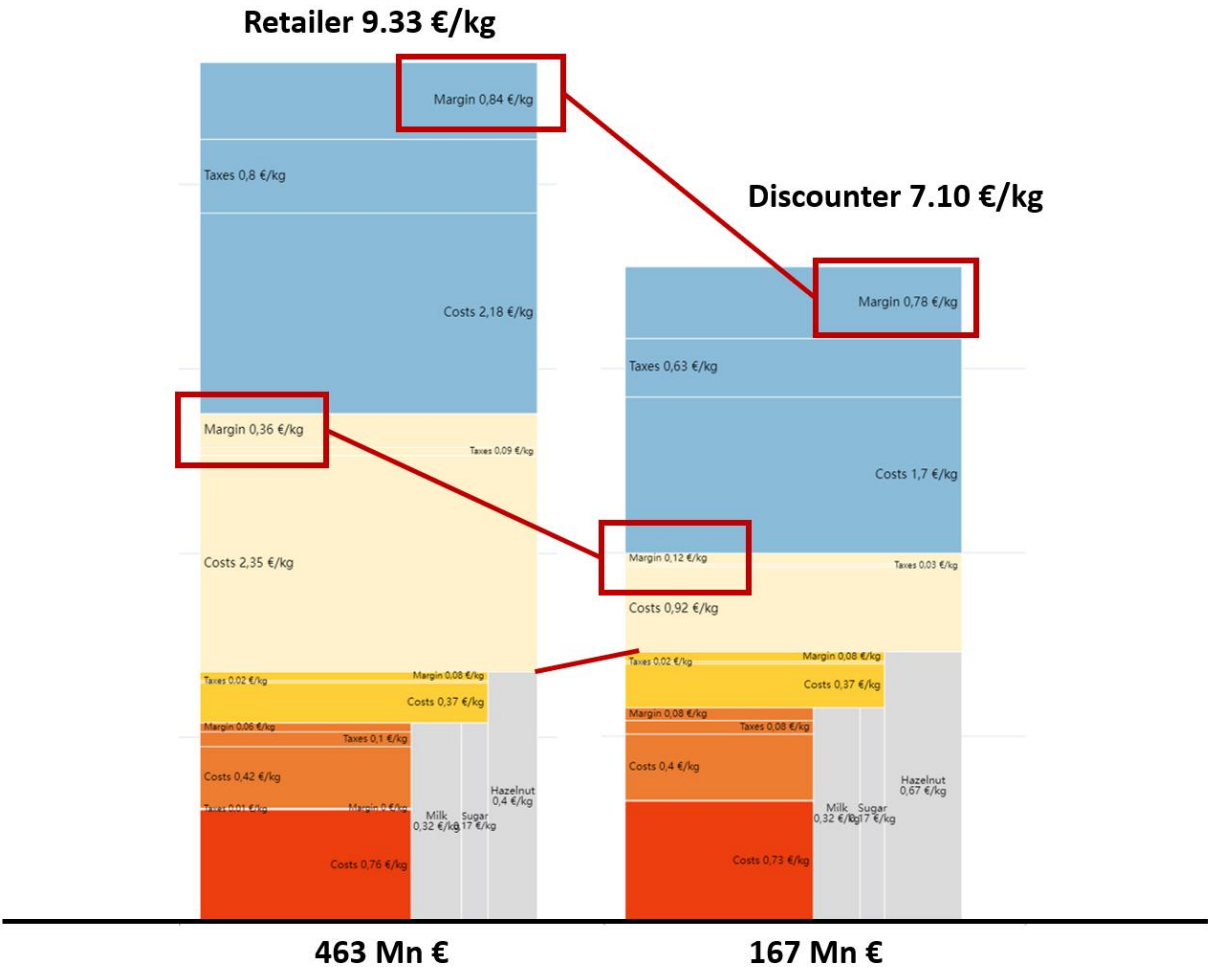


Figure 33. Comparison of the distribution of value, costs, taxes and margins for the chocolate tablets sold in German traditional retailers' stores (on the left) and in German discounters' stores (on the right). Source: BASIC, 2022

As illustrated above, our model and estimates show that:

- While the consumer price of chocolate tablets is 24% lower in discount stores (7.10 €/kg in the latter¹¹⁹ compared to 9.33 €/kg in retailers¹²⁰), the share of value and the net margin generated by

¹¹⁸ These are weighted average calculations, based on the real spendings of consumers in both types of stores (monitored by IRI database at the detailed level of each barcode). As a result, the portfolio of products used for retailers and discounters is clearly different and representative of the real purchases of consumers in each channel. The purpose of this aggregation is not to compare the same products sold by retailers on one side and discounters on the other, but to compare the baskets of chocolate goods respectively purchased in both types of stores (hence the differences in product portfolio are one element of explanation to interpret results, amongst other factors). Complementary to this analysis, [our online tool](#) enables to compare a given finished product in our modelling between retailers and discounters.

¹¹⁹ This is the weighted average value of the 22 modelled chocolate tablets sold in discounters' stores

¹²⁰ weighted average value of the 40 modelled chocolate tablets sold in retailers' stores – a higher number which derives from their more diversified portfolio of products

retailers and discounters is fairly similar in absolute terms (3.8 €/Kg share of value and 0.8 €/kg margin for the former, 3.1 €/kg share of value and 0.8 €/kg margin for the latter).

- When analysing the **percentage of margin generated by each distribution channel**, the **discounters appear to achieve a higher performance: 11% compared with 9% for retailers.**
- Looking more closely at the penultimate stage of the chain ('branding and finished product manufacturing'), the differences are even more striking as the share of value and the margin are 3 times lower in absolute terms in the case of discounters' chains which generate 1.1 €/Kg share of value and 0.1 €/kg margin (compared with 2.8 €/Kg share of value and 0.4 €/kg margin in the case of retailers' chains).
- In contrast, there seems to be very little differences between the 2 channels upstream in the chain, whether looking at cocoa and chocolate processing, collection and trade, or cocoa farming.
- Final point, the costs for non-cocoa ingredients is higher in the case of discounters because of the difference of recipes of the chocolate tablets they sell. In particular, there is a higher proportion of tablets with hazelnuts in the total basket of chocolate tablets sold yearly by discounter stores (26% according to IRI data) compared to retailers' stores (10%). This is not surprising as reversely, premium segment which are mainly plain dark chocolate tablets has a very low presence in discounters' stores compared to retailers' stores.

Going further, the question is whether there are other underlying factors which can explain such differences between retailers' and discounters' value chains.

2.2.3. Influence of the type of brand: National brand vs. Private label

Following our analysis of the German sector (see chapter 1.2), another important factor to be investigated is the type of brand, more specifically the differences that might exist between the national brands' products and those sold under the private labels of both retailers and discounters.

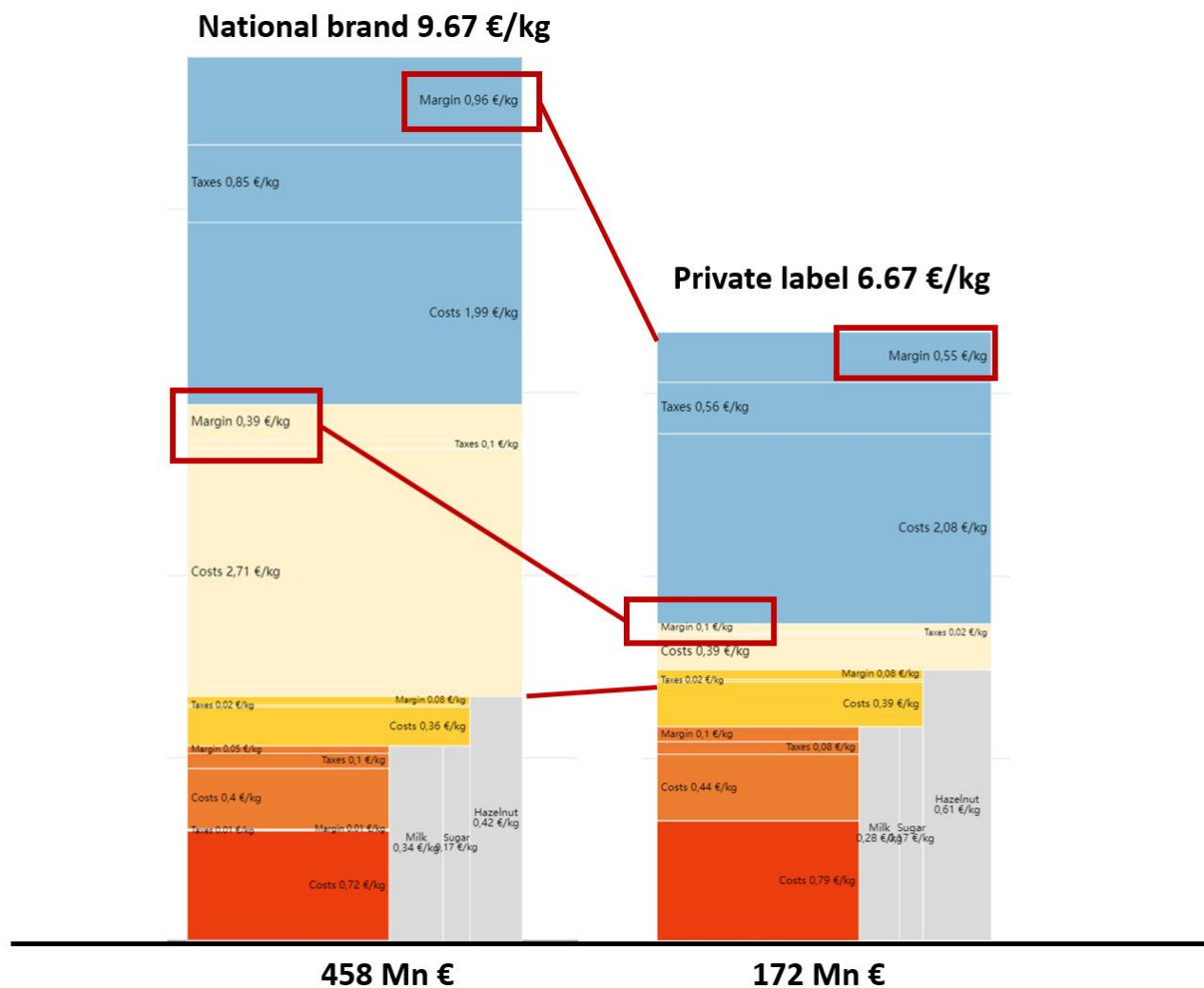


Figure 34. Comparison of the distribution of value, costs, taxes and margins for the chocolate tablets sold under National brand (on the left) and Private Label (on the right) in German stores of both retailers & discounters. Source: BASIC, 2022

As illustrated above, the similarities with the previous comparative estimates for Retailers vs. Discounters are quite striking:

- Firstly, the consumer price differential is quite similar: Private label products are on average 31% cheaper than National brands products (compared to 24% price difference between products sold in retailers' stores vs. discounters' stores)
- Secondly, the share of value and margins of the last stage of the chain (retail) are of the same order of magnitude in absolute terms (both between the two types of brands and in comparison to the previous analysis by distribution channel), but with a somewhat higher level of profitability for National brands which generate 3.8 €/Kg share of value and 0.96 €/kg margin, compared with 3.2 €/kg share of value and 0.6 €/kg margin for Private labels.
- At the stage of 'branding and manufacturing of finished products', the differences in share of value and margins are even more pronounced than in the previous analysis by distribution channel: National brands generate 3.2 €/Kg share of value and 0.4 €/kg margin, compared with 0.5 €/Kg share of value and 0.1 €/kg margin in the case of Private labels' manufacturers.

- Finally, in all other upstream stages of the cocoa/chocolate chains, there are few differences at the exception of other ingredients because the portfolio of Private Labels products includes a greater proportion of tablets with hazelnuts (for further details, see section 2.2.5 below).

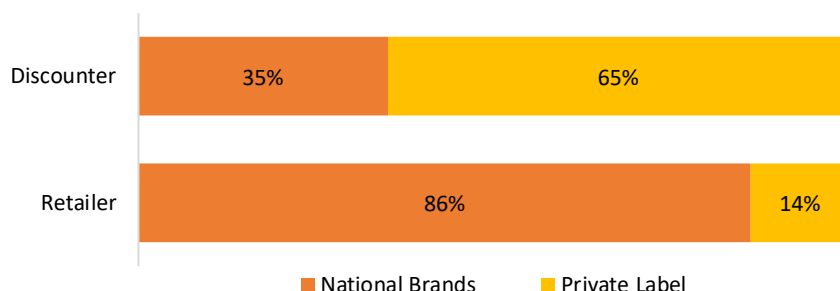


Figure 35. Share of National brand & Private Label tablets sold by retailers and discounters. Source: BASIC, based on IRI 2020 data

These similarities between our comparative estimates of Retailers vs. Discounters on the one hand, and National Brands vs. Private Labels on the other, can be explained by the portfolio of brands sold in each distribution channel, as evidenced in the above diagram. Indeed, the discounters are characterised by a high share of chocolate tablets sold under their private label (65% compared to only 14% in retailers' stores) whereas the retailers stand out for their high proportion of chocolate tablets sold under national brands (86% compared to only 35% in discounters' stores).

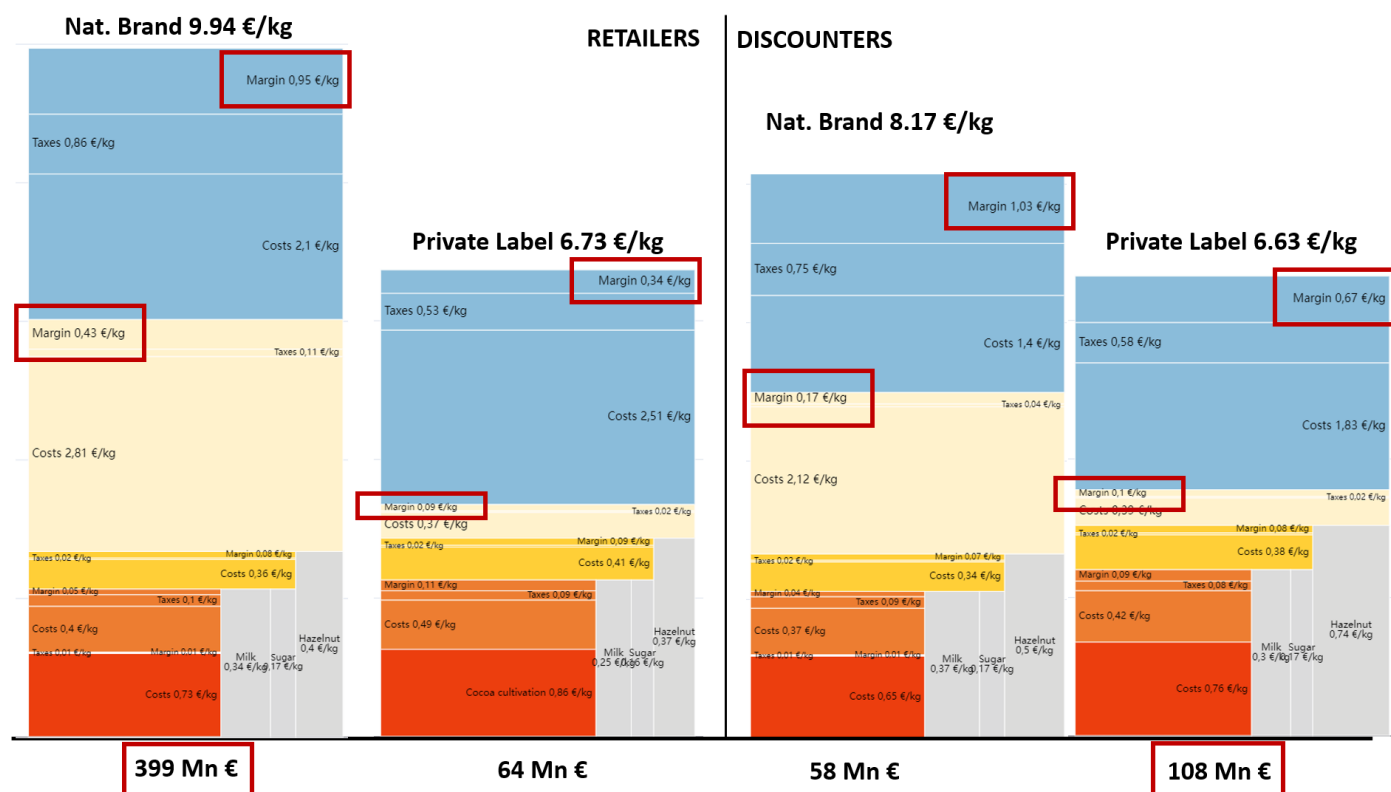


Figure 36. Comparison of the distribution of value, costs, taxes and margins for the chocolate tablets sold under National brand and Private Label in German retailers' stores (on the left) and in German discounters' stores (on the right). Source: BASIC, 2022

Looking more closely at the results in each distribution channel – retailers on the one hand and

discounters on the other – we observe that the comparative analysis of National brands' and Private labels' value chains provides similar conclusions in each case:

- The average consumer prices of National brand products on the one hand, and Private label products on the other are quite close in both channels (6.73 €/kg for Private labels in retailers' stores vs. 6.63 €/kg in discounters' stores), the only slight difference being the somehow lower consumer price of National brands in discounters, probably due to the more limited portfolio of products they sell (in particular regarding premium brands – see section 2.2.4 for details).
- The share of value of the retail stage of the chain is of the same order of magnitude in absolute terms (3.9 €/kg and 3.4 €/kg in the case of retailers, 3.2 €/kg and 3.1 €/kg in the case of discounters) so as the percentage margin generated in each distribution channel albeit for the Private labels products sold by retailers which demonstrate a somewhat lower profitability (5% margin for Private labels of retailers, 10% for National brands sold by retailers, 13% margin for National Brands sold by discounters and 11% for Private labels of discounters).
- The share of value and margins of the stage of 'branding and manufacturing of finished products' is 4 times higher in the case of National brands compared to Private labels in both retailers' stores and discounters' stores (with the exception of the margin of National brands sold by discounters which appear to be more constrained than in the case of retailers).

These converging results can be explained by two main factors:

- **In the case of National brand**, the higher level achieved in terms of consumer prices, higher profitability for the retailing as well as higher profitability and higher share of value for the branding/manufacturing stage, is associated with the fact that **the intangible value creation leverages are mainly in the hands of brands** (and to a lesser extend retailers). Although the upstream costs of National brands are very similar to Private labels (with regards to cocoa cultivation, as well as the processing of mass, butter and even chocolate), the National brands are able to achieve a higher selling price to retailers, and in the end to final consumers, thanks to their heavy investments in advertisement and Research & Development, that enable them to strengthen their reputation, which is what consumers seem to value more than the intrinsic features of the chocolate they eat.
- **In the case of Private labels, the main adjustment variable is the final product manufacturing.** Indeed, the share of value dedicated to this stage of the chain is clearly reduced to a minimum, with all associated costs being as streamlined as possible: very limited advertisement costs (which have been included in our model), no sales force expenses and somehow lower research & development costs compared to National brands. As shown by our estimates, the low share of value associated with the manufacturing of Private Labels' chocolate tablets is not entirely to the detriment of the chocolate manufacturer which still generates a net margin, albeit limited. This illustrates the specific business model of 'Private label' manufacturers which is mainly volume-based, as opposed to the value-based profitability model of 'National Brands', the latter being sustained through high expenses in advertisement which can amount to 15% of the selling price of the tablet to retailers.

In addition, the differences of the costs of National Brands between those sold in retailers' stores and those sold in discounters' stores are mostly linked to the differences of product ranges sold in both channels. Indeed, the retailers' product portfolio includes a significant share of premium chocolate

tablets (accounting for approximately 36% of sales) which are linked to higher costs of manufacturing (in terms of packaging, logistics, research and development, marketing and advertisement, etc.). Thus, the aggregated results for National Brand chocolate tablets sold in retailers' stores show higher manufacturing costs than National Brand chocolate tablets sold in discounters' stores (which are of lower market ranges).

These results reflect the internal logic of each type of actor: National Brands and Manufacturers of Private Label products. Indeed, the brands are companies which continuously invest in a production infrastructure to create a unique product which can differentiate itself on the market. They strive to promote it as best so as to maintain their differentiation against competitors, which involves continuous R&D, heavy advertising and regular negotiations with retailers and discounters which require to develop and sustain a significant salesforce team. Reversely, in the case of private label manufacturers, they already have invested in their production infrastructure and try to maximize its use and efficiency so as to sustain their profitability. The contract signed with the retailer or discounter guarantees manufacturing volumes but deprives private label manufacturers from having a differentiated position on the market, other than their ability to manufacture while keeping their costs as low as possible for a given set of quality requirements.

Based on this, we conclude that the distinction between National brands and Private labels has a more structural influence than retail channels on the distribution of value, costs, taxes and margins. This factor explains much of the difference between retailers and discounters. It will thus be used as a primary analytical criterion in the rest of the analysis.

2.2.4. Influence of the market segments: Low, Mid & Premium ranges

To deepen the analysis, the next factor to be investigated is the segmentation of the market, i.e. the differences that may exist between low-range, mid-range and premium range products. Building on the previous learnings, this is first analysed in the case of National brands, then Private labels.

2.2.4.1. Case of National brands

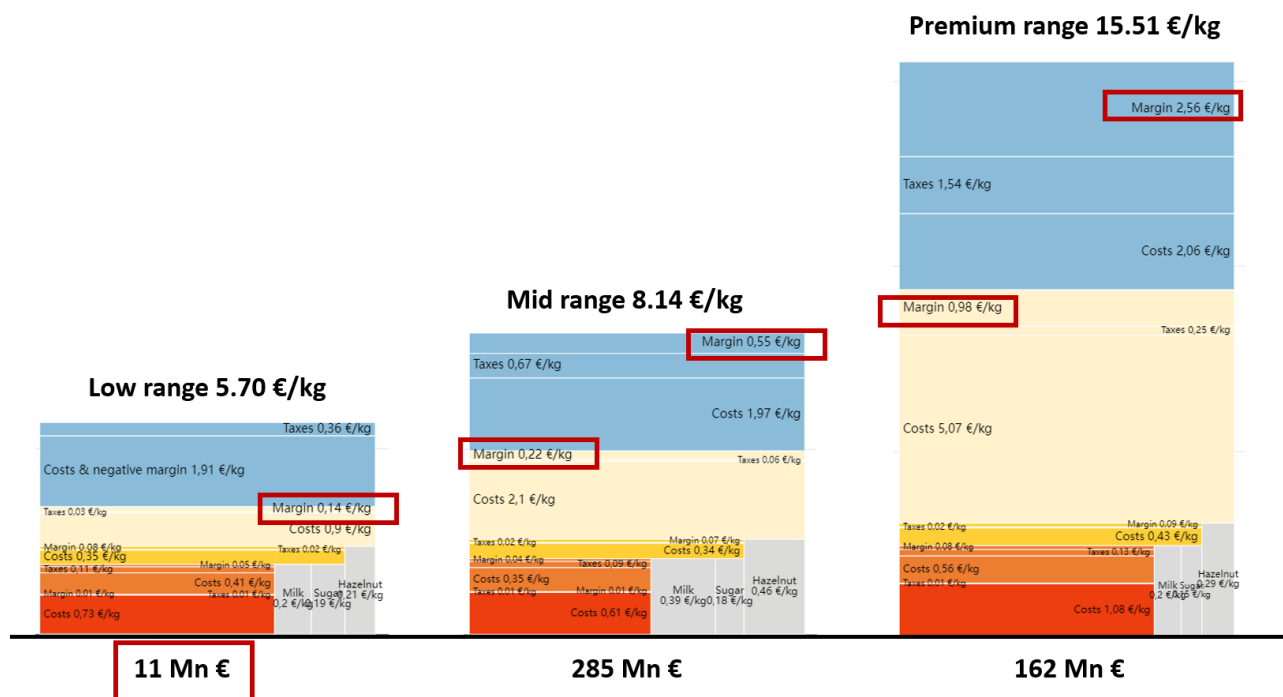


Figure 37. Comparison of the distribution of value, costs, taxes and margins for the low range, mid-range and premium range National brand chocolate tablets sold in German stores (both retailers and discounters). Source: BASIC, 2022

As illustrated in the above diagram, our estimates show that the market segmentation is another very influential factor of the distribution of value, costs, taxes and margins:

- First, the consumer price can vary from single to nearly triple between the different ranges: from 5.7 €/kg for low-range National brand chocolate tablets to 8.14 €/kg for mid-range tablets and up to 15.51 €/kg for premium range tablets.
- This translates into very different levels of profitability for retailers according to our estimates: while the low-range National brand chocolate tablets would generate a loss of 3% (but on a very small turnover of 11 million €), mid-range tablets would generate a positive margin of 6.8% and premium range tablets a higher margin of 17%.
- At the stage of 'branding and manufacturing of finished product', the profitability is positive and much more similar for the 2 first segments according to our estimates (42% margin for low range tablets and 5% for mid-range tablets), and much higher for premium range tablets (11% margin). It is interesting to note that the costs for other ingredients are somewhat higher in the low range segment compared to the premium range one because the proportion of plain dark chocolate is much higher in the latter (53% according to IRI) than in the former (22%).
- Upstream in the chain, the results of our estimates are much more similar for cocoa and chocolate processing, and the variations observed for the other ingredients and cocoa farming can be explained by the differences in recipes, the mid-range tablets being much more oriented towards milk chocolate with hazelnuts whereas the premium tablets are characterised by a strong proportion of dark plain chocolate with a high percentage of cocoa.

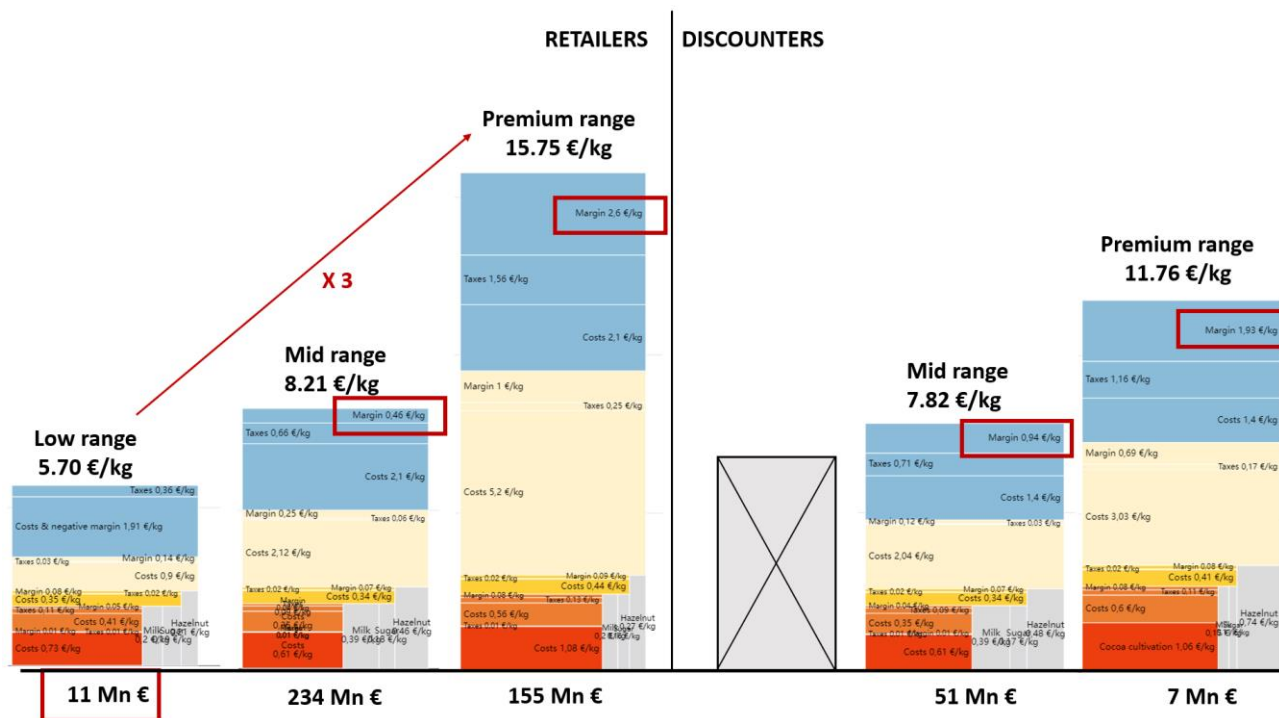


Figure 38. Comparison of the distribution of value, costs, taxes and margins for the low range, mid-range and premium range National brand products sold in German retailers' stores (on the left) and discounters' stores (on the right). Source: BASIC, 2022

When investigating separately the case of the National brand products sold in retailers' stores on the one hand, and discounters' stores on the other, we find that the previously described results also apply to both distribution channels, with some minor differences for discounters which reflect their specificities:

- Regarding retailers' stores, we indeed observe the same results: a multiplication by a factor of nearly 3 of the consumer prices between low range National brand chocolate tablets and premium range tablets, and a loss for the retailer on low-range tablets while the two other segments generate a positive margin (the premium range tablets being much more profitable for retailers). For the 'branding and finished product manufacturing' stage, the profitability is similar for the two first segments (42% margin and 53% margin) and higher for premium range tablets (11%).
- Regarding discounters' stores, we observe some minor differences: first of all, discounters do not sell low-range National brand chocolate tablets as this segment of the market is only covered by their Private label products, and secondly they sell very little premium range National brand tablet (a turnover of only 7 million € in 2020) for a lower consumer price than in retailers' stores (probably linked to their very limited portfolio and their objective not to compete with their own premium range Private label products – see below).

2.2.4.2. Case of Private labels

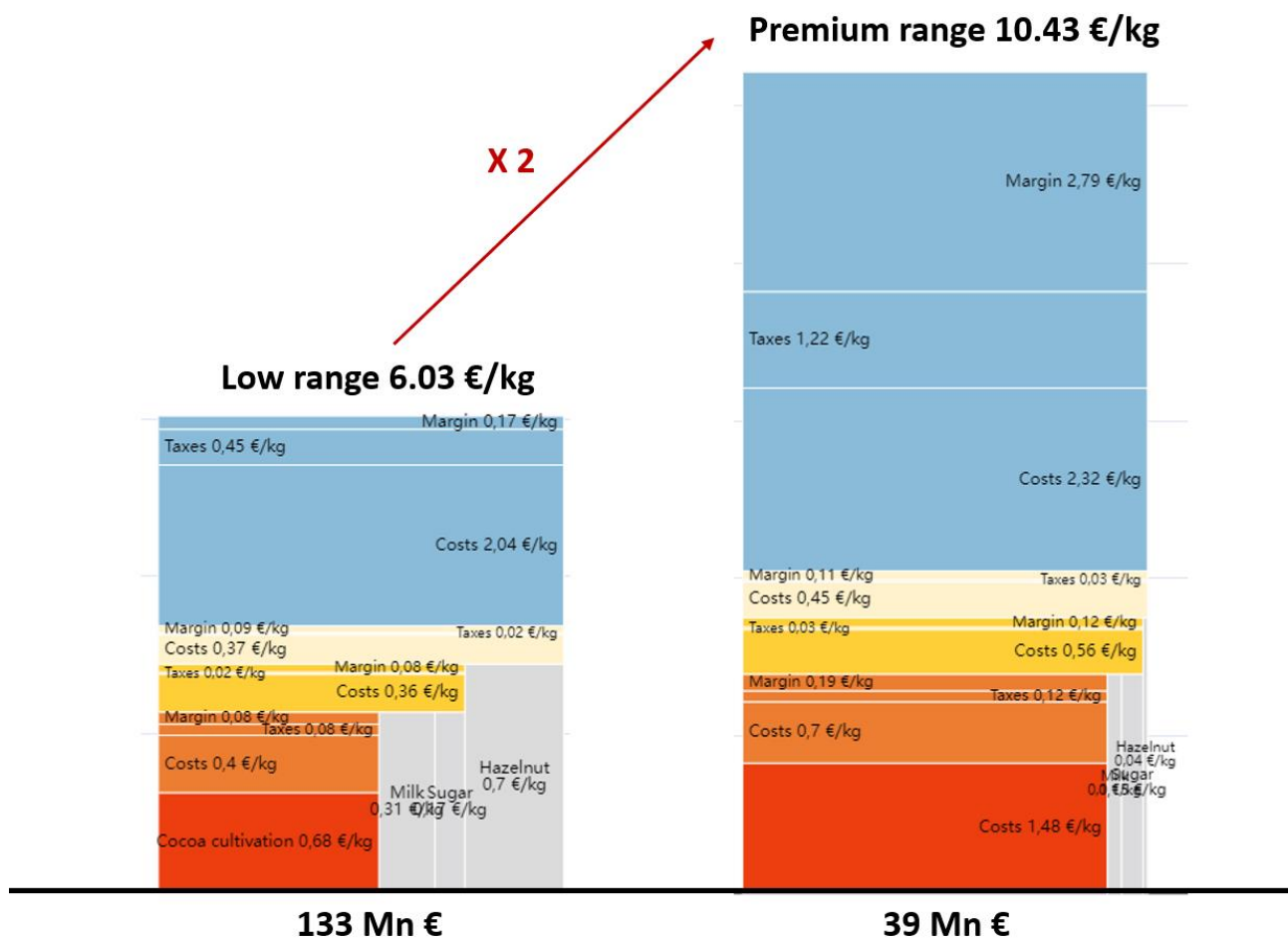


Figure 39. Comparison of the distribution of value, costs, taxes and margins for the low range and premium range Private label chocolate tablets sold in German stores (both retailers and discounters). Source: BASIC, 2022

Looking at the case of market segmentation in Private labels, the results of our estimates are quite similar to the ones obtained for National brands, except for the fact that there is no mid-range segment for this type of brand (see above):

- There is a significant consumer price difference between the 2 segments, the low-range Private label chocolate tablets being sold almost twice cheaper than premium range tablets: 6.03 €/kg vs. 10.43€/kg (compared to 3 times cheaper in the case of National brands).
- The profitability for retailers and discounters is much higher for premium range products.
- The profitability for the finished product manufacturers is similar for both segments (3% margin)

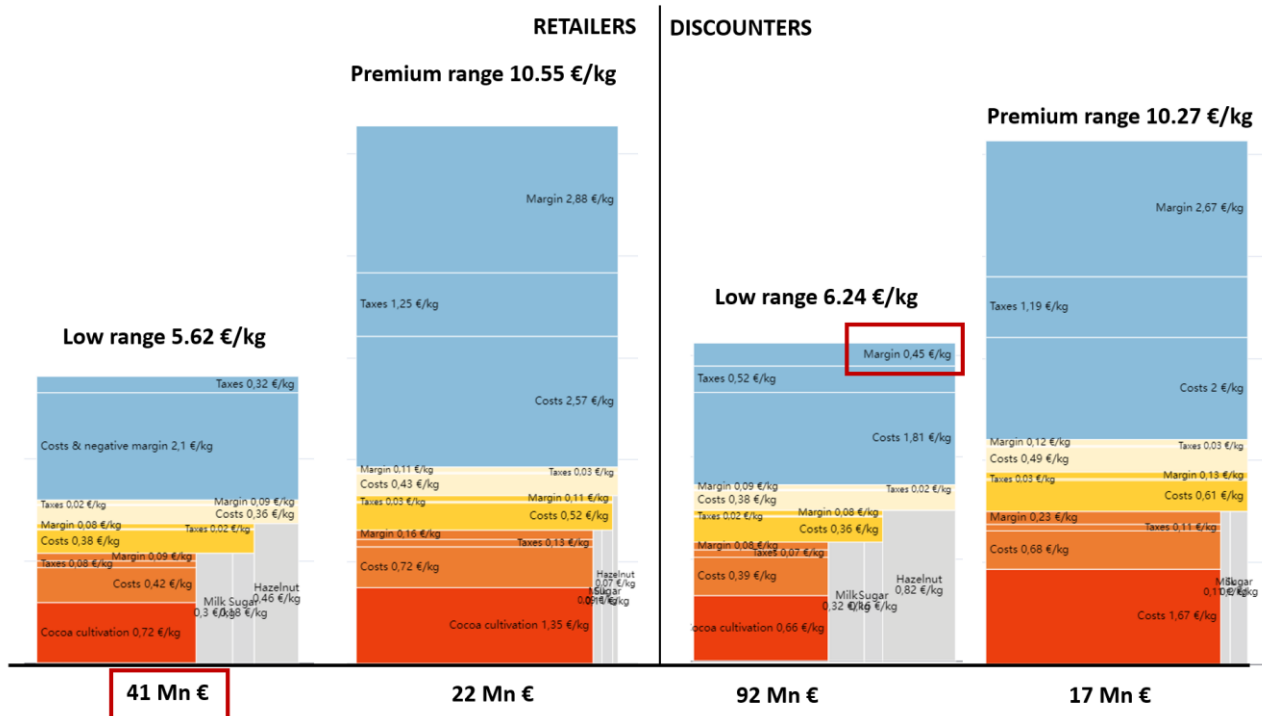


Figure 40. Comparison of the distribution of value, costs, taxes and margins for the low range and premium range Private label products sold in German retailers' stores (on the left) and discounters' stores (on the right). Source: BASIC, 2022

Looking more closely at the case of retailers' stores and discounters' stores, the results obtained through our model are very much similar for both distribution channels: the consumer prices are very close in retailers' and discounters' stores for Private label low-range chocolate tablets as well as premium-range tablets (the latter being twice more expensive than the former). Regarding the profitability of retailers as well as discounters, it is much higher for premium range Private label tablets than for low-range tablets, while the profitability of finished product manufacturers is the same across all product ranges and distribution channels. The only difference, according to our estimates, lies in the low range chocolate tablets: while the retailers appear to make a loss on this segment of products (indicated by the blue bar at the bottom of the graph on the left which shows a negative value for the net margin of retailers), the discounters seem to achieve the same level of profitability for low-range national brand chocolate tablets as for premium-range ones.

This confirms our finding that the greater value created by higher ranges of products can be predominantly explained by intangible leverages of advertisement and brand reputation. Indeed, our estimates show that in the case of National brands while the share of value for upstream stages in the chain (cocoa farming and processing) remain quite comparable across the different ranges of products, the 'branding & final product manufacturing' is associated with a much bigger share of value in the higher ranges because of the level of investments required in advertisement for Premium chocolate tablets. Similar overall findings are observed in the case of Private labels, this time with important differences regarding the margin of the retail stage which is apparently much higher for Premium than for low-range tablets, while the margin of the final product manufacturing stage is very similar across the 2 segments.

Another major intangible leverage that amplifies these results is the fact that consumers believe that it is the percentage of cocoa that matters most and defines the quality of chocolate tablets (esp. in the premium segment) and not the terroir or the work of farmers (potentially a result of advertising).

2.2.5. Influence of recipes

Another factor to be investigated is influence of recipes of the chocolate tablets, i.e. the differences that may exist between dark and milk chocolate tablets between plain chocolate tablets and tablets with hazelnuts products, as well as other confectionery products. As previously, this factor will be first analysed in the case of National brands (focusing on mid-range tablets which is the heart of the market), then Private labels (focusing on the low range tablets for the same reason).

2.2.5.1. Case of National brands

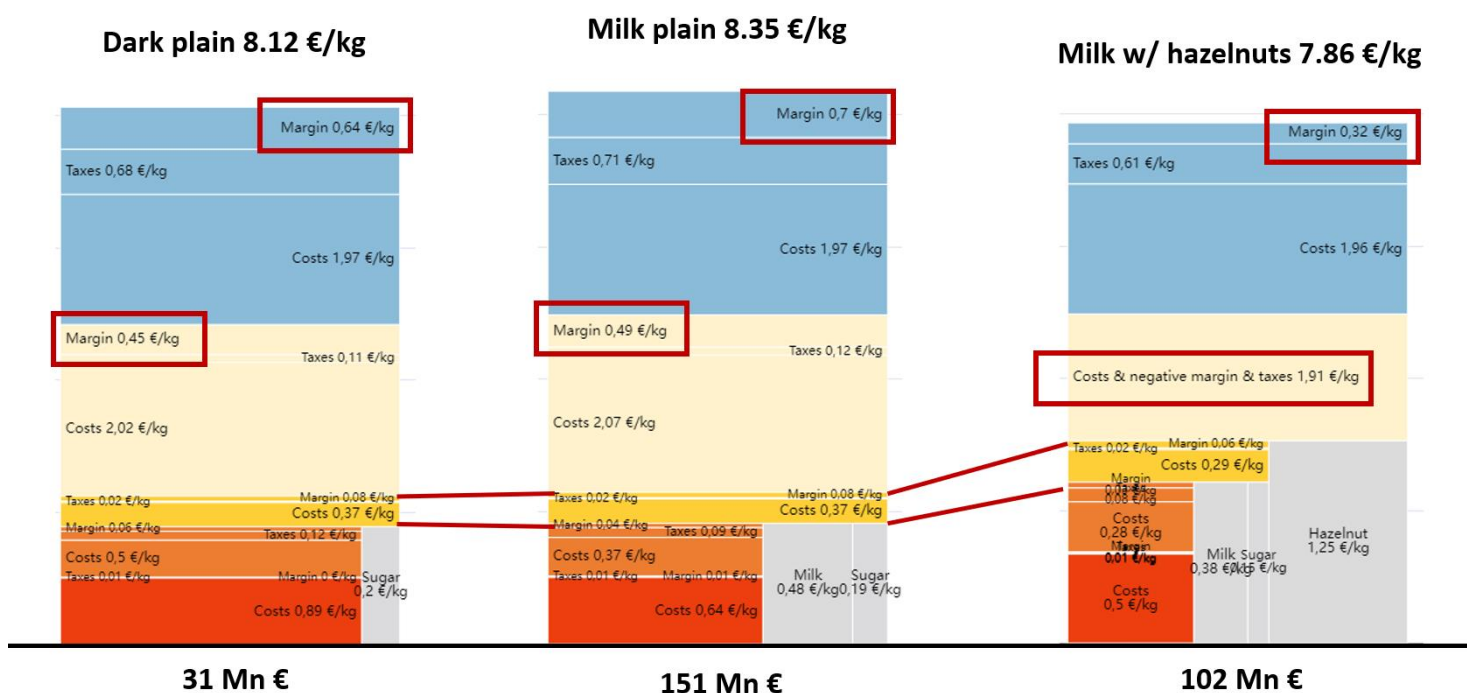


Figure 41. Comparison of the distribution of value, costs, taxes and margins for dark plain, milk plain and milk with hazelnuts chocolate tablets sold by mid-range National brands in German stores (both retailers and discounters). Source: BASIC, 2022

As illustrated in the diagram above, our estimates show that:

- The differences in recipes and ingredients of chocolate tablets have a very limited impact on their selling price to consumers: for mid-range National brands, dark plain chocolate tablets are sold on average at 8.12 €/kg, milk plain tablets at 8.35 €/kg and milk tablets with hazelnuts at 7.86 €/kg (hence a price difference of 6% between the cheapest and the most expensive tablet).
- The above result is partly counterintuitive, especially for the milk chocolate tablets with hazelnuts as this product is sold cheaper to consumers while hazelnuts are much more costly than cocoa and milk (these two having a similar cost of supply for manufacturers). This is the result of the line approach and the fierce competition between retailers and discounters which translate into a lower price to consumers in order to attract the latter in their stores (milk chocolate tablet with hazelnuts being a loss leader).

- In addition, it seems that both retailers and discounters have sufficient negotiation capacity to impose a unified purchase prices to National brands whether the chocolate tablet is dark or milk, plain or with hazelnuts (and hence keep their profitability). As a result, the National brands appear to make a loss on milk tablets with hazelnuts (because of the much higher cost of the latter ingredient compared to cocoa and milk – cf. illustration above) while their margins are fairly similar for dark plain and milk plain tablets. There are 3 main reasons for which the brands accept to sell these products despite of negative margins: 1/ If they stop the manufacturing of a 'negative margin' product, the production lines within their factories may go below their break-even point, meaning that they lose more money by refusing to manufacture this product instead of selling it to retailers or discounters, even if it's at loss. 2/ It can be an investment made by a brand in order to penetrate a market as part of a more global strategy (i.e., the negative margin is temporary, for the time of gaining market shares against competitors, before it can hopefully make positive margins). Reversely, if a company refuses to produce at loss, its market position could be taken by competitors who accept to sell their products at loss. And 3/ The negative margin can sometimes happen temporarily because of the economic situation which creates costs increases which cannot be transmitted to retailers/discounters for a certain time period.
- At the beginning of the chain, the variations of share of value for cocoa farmers only reflect the differences of percentage of cocoa between dark and milk chocolate tablets, plain or with hazelnuts.

2.2.5.2. Case of Private labels

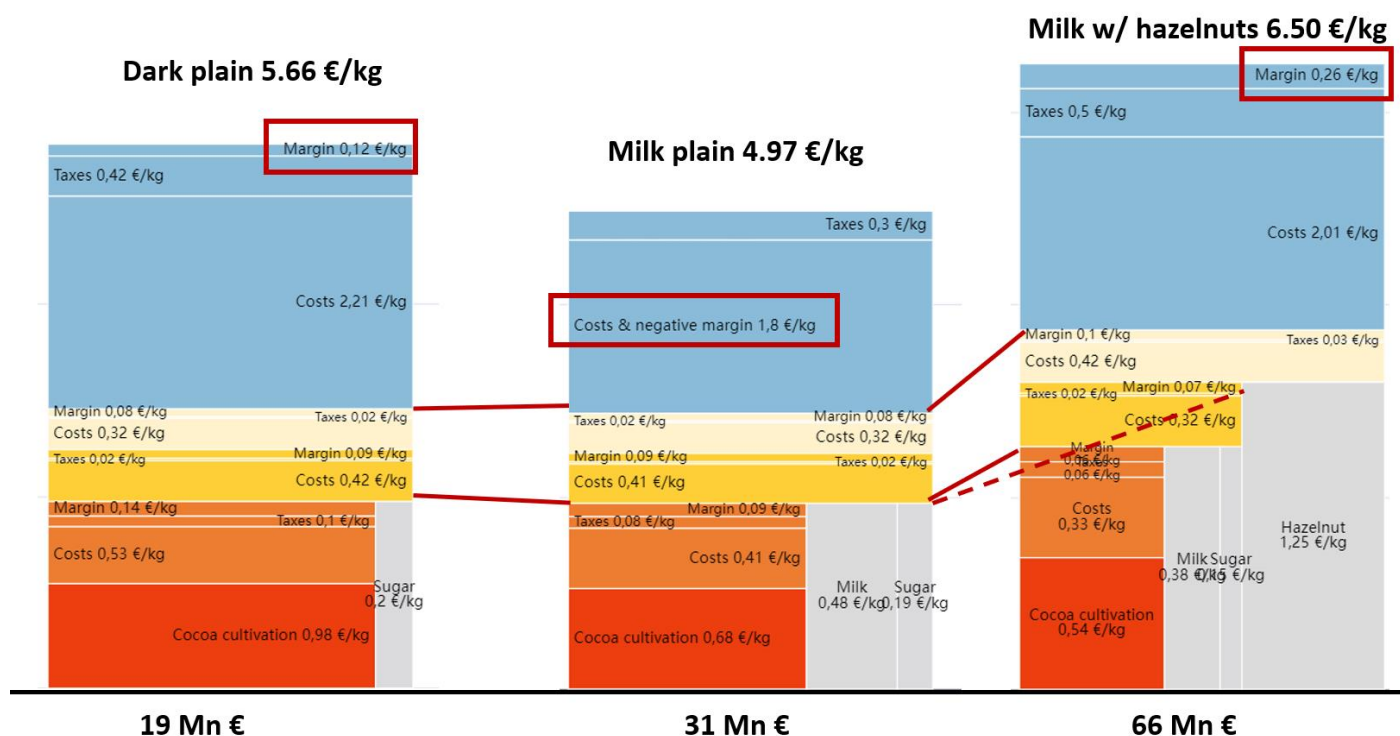


Figure 42. Comparison of the distribution of value, costs, taxes and margins for dark plain, milk plain and milk with hazelnuts chocolate tablets sold under low-range Private labels in German stores (both retailers and discounters). Source: BASIC, 2022

- Firstly, the selling prices to consumers appear to be always correlated with the cost of manufacturing of the Private label chocolate tablet. For instance, the milk plain chocolate tablet is sold 9% cheaper than dark tablet and it costs 2.5% less to manufacture (because of a higher content of sugar). Reversely, the milk chocolate tablet with hazelnuts which is the costliest to manufacture (because of the cost of the latter ingredient) is also the product which has the highest price to consumers (6.5 €/kg compared to 5.66 €/kg and 4.97€/kg for plain dark and plain milk tablets).
- As a result, the profitability of retailers and discounters appears quite similar (in absolute terms as well as in percentages) for dark and milk chocolate with hazelnuts, whereas it is slightly negative for milk plain because of low price to consumers (which is not compensated by lower costs of manufacturing).
- Upstream in the chain, the manufacturers of the finished products appear to generate the same level of margin of 3% over their selling price to retailers and discounters in all cases.

2.2.5.3. Case of other case study products



Figure 43. Distribution of value, costs, taxes and margins for the aggregation of a case study of wheat-based chocolate confectionery bar (countlines) modelled on the German market. Source: BASIC, 2022

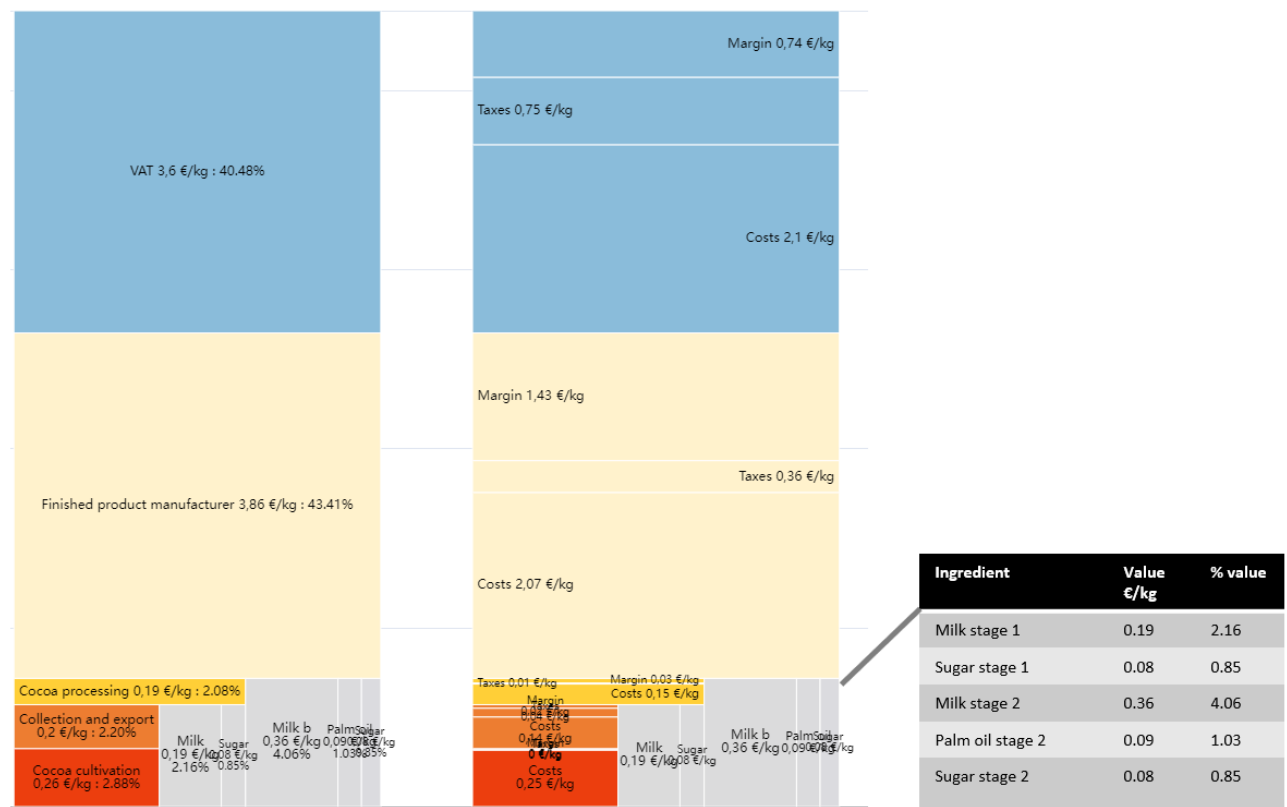


Figure 44. Distribution of value, costs, taxes and margins for the aggregation of a case study of milk-based chocolate confectionery bar (countlines) modelled on the German market. Source: BASIC, 2022

In addition to the German market of chocolate tablets, we have also modelled two cases of confectionery bars sold in German retailers' and discounters' stores: one with predominantly wheat ingredient, and one with predominantly milk ingredient (both being also made up of other ingredients such as sugar, vegetable fat, etc.).

As illustrated above, the first thing that can be observed is the number of similarities between the two case studies:

- The consumer prices are quite similar: 8.09 €/kg for the wheat-based chocolate confectionery bar and 8.89 €/kg for the milk-based chocolate confectionery bar.
- The share of value accruing to retailers/discounters, National brands and the rest of the chain upstream are also of the same order of magnitude.
- The National brand seem to generate higher margins than the retailers/discounters in both cases (see above diagram), which is a reverse situation from what we have analysed for chocolate tablets.

The main difference between the two cases is associated with the recipe: there is a higher content of chocolate and a lower proportion of non-cocoa ingredients in the case of the wheat-based chocolate confectionery bar, compared to the milk-based chocolate confectionery bar. This explains why, in the

latter case, the cost of other ingredients is double and the share of value accruing to cocoa processing, cocoa transport and cocoa farming is substantially lower.

2.2.6. Influence of certifications: UTZ/Rainforest, Fair Trade & Organic

A last factor which can influence the distribution of value, costs, taxes and margins along the cocoa/chocolate chain is the use of independent certifications, i.e. the differences that may exist between chocolate tablets which are not certified and those under UTZ/Rainforest, Fair Trade, Organic or Fair Trade & Organic certifications. In this section too, this factor will be first analysed in the case of National brands then Private labels.

2.2.6.1. Case of certified National brands



Figure 45. Global view of all the types of National brand chocolate tablets modelled through the present study. Source: BASIC, 2022

Firstly, it is important to recall that only 20% of the total sales of National brand chocolate tablets that we have been able to model are certified with one of the 3 labels detailed earlier. As illustrated above, the UTZ/Rainforest certification is the most prevalent with 20% of the market share, while Organic certification (1%) and the combination of Fair Trade and Organic (2%) are linked to a niche

segment of premium range pure-origin dark chocolate tablets. Finally, the Fair Trade Cocoa certification alone is the least common certification on the market (1%).

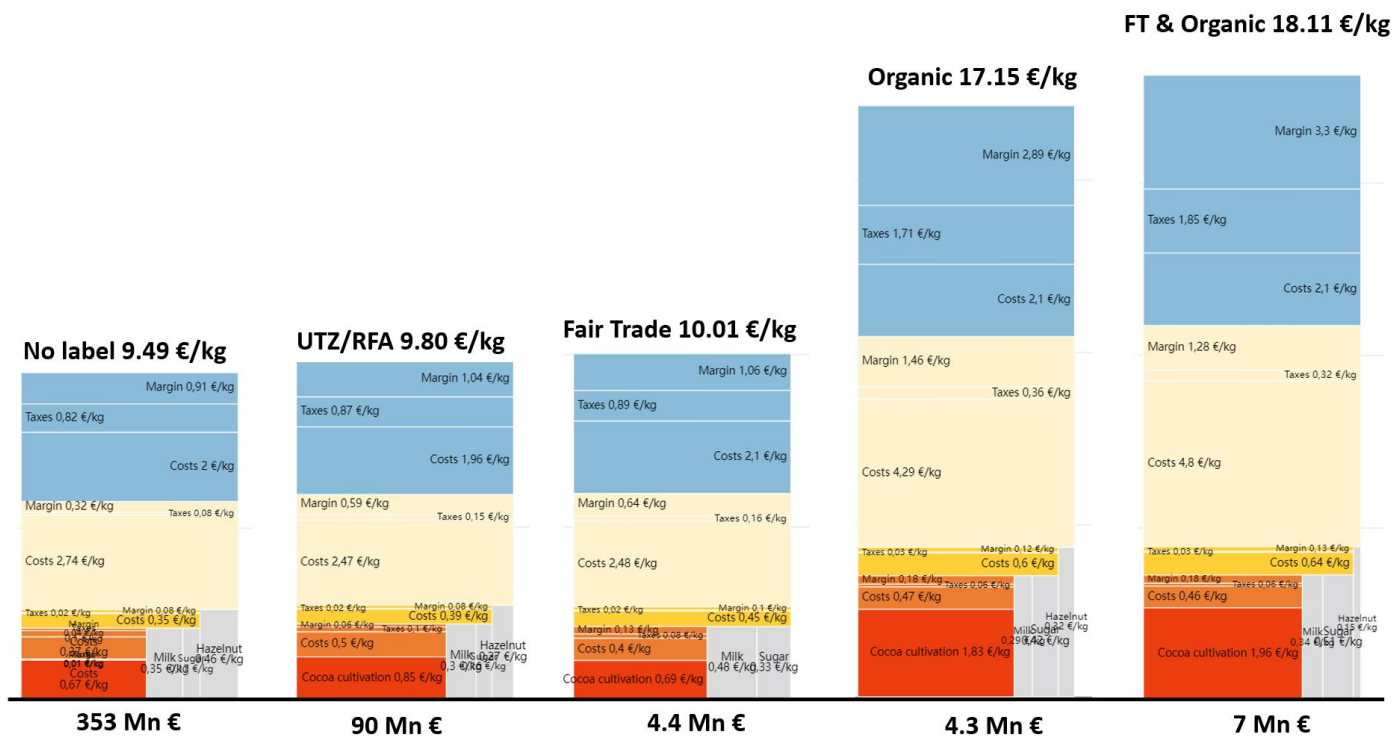


Figure 46. Comparison of the distribution of value, costs, taxes and margins for National brand chocolate tablets which are either not certified (left) or certified under UTZ/Rainforest, Fair Trade, Organic and Fair Trade-Organic. Source: BASIC, 2022

As illustrated in the diagram above, our estimates show that:

- Regarding the cases of National brand chocolate tablets which are certified under UTZ/Rainforest or Fair Trade, our estimates demonstrate that there are very little differences if any with the chocolate tablets which are not certified. The selling prices to consumers are very similar: 9.50 €/kg for tablets without label, 9.80 €/kg for UTZ/Rainforest certified tablets and 10.0 €/kg for Fair Trade certified tablets (either carrying the traditional Fairtrade logo or the Fairtrade Cocoa one). Similarly, the margins generated by retailers and discounters appear to be fairly much the same in the 3 cases, whether in absolute terms or expressed as a percentage of the consumer price. At the stage of 'branding and manufacturing of finished product', the profitability seems higher for certified chocolate tablets (Utz/rainforest as well as Fair Trade). The same applies to the stage of cocoa farming where the small variations of share of value mainly derive from differences in the percentage of cocoa in the recipe of the end product, the 2 certifications being only linked to small premiums compared to conventional cocoa (a bit higher in the case of Fairtrade – see section 3 for further details). Regarding cocoa farmers, the publicly available independent studies collected and analysed for this study show that the certified farmers remain on average below the living wage threshold (even though a part of them manage to go above). This does not mean that the certifications do not generate positive impacts on farmers' income: they

contribute to bridging the gap with living income levels, but not sufficiently; hence, the farmers are still not generating a net margin on average when taking into account family labour (see producing country sections for further details).

- In stark contrast to the previous case, **National Brand chocolate tablets certified under Organic or the combination of Fair Trade and Organic clearly stand out.** First of all, their selling price to consumers is almost double the one of non-certified National brand chocolate tablets. Regarding the profitability of both stages of retailing (traditional retailers and discounters) and of 'branding and manufacturing of finished products', it is much higher for products certified under Organic or Fair Trade & Organic than for non-certified chocolate tablets or tablets certified under UTZ/Rainforest or Fair Trade alone. In addition, the costs of non-cocoa ingredients are lower than in the case of UTZ/RFA and Fairtrade alone because FT & organic tablets are situated in the premium segment (as shown by their higher consumer price) which is associated with a much higher proportion of plain dark chocolate (in comparison, UTZ/RFA and Fairtrade are essentially associated with mid-range segment).

At the beginning of the chain, this specific dynamic translates into a more than **doubling of the share of value accruing to cocoa farmers which is mainly correlated with a higher farmgate price (plus premium in the case of Fair Trade and Organic).** There are two reasons why the share of value accruing to farmers (in red) is significantly higher in the case of organic as well as FT & organic chocolate tablets: 1/ These chocolate tablets usually belong to the premium category and contain more cocoa (above 70% according to the IRI detailed data we have collected). Thus, there is less 'other ingredients', and the share of value accruing to cocoa farmers is higher for these products. And 2/ The farmgate price paid to producers is higher in the two latter cases compared to RFA/UTZ and Fair Trade only certification. This is not linked to the minimum prices defined in the standards (especially for Fair Trade) but most importantly to the fact that organic cocoa is more sought-after by buyers and is associated with higher costs to be covered (linked to lower yields), hence explaining why organic cocoa can achieve higher prices. The experts interviewed in producing countries asserted that in these latter cases the farmers seem to achieve a living wage on average, and sometimes even go beyond that threshold, but independent studies are lacking to quantify and objectify this situation.

2.2.6.2. Case of certified Private labels



Figure 47. Global view of all the types of Private label chocolate tablets modelled through the present study. Source: BASIC, 2022

In contrast with the case of National brand, almost all sales of Private label chocolate tablets that we have been able to model are certified with one of the 3 labels detailed earlier. As illustrated above, in this case too, the UTZ/Rainforest certification is the most prevalent (53%), but this time almost on par with the Fair Trade Cocoa certification (44%). In addition, the combination of Organic and Fair Trade certification is still limited to a very small niche (3%) and there were apparently not yet Private label tablets certified as Organic alone (0%).

When looking at the case of Private label chocolate tablets, the results we obtained are very similar to the previous case of National brands: the selling price to consumers of Fair Trade and Organic chocolate tablets is double than the one of Private label certified under UTZ/Rainforest or Fair Trade only, the profitability for retailers and discounters is also much higher, so as the share of value accruing to cocoa farmers. The only minor difference appears to be the level of profitability for finished product manufacturers which is the same (and quite limited) whatever the type of certification.

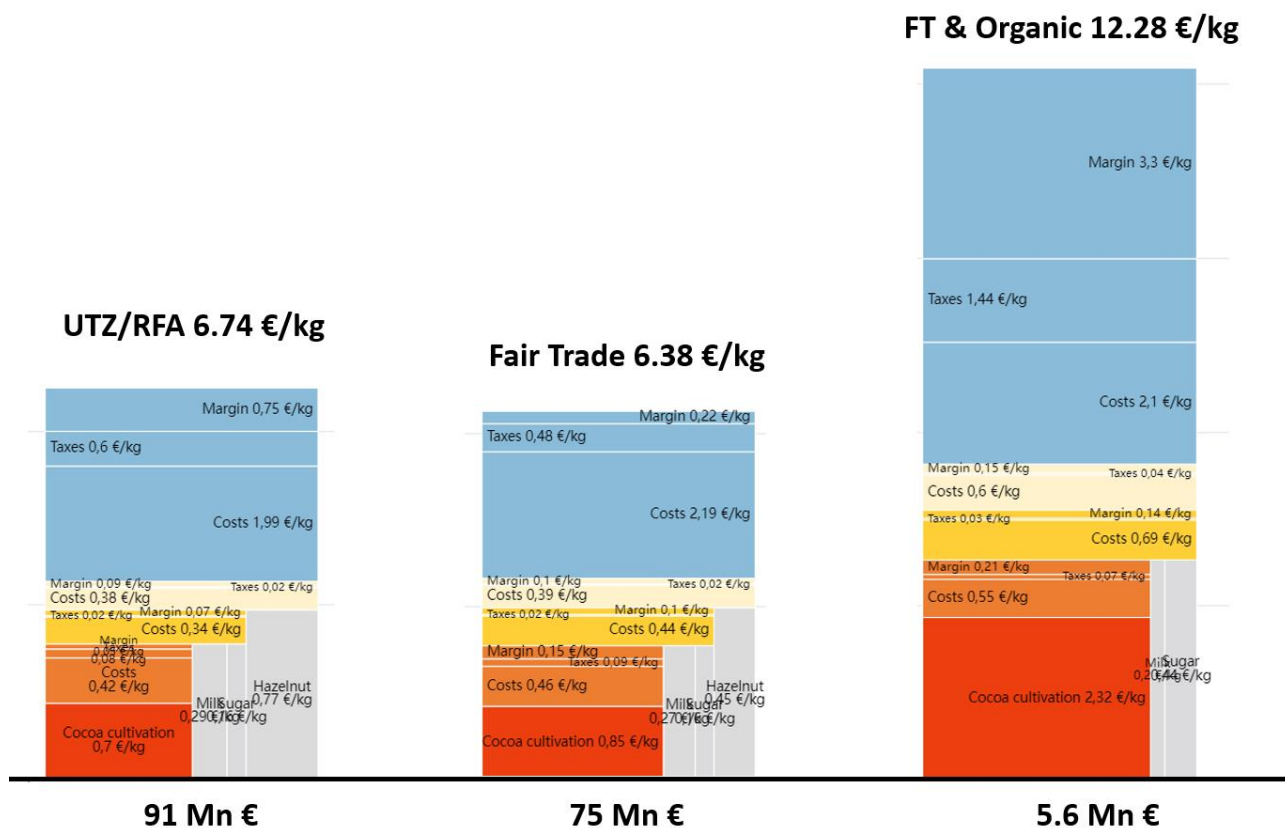


Figure 48. Comparison of the distribution of value, costs, taxes and margins for Private label chocolate tablets which are certified under UTZ/Rainforest, Fair Trade and Fair Trade-Organic sold in all German stores (retailers and discounters). Source: BASIC, 2022

In conclusion, our estimates show that the certifications analysed are associated with mixed results:

- The UTZ/Rainforest certification as well as the Fairtrade certification alone appear to play mainly the role of “licences to operate” in the eyes of many brands and retailers willing to demonstrate their conformity with social and environmental criteria, with difficulties in most cases to translate these commitments into higher prices to consumers.

In contrast, the organic label, especially in combination with Fair Trade, is associated with a higher valuation of the work of farmers which is transmitted along the chain towards the end consumers, thereby meeting the growing demand from certain consumers who are ready to pay more for “green and fair” chocolate. However, only a minority of cocoa farmers are able to access what remains a small niche on the German market.

3. Focus on distribution of value, costs, taxes, and margins in producing countries

The model we have developed is built on the analysis of the cocoa production and marketing in the five largest cocoa exporting countries: Côte d'Ivoire, Ghana, Cameroon, Nigeria and Ecuador. This third part of the report is a summary of the detailed analysis of the history of the cocoa sector, public regulations, cocoa actors as well as production and market dynamics which has been conducted for each country and published in 2020 in the [study on the value distribution along French cocoa and chocolate value chains](#) – with the exception of Nigeria which detailed analysis is provided in Appendix 8.2.

This analysis has been founded on official figures published by relevant public authorities, international trade data collected and processed from the UN Comtrade database, an extensive literature review and a set of interviews with experts from each country (the two latter sources of information have enabled us to analyse and make estimates on costs at the different stages of the chain which are not informed by available public statistics). The analysis performed covers all stages from cocoa farming to exports and all exported cocoa products (cocoa beans as well as processed cocoa – cocoa paste/butter and/or cocoa powder). At farm level, the costs and value estimated are averages reflecting at best the situation for each country, for main producer set-up (small farmers, plantations, etc.) and for each market type (conventional, organic, fair trade, UTZ/RFA). Regarding certified cocoa, our model takes into account the premiums paid and the minimum price (when it exists), however the other additional costs – in particular those linked to costs of certification borne by producer organizations and additional costs induced by changes in farming practices and yields have not been taken into account because of the lack of data (only partial information could be gathered for Côte d'Ivoire and Ecuador, but were not sufficient to be included in the model - see country sections for more details).

Based on this model and on our analysis detailed in the previous chapter, our estimates firstly show that **the country of origin has very little influence on the distribution of value, costs, tax and margins** along the chain from cocoa farmers to end consumers, and that **the share of the total value accruing to cocoa farmers lies between 6% and 15% of the end consumer value** (depending on the type of chocolate tablet).

Yet, there are some significant differences of farmgate and export prices depending on the country and to a lesser extent on the certification.

To analyse this further, the present chapter 3 provides the details of our estimates and analysis for the 5 countries included in the scope of our study:

- Côte d'Ivoire
- Ghana
- Cameroon
- Nigeria
- Ecuador

Looking across these countries at the conventional sector, there are differences among them in terms of import price and share accruing to farmers, however these differences are much lower than the ones documented earlier in consuming countries (see diagram below).

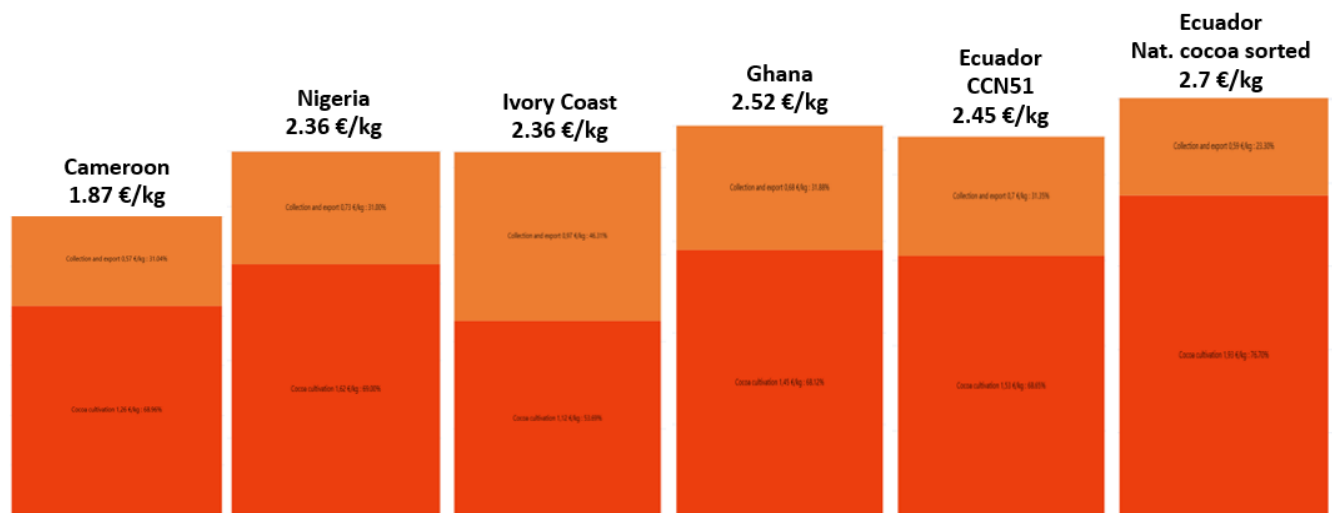


Figure 49 Distribution of value for producing countries' conventional value chains up to the export price (2020). Source: BASIC (2022)

These results are consistent with the literature and the interviews we have conducted which concur on the fact that the actors in producing countries (most notably cocoa farmers, but also collectors, transporters, wholesalers and exporters) seem to feel the pressure of the rest of the cocoa/chocolate chain downstream that expects them to deliver the required quantity and quality at the right time, while adapting to the economic and climate risks (the latter being amplified by climate change).

In the case of certified cocoa, even larger differences can be observed between labels and between countries of implementation (see diagram below). However, these differences hardly translate into structural differences in the total distribution of value, costs, tax and margins down to consumers, except partly in the case of Organic or 'Fair Trade and Organic' cocoa (see previous section 2.2.6).

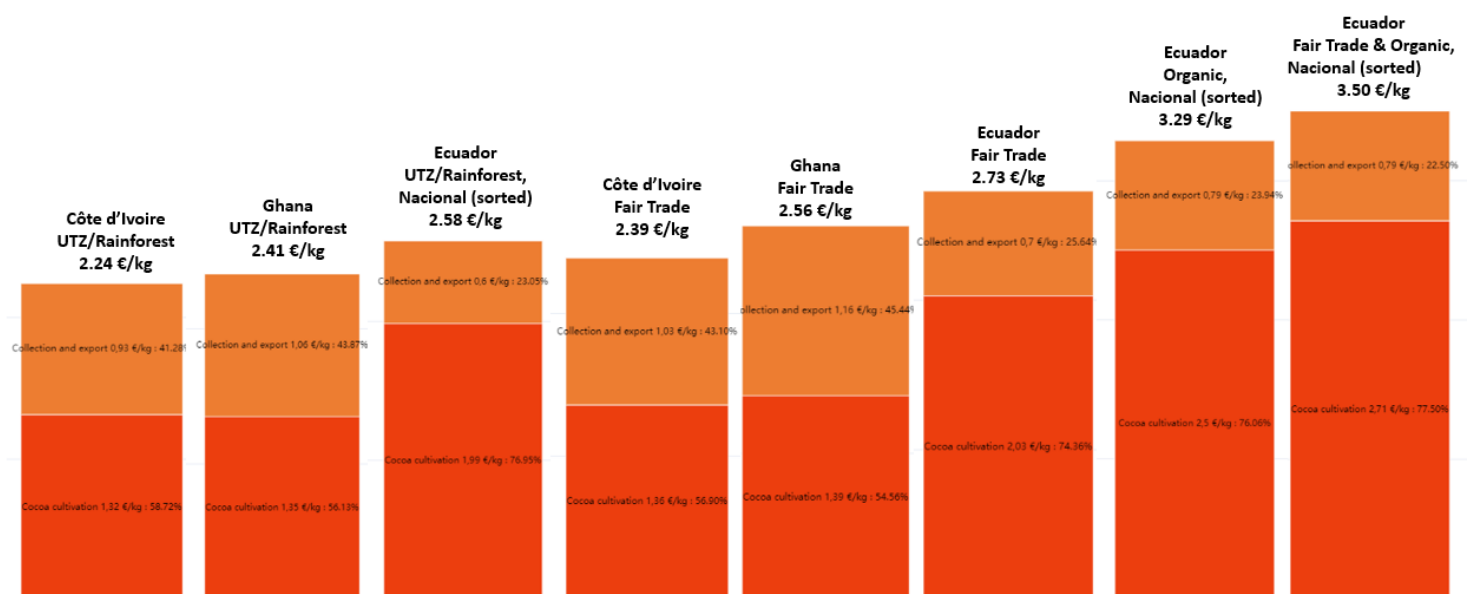


Figure 50 Distribution of value for producing countries' conventional value chains up to the export price (2020). Source: BASIC (2022)

For any further detail on producing countries please read the Chapter 3 of FAO and BASIC (2018), [“Comparative study on the distribution of value in European chocolate chains”, related to the French cocoa / chocolate value chains.](https://lebasic.com/wp-content/uploads/2020/07/BASIC-DEVCO-FAO_Cocoa-Value-Chain-Research-report_Advance-Copy_June-2020.pdf)¹²¹

3.1. Côte d’Ivoire

Disclaimer: the year of reference for the data in this section is 2020. Both the report and the model are based on exports data from January to December 2020, corresponding almost only to the 2019/2020 harvest campaign. The implementation of the Living Income Differential (LID) starting from October 2020 would have impacted only the last trimester of 2020. Hence the consequences of the LID on the value chain of the cocoa and the exports can hardly be seen in the statistics which prevented the BASIC from analysing the LID’s impacts.

3.1.1. Main characteristics of the Ivorian cocoa sector

As the leading cocoa producing country since the 1970s, Côte d’Ivoire represented 45% of the worldwide cocoa production in 2020.¹²² Production has stood at around 2.2 million tonnes for the past three years.¹²³ Cocoa beans continue to represent the major share of the exports (an estimated average of 75% for the 2016/2017 campaign) while the exports of semi-transformed products (cocoa butter, powder, cake or mass) fluctuate between 25% and 30%.¹²⁴

The Ivorian cocoa production is almost exclusively undertaken by small producers and their families who own an averaged 5 hectares.¹²⁵ The average annual yield in Ivorian cocoa farms is quite low, around 400 kg/ha.¹²⁶ Today, estimates show that cocoa in Côte d’Ivoire is cultivated on 4 to 8 million hectares by roughly 800 000¹²⁷ cocoa farmers, with 3.6 million people employed throughout the country¹²⁸ and almost 8 million people throughout the country who depend on cocoa for their living.

Most of these cocoa farmers ferment and dry the beans themselves before selling and delivering them to their cooperative or selling to the *pisteurs* who constitute a network working for *traitants*, who, in

¹²¹ FAO and BASIC, “Comparative study on the distribution of value in European chocolate chains”, 2020, p.156 https://lebasic.com/wp-content/uploads/2020/07/BASIC-DEVCO-FAO_Cocoa-Value-Chain-Research-report_Advance-Copy_June-2020.pdf

¹²² International Cocoa Organisation (ICCO), ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XLVIII, No2, Cocoa year 2021/22, 31 May 2022: https://www.icco.org/wp-content/uploads/Production_QBCS-XLVIII-No.-2.pdf

¹²³ Reuters, “Ivory Coast 2021/2022 cocoa output seen down 11% as trees rest, says regulator,” 23 September 2021

¹²⁴ Conseil Café Cacao, Evolution de la filière café-cacao de 2012 à 2017, 2017

¹²⁵ 8 persons on average in an Ivorian household (AFD/Barry Callebaut, Cocoa farmers’ agricultural practices and livelihoods in Côte d’Ivoire, 2016).

¹²⁶ A. A. Assiri, G. R. Yory, O. Deheuvelds, B. I. Kebe, Z. J. Keli, A. Adiko et A. Assa, « Les caractéristiques agronomiques des verges de cacaoyer (*Theobroma cacao* L.) en Côte d’Ivoire », Journal of Animal & Plant Sciences, 2009, vol. 2 issue 1 ; J. P. Colin et F. Ruf, « Une économie de plantation en devenir. L’essor des contrats de planter-partager comme innovation institutionnelle dans les rapports entre les autochtones et étrangers en Côte d’Ivoire », Revue Tiers Monde, 2011/3 n°207

¹²⁷ Aidenvironment, NewForesight, IIED et IFC, « Cocoa in Côte d’Ivoire », 2015

¹²⁸ Abdulsamad et al., “Pro-poor development and power asymmetries in global value chains, 2015

their turn, collect cocoa and sell it on to traders and grinders. *Pisteurs* are legally obliged to pay the minimum price set for the harvest by the State, which corresponds to the world price plus a 400-USD per ton markup called the Living Income Differential (see below).

Cocoa farmers are highly dependent on this cash crop for income. Some farmers diversify their economic activities to hedge against the risk of price fluctuations: along with cocoa, they cultivate other cash crop (for instance, they can farm rubber tree) or develop a non-agricultural activity (a small shop, real estate, transportation services, etc.).¹²⁹ Nonetheless, cocoa producers seem to remain highly specialised and therefore dependent on cocoa as a main source of income.

The majority of cocoa producers are believed to live below the poverty line. This is due to low yields and the limited surface area under cultivation, but it is also part of a vicious circle with negative economic, social and environmental consequences for the producers and their families. The lack of saving capacity, due to the low incomes, inhibits investment in the cocoa farms on the short term, and the resulting low yields and instability of cocoa incomes reinforce their choices not to invest in their farms over the medium run. After 15 to 20 years, cocoa trees' yields naturally decline and the tree becomes more and more vulnerable to diseases, reinforcing further this vicious cycle and pressuring towards the expansion of cocoa growing areas, and ultimately deforestation as one of the only leverages for farmers to maintain revenues.¹³⁰ In the end, the cocoa producers' children are not encouraged to take over the family cocoa farm. They choose either to swell the ranks of rural exodus or to cultivate other crops than cocoa.¹³¹ Several studies have confirmed that Ivorian farmers do not earn a living wage.¹³²

The current setup of cocoa commercialisation in Côte d'Ivoire is that of a public-private collaboration. In Côte d'Ivoire, after several years of a liberalisation, the cocoa sector is now back under a State regulation led by the *Conseil Café Cacao* which nonetheless gives important leeway to private actors (especially if compared to the neighbouring Ghana).¹³³ Back in the 1990s and early 2000s, a bold liberalisation of Côte d'Ivoire's cocoa sector had led to a drop in bean quality and in the premium paid on Ivorian cocoa, as well as deforestation as farmers expanded their cocoa production to cope with poverty, in a context of political instability.¹³⁴ In response to the crisis, the government organised a major reform in the 2010s, creating a semi-liberalised model for cocoa commercialisation. The reform included the following provisions:

- A quality control system regulated by the State,
- A guaranteed minimum price to producers equivalent to 60% of the FOB price, set by the State before the harvest season,
- A maximum tax level equivalent to 22% of the FOB price,

¹²⁹ Maxime Assi Tano, *Crise cacaoyère et stratégies des producteurs de cacao de la sous-préfecture de Meadji dans le sud-ouest ivoirien*, Thèse, Université de Toulouse, 2012

¹³⁰ J. P. Colin & F. Ruf, *Une économie de plantation en devenir. L'essor des contrats de planter-partager comme innovation institutionnelle dans les rapports entre les autochtones et étrangers en Côte d'Ivoire*, *Revue Tiers Monde*, 2011/3 n°207

¹³¹ BASIC, *The Dark side of chocolate*, 2016

¹³² World Bank, *Au pays du cacao: comment transformer la Côte d'Ivoire*, 2019; True Price, *The True Price of Cocoa-Progress Tonys Chocolonely*, 2018; Cocoa Barometer, *Necessary Farm Gate Prices for a Living Income: Existing Reference Prices are Too Low*, 2020

¹³³ Ecobank and Jeune Afrique, 2014

¹³⁴ F. Ruf et J.L. Agkpo, « Étude sur les revenus et les investissements des producteurs de café et de cacao en Côte d'Ivoire », May 2008

- An interprofessional organisation, the Conseil Café Cacao (CCC), in charge of enforcing a transparent institutional frame in order to reach a more consensual management of the cocoa sector between public and private actors.¹³⁵

The first reform – quality control – had a significant impact.¹³⁶ As for price control, the price paid to producers rose regularly until 2017/2018. This regulation system has enabled more stable prices for cocoa farmers country-wide, especially in times of negative price shocks, but is also associated with a lower share of export value accruing to cocoa farmers. To create sufficient value at the export level and guarantee a minimum farmgate price for all cocoa farmers in the country, a key leverage has been the guarantee of a homogeneous, stable and predictable quality of cocoa as well as the reliability of the supply.

As a result, Côte d'Ivoire is associated with a relatively homogeneous base of cocoa producers whose farm and household features are globally similar and who produce quite comparable lots of unsorted mixes of cocoa having consistent physical characteristics.

Recently, the Ivorian and Ghanaian governments have embarked on a new strategy to secure higher farmgate prices by putting into place a Living Income Differential (LID), which is a 400 USD premium per tonne on all cocoa beans leaving the country. The LID was to be put in place for the 2020/2021 campaign, but its rollout was rocky, with major international buyers accused of going shopping for cocoa in places other than Côte d'Ivoire and Ghana to avoid paying the LID.¹³⁷ This situation created a downward pressure on prices for cocoa from Côte d'Ivoire. By 2021, the premium for Ivorian cocoa was so low as to have wiped out a significant part of the LID (see Figure 51 below); the guaranteed farmgate price for the main campaign also dropped, from 1,000 FCFA in 2020/2021 to 850 FCFA in 2021/2022.¹³⁸

¹³⁵ World Bank, 2017, op. cit.

¹³⁶ The share of cocoa beans sold under Grade 1 and 2 (properly fermented and dried) rose from 81% in 2012/2013 to 95% in 2016/2017, and the humidity rate measured upon arrival in the warehouses or the factories lowered from 12% before the reform to 7,6%. Ibid.

¹³⁷ Confectionery News, « Hershey move of buying cocoa on futures market threatens LID agreement with Ghana and Cote d'Ivoire », 23 November 2020 ; AFP, « Ivory Coast cocoa producers end chocolate war with Hershey's », 5 December 2020 ; Jeune Afrique, « Cacao : « Le rapport de force entre pays africains et multinationales est en pleine recomposition » », 4 December 2020 ; EcoFin, « Ghana : Joseph Aidoo dénonce une tentative délibérée de certaines compagnies pour faire capoter le DRD », 21 November 2020 ; Bloomberg, « Top Cocoa Grower Says Chocolatiers Favor Profit Over Farmers », 25 November 2020 ; EcoFin, « Le géant américain de l'agroalimentaire Mondelez ne verserait pas le DRD sur le cacao (CCC) », 21 June 2021.

¹³⁸ EcoFin, « Côte d'Ivoire : le prix du kilogramme de cacao fixé à 825 Fcfa pour la saison principale 2021/2022 », 1 October 2021

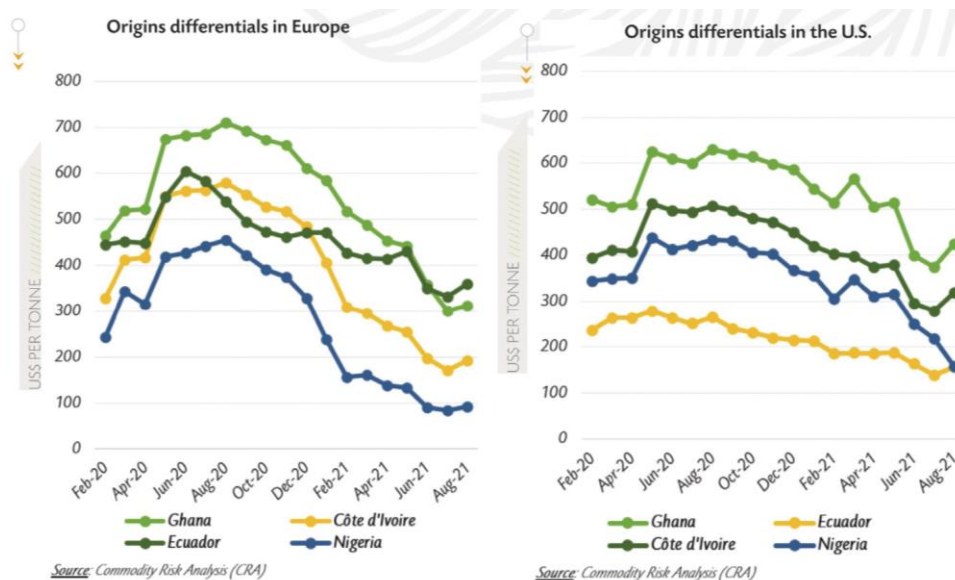


Figure 51. Evolution of country differentials in Europe and in the US, February 2020 to August 2021.
Source: ICCO August Cocoa Market Report 2021, cited in USDA AND IESC, "Global Cocoa Market Study", 2021

3.1.2. Key results on distribution of value, costs, taxes, and net margins (production to export)

In the following sections, we examine the breakdown of costs, taxes, and profit margins in the value chain, from production through to export (but before international freight) for Ivorian cocoa.

3.1.2.1. Conventional cocoa

Our estimates for 2020 illustrate that the share of value associated with cocoa cultivation is the result of the public commitment of the government to ensure that farmers receive at least 60% of the export price. Indeed, farmers captured 58% of the export price in the 2019/2020 season (see Figure 52).

Through the public regulation system in place, the rest of the chain is under strict control in terms of costs and margins, based on the official 'Bareme' set up each year by the Ivorian authorities, following an intense and organised process of discussions with the private actors involved in the collection, transport, warehousing and trading of cocoa. This 'Bareme' then serves as the benchmark for the Ivorian government to set up the reference farmgate price and the reference export price, the latter being implemented and controlled through a sophisticated system of auctions of export rights backed up by export contracts on the cocoa stock exchange futures market (which exporters have to provide in order to get the official approval needed to export each of their containers).¹³⁹ This system thus combines full privatisation with public control.

¹³⁹ Regarding cocoa farmers, the farmgate minimum price is controlled via approximately 160 public officers who control on the ground the receipts given by collectors/pisteurs to cocoa farmers which stipulate the price of the transaction (without cross-checking of the concrete amount of money they concretely received, except verbally with the farmers).

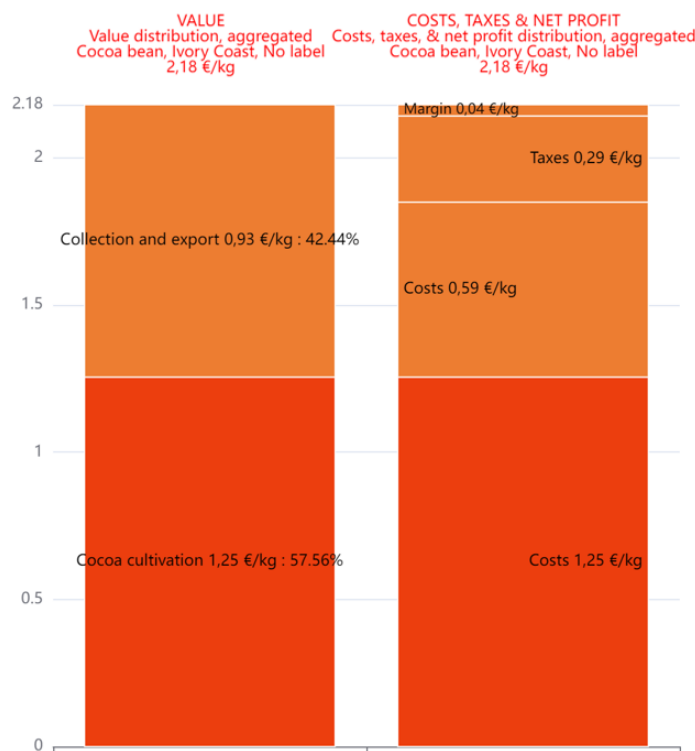


Figure 52. Distribution of value in Côte d'Ivoire (from farmers to export) in 2020 (harvest 2019/2020). Source: BASIC 2022

As a result, the total aggregated margins realised by these different actors are quite limited, amounting to approximately 2% of the FOB price (i.e. 0.04 euros/kg), while the costs of all the operations that sit between the farmers and exports amounts to 27% of the export price (0.6 euros/kg). The last part of the cocoa export chain corresponds to the taxes perceived by the Ivorian government (mainly through the 'Droit de Sortie Unique' and complementary taxes), which represent a similar share as the operational costs of transport, warehousing, and exports: the aggregated amount of Ivorian taxes thus amounted to 14% of the export price in 2020 (0.30 euros/kg).

To put in perspective the level of taxes perceived by the Ivorian public authorities, we have collected and compiled the publicly available data on the public expenses of the central government that can be directly linked to essential services in cocoa growing areas – education, health, housing, transport, the rule of law and support for agriculture – in proportion of the number of families that depend on cocoa for their living in the global population. To make these estimates, we have we relied on data published by the IMF in its report on Côte d'Ivoire, in particular the consolidation of the pro-poor spending of the Ivorian State. We have also extrapolated these expenditures to reflect unmet essential needs related to the lack of access to public infrastructure in cocoa communities - when indicators were available - based on the survey of the living standards of households in Côte d'Ivoire conducted by the National Statistics Institute¹⁴⁰.

The results of our calculations are summarised in the table below:

140 Institut National de la Statistique, Enquête sur le niveau de vie des ménages en Côte d'Ivoire, 2015

<i>Scope: Côte d'Ivoire</i>	Public spending in 2014	Extrapolated public spending in 2014
<i>Education</i>	819 bn FCFA	1 166 bn FCFA
<i>Health</i>	228 bn FCFA	239 bn FCFA
<i>Water, sanitation, energy</i>	180 bn FCFA	352 bn FCFA
<i>Roads and bridges</i>	139 bn FCFA	139 bn FCFA
<i>Social spending</i>	25 bn FCFA	25 bn FCFA
<i>Agriculture and rural development</i>	140 bn FCFA	140 bn FCFA
<i>Rule of law</i>	231 bn FCFA	231 bn FCFA
<i>Total</i>	1 764 bn FCFA	2 293 bn FCFA
<i>Total spending attributable to cocoa sector (in proportion to population)</i>	637 bn FCFA	811 bn FCFA
<i>Total contributions from the cocoa sector (taxes ...)</i>	428 bn FCFA	

Figure 53. Estimated expenditures for essential services in Ivorian cocoa communities.

Source : BASIC, based on IMF & Republic of Côte d'Ivoire

These estimates tend to show that the level of taxes levied on cocoa, although quite high (and highest among all producer countries analysed) would not be enough to cover the current public expenses of the government to give cocoa communities access to essential services (and much below what would be required to ensure full access is guaranteed).

At the level of cocoa farmers, as the vast majority of them do not earn a living wage and a significant part remain below the poverty line (even below the absolute poverty line for some of them).

This situation has been most recently objectified by the study conducted by the World Bank in 2019. Their data showed that approximately 54.9% of cocoa producers earn less than 757 FCFA per day (i.e. 1.15 euros per day), which corresponds to the poverty line set by the authorities.¹⁴¹ Another study conducted by True Price in 2018 on behalf of Tony's Chocolonely estimated that only 9% of families managed to generate an income above what they considered to be a living income, which was estimated by the researchers at 4658 euros per year for a family of 8 people.¹⁴² This last estimate has been further confirmed by a more recent study conducted for the Cocoa Barometer in January 2020 estimates the living income for cocoa farmers in Côte d'Ivoire at 5,448 USD (i.e. 4,860 euros) per household per year.¹⁴³ Most recently, the study on living income in rural Côte d'Ivoire conducted in 2022 by the Ivorian Center for Socio Economic Research (CIRES) and supported by the GIZ confirmed these numbers and showed that an estimated 87% of cocoa farmers households lie below the living income threshold.¹⁴⁴

Thus, we have considered that they were not able to cover the costs of a decent living for their families. Hence, no margin is visible at their stage of the chain.

141 World Bank, *Au pays du cacao : comment transformer la Côte d'Ivoire*, 2019

142 True Price, *The True Price of Cocoa-Progress Tonys Chocolonely*, 2018.

143 Cocoa Barometer, *Necessary Farm Gate Prices for a Living Income: Existing Reference Prices are Too Low*, 2020

144 CIRES, *Living Income Report - Rural Côte d'Ivoire - Cocoa growing areas*, 2022

3.1.2.2. Certified cocoa

According to statistics published prior to the UTZ/RainforestAlliance merger, Côte d'Ivoire was by far the first origin of certified cocoa for:¹⁴⁵

- UTZ (50% of its worldwide certified cocoa area in 2019)
- Rainforest (49% of its worldwide certified cocoa area in 2019)
- Fair Trade (69% of its worldwide certified cocoa area in 2019)

Regarding organic certification, the area is very limited, 6360 Ha in 2019, but has tripled since 2018.¹⁴⁶

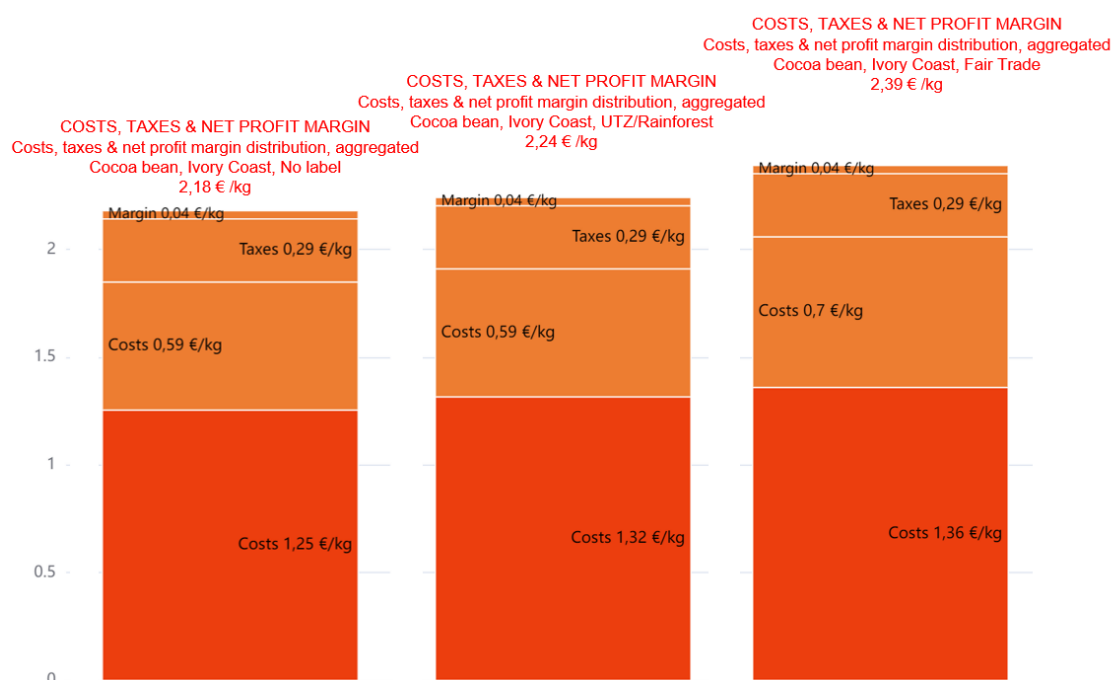


Figure 54. Distribution of value of conventional, UTZ/Rainforest & Fair Trade cocoa in Côte d'Ivoire in 2020 (2019/2020 harvest) at the export stage. Source: BASIC 2022

The results of our estimates highlight that the two certified value chains – Rainforest/UTZ and Fair Trade – are not so different from one another. Indeed, these certified value chains appear to be variants/extensions of the conventional set up. The main benefit received by farmers consists in the premium associated with both certifications. In addition, in the case of Fair Trade, the cooperative also benefits from approximately half of the Fair Trade premium which is collectively invested in services to communities (education, health, gender projects...) and in strengthening the capacity of the producer organisation.¹⁴⁷

As reflected in our estimates, the final price received by farmers is increased by approximately 7% for the two certifications when compared to conventional: 1.32 euros/kg for UTZ/Rainforest and 1.36 euros/kg for Fair Trade in comparison with 1.25 euros/kg in conventional.

In the case of Fairtrade, the cooperative also benefits from approximately ½ of the Fairtrade premium which is collectively invested in services to communities (education, health, gender projects...) and

¹⁴⁵ <https://standardsmap.org/en/trends> accessed on July 28th, 2022

¹⁴⁶ Ibid.

¹⁴⁷ Fair Trade International, Cocoa Monitoring Report, 2017

in strengthening the capacity of the producer organisation.¹⁴⁸ This explains why the costs at the collection and transport stage is higher in the case of Fairtrade, as they include these collective and community investments. In addition, different qualitative studies commissioned in recent years by the sustainable certifications (especially UTZ/Rainforest) also indicate a small increase in yields.¹⁴⁹

Recent reports have brought to perspective these conclusions. the field research conducted by a student of the University of California Davis which gathered data from 301 cocoa producers associated with 35 different cooperatives in several regions of the country (counties of Adzopé, Divo and Soubré). Amongst these producers, 76 of them sold their cocoa exclusively through the conventional chain (control group) and 225 were certified as Fairtrade, Rainforest Alliance or UTZ (125 with a single certification, 75 with two certifications and 25 with all three certifications)¹⁵⁰.

Data from field research shows very few differences between yields and incomes amongst the producers for the 2013-2014 harvest (see table below).

	Conventional producers	Certified producers
Average plot size	5,69 ha	5,84 ha
Average yield	444,12 kg/ha	463,01 kg/ha
Average sale price	729,82 FCFA/kg	760,81 FCFA/kg
Annual incomes from cocoa sales	1 424 243 FCFA	1 733 973 FCFA
Annual global incomes (incl. other activities)	1 809 500 FCFA	1 923 996 FCFA

Figure 55. Incomes' estimates for conventional and certified (sustainable and fair trade) producers
Source: BASIC, based on data from M. A. Schweisguth, University of California Davis (2015)

These findings have been corroborated by the impact study assessment of UTZ certification (now merged with Rainforest) conducted in 2017 in Côte d'Ivoire by researchers of Wageningen University¹⁵¹.

It has been conducted on a sample of 426 farmers randomly distributed across the country in 3 agro-ecological zones (of which 339 have been UTZ certified since at least 2013, 79 have never been certified and the others are newly certified).

The results of the study show that income per household member and per day for the year 2017 was similar for UTZ and non-UTZ cocoa farmers (see table below) and reaching the very low level of 1.25 USD per day (although UTZ farmers had significantly higher net cocoa income per hectare in 2017 than non-UTZ farmers).

¹⁴⁸ Fairtrade International, Cocoa Monitoring Report, 2017

¹⁴⁹ Ingram, V., van Rijn, F., Waarts, Y., Dekkers, M., de Vos, B., Koster, T., Tanoh R., Galo A. 2017. Towards sustainable cocoa in Côte d'Ivoire. The impacts and contribution of UTZ certification combined with services provided by companies. Wageningen Economic Research, 2018. Ingram V. et al., Impact of UTZ Certification of cocoa in Ivory Coast: Assessment framework and baseline, Wageningen University-CIRAD-ALP, 2014

¹⁵⁰ M. A. Schweisguth, Evaluating the Effects of Certification on Smallholders' Net Incomes, with a Focus on Cacao Farmers in Cooperatives in Côte d'Ivoire, University of California Davis, Master Thesis, 2015

¹⁵¹ Ingram, V., van Rijn, F., Waarts, Y., Dekkers, M., de Vos, B., Koster, T., Tanoh R., Galo A. 2017. Towards sustainable cocoa in Côte d'Ivoire. The impacts and contribution of UTZ certification combined with services provided by companies, 2018

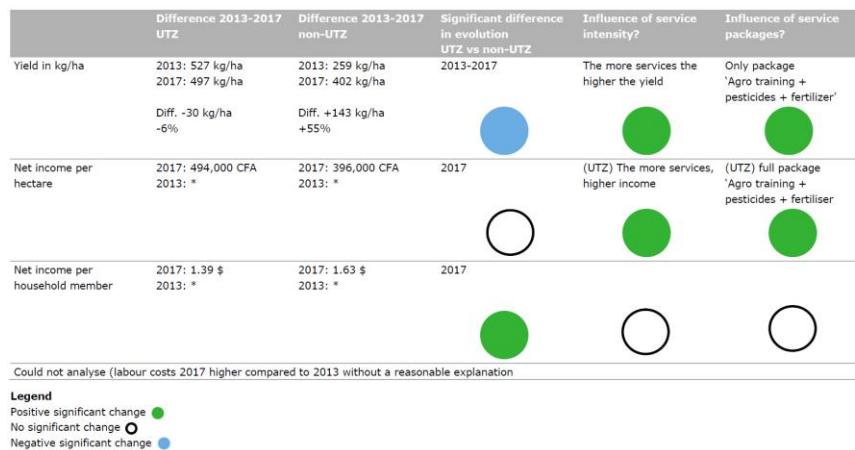


Figure 56. Impact of UTZ certification on cocoa farmers in 2017 in Côte d'Ivoire Source: Wageningen (2018)

Other studies corroborate the low impact of sustainable and fair trade certifications even if they showed that, on average, yields have increase by 10%¹⁵² up to 30%¹⁵³ in comparison with conventional cocoa value chains.

This result is low in comparison with other producing countries such as Ecuador. If yields do not significantly increase in cocoa plantations with sustainable and fair trade certifications, data show that yields increase much more when the producer holds multiple certifications¹⁵⁴. This can lead us to think that once the producer is familiarised with the promoted good agricultural practices (GOP), yields tend to increase.

The limited yields' increase can be even more deceptive as certifications require an important investment in workforce¹⁵⁵. As most of the cocoa trees in Côte d'Ivoire are older and the producers then have to invest a lot of time and energy in their work for a very low increase in yields in the end. These low percentage increases also call into question the efficiency of the agricultural practices promoted by the sustainable and fair trade standards and their appropriation by the producers¹⁵⁶.

In the end, according to existing studies, the higher revenue of certified cocoa producers (between 6% and 15% above conventional cocoa) is not enough to enable most of the farmers to earn a living income for their families.¹⁵⁷

More details and explanations on the specificities of Ivorian cocoa can be found in the Chapter 3 of the [2018 version of the study](#) on the distribution of value, cost, taxes and margins of French cocoa / chocolate value chains.¹⁵⁸

¹⁵² Lemeilleur S., Y. N'Dao et F. Ruf, « The productivist rationality behind a sustainable certification process: Evidence from the Rainforest Alliance in the Ivorian cocoa sector », 2015

¹⁵³ Ingram V. et al., Impact of UTZ Certification of cocoa in Ivory Coast: Assessment framework and baseline, Wageningen University-CIRAD-ALP, 2014

¹⁵⁴ V. Ingram & al., « Impact of UTZ Certification... », op. cit.

¹⁵⁵ S. Lemeilleur, Y. N'Dao & F. Ruf, « The productivist rationality behind a sustainable certification process: Evidence from the Rainforest Alliance in the Ivorian cocoa sector », 2015.

¹⁵⁶ F. Ruf, Y. N'Dao & S. Lemeilleur, « Certification... », op. cit.

¹⁵⁷ True Price, Cocoa Farmer Income: The household income of cocoa farmers in Côte d'Ivoire and strategies for improvement, 2018. Cocoa Barometer, Necessary Farm Gate Prices for a Living Income: Existing Reference Prices are Too Low, 2020

¹⁵⁸ FAO and BASIC, "Comparative study on the distribution of value in European chocolate chains", 2020, p.156 https://lebasic.com/wp-content/uploads/2020/07/BASIC-DEVCO-FAO_Cocoa-Value-Chain-Research-report_Advance-Copy_June-2020.pdf

3.2. Ghana

Disclaimer: the year of reference for the data in this section is 2020. Both the report and the model are based on exports data from January to December 2020, corresponding almost only to the 2019/2020 harvest campaign. The implementation of the Living Income Differential (LID) starting from October 2020 would have impacted only the last trimester of 2020. Hence the consequences of the LID on the value chain of the cocoa and the exports can hardly be seen in the statistics which prevented the BASIC from analysing the LID's impacts.

3.2.1. Main characteristics of the Ghanaian cocoa sector

Ghana plays an important role on the international cocoa market being the second largest producer of cocoa beans in the world, after Côte d'Ivoire, and representing about 20% of global production (an estimated 700 to 900 000 tonnes annually over the past decade).^{159,160} In Ghana, cocoa makes up about 20-25% of the total export receipts, coming second after mineral. It also accounts for around 7% of the country's GDP.¹⁶¹ Cocoa is very important to Ghana's economy, in terms of rural livelihoods, foreign exchange earnings and employment, as well as being a key driver of sector growth.

90% of cocoa in Ghana is produced by smallholder farmers whose farms sizes usually do not exceed 4 hectares.¹⁶² Yields are relatively low in Ghana (400-450 kg/ha, a similar level to Côte d'Ivoire), due to ageing trees, pest and disease infestation and inadequate agricultural practices.¹⁶³ According to COCOBOD, the estimated total number of smallholder cocoa farmers in Ghana is around 1 million, with 500,000 cocoa farm units and a cultivated area of 1.6 million hectares. The cocoa production delivers 70-100% of the income of farmer households¹⁶⁴ and these smallholder cocoa farmers provide a livelihood for over 4 to 6 million people (25–30% of the population).^{165,166}

In the 1990's, Ghana entered a process of semi liberalisation of its cocoa sector. The government implemented bold economic reforms in 1983 and cocoa sector reform in 1993 but refused to dismantle its cocoa marketing board as was recommended by the International Monetary Fund and World Bank. Some academics called the resulting system a “meso-model” of partial liberalisation of the cocoa sector which is still in operation today¹⁶⁷ (a model which is very close to the pre-liberalisation situation in Côte d'Ivoire):

- A quality control system regulated by the State.
- Services and input supply to production.

¹⁵⁹ International Cocoa Organisation (ICCO), ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XLVIII, No2, Cocoa year 2021/22, 31 May 2022: https://www.icco.org/wp-content/uploads/Production_QBCS-XLVIII-No.-2.pdf

¹⁶⁰ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

¹⁶¹ World Bank, Ghana Agriculture Sector Policy Note - 2017

¹⁶² ETH, Assessing the resilience of the cocoa value chain - 2016

¹⁶³ World Bank, Ghana Agriculture Sector Policy Note - 2017

¹⁶⁴ ETH, Assessing the resilience of the cocoa value chain - 2016

¹⁶⁵ Kwaku Ofosu-Asare, The “Meso-Model” of Liberalisation: a Salvation for Ghana's cocoa Industry? - 2018

¹⁶⁶ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

¹⁶⁷ Kwaku Ofosu-Asare, The “Meso-Model” of Liberalisation: a Salvation for Ghana's cocoa Industry? - 2018

- A producer price set by the State before the harvest season and equivalent to at least 70% of the “net-FOB” price.
- A leader position on the purchase of cocoa beans from farmers through the state-owned company “Produce Buying Company”. The private sector is free to enter this stage of the chain and collect cocoa beans from farmers.
- A state monopoly of cocoa bean exports and cocoa bean supply to domestic processors.
- The local processing of cocoa beans in Ghana is fully liberalised, Barry Callebaut, Cargill and Olam make up more than 70% of the cocoa processing volumes with a total installed capacity of about 431,000 metric tonnes.
- A regulation of the private actors by the State.

The Cocoa marketing Board (COCOBOD) is in charge of the majority of this regulation. Its functions include production, research, extension, internal and external marketing and quality control of cocoa. As in Côte d'Ivoire, this regulation system has enabled more stable prices for cocoa farmers country-wide, especially in times of negative price shocks, but is also associated with a slightly lower share of export value accruing to cocoa farmers, but most of the time higher than its neighbour Côte d'Ivoire. To create sufficient value at the export level and guarantee a minimum farmgate price for all cocoa farmers in the country, a key leverage has been the guarantee of a homogeneous, stable and predictable quality of cocoa as well as the reliability of the supply.

Around 60-80% of cocoa is pre-sold by the Cocoa Marketing Company (CMC). Ghanaian cocoa receives a 4-6% price premium on the international market due to the consistent superior quality of the cocoa beans.¹⁶⁸ In complement, the COCOBOD maintains a mitigation fund that appears to be the main available and effective tool to buffer market volatility, in particular potential price falls.

As in Côte d'Ivoire, Ghana is associated with a relatively homogeneous base of cocoa producers whose farm and household features are globally quite similar and who produce comparable lots of unsorted mixes of cocoa having consistent physical characteristics.

Ghana and Côte d'Ivoire also teamed up in 2019 to implement a Living Income Differential (LID), an additional sum of 400 USD to be paid per each ton of cocoa to ensure a higher farm gate price representing 70% of the FOB price. It is unclear to what extent the LID has been disbursed to farmers, especially in a context of plummeting country differentials (see Côte d'Ivoire section above).

3.2.2. Key results on distribution of value, costs, taxes, and net margins (production to export)

In the following sections, we examine the breakdown of costs, taxes, and profit margins in the value chain, from production through to export (but before international freight) for Ghanaian cocoa.

¹⁶⁸ ETH, Assessing the resilience of the cocoa value chain - 2016

3.2.2.1. Conventional cocoa

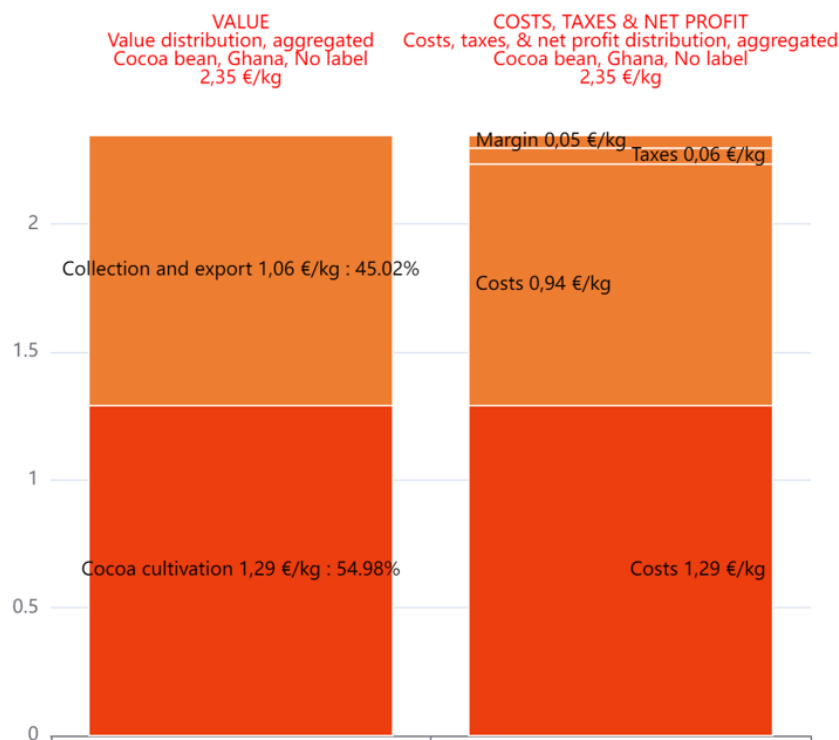


Figure 57. Distribution of value in Ghana (from farmers to export) in 2020 (2019/2020 harvest). Source: BASIC, 2022

Our estimates for 2020 illustrate that farmers captured 55% of the export value (see the detailed percentages in the diagram above). This is a decrease from our previous estimates that the price received by cocoa farmers amounted to more than 70% of the export price in 2018.¹⁶⁹

This may be explained by the quality control system put in place by the COCOBOD which ensures a high consistency of the quality of Ghanaian beans which is better valued on the world market than neighbouring cocoa producing countries.

A recent study conducted by the Ghanaian research institute Imani¹⁷⁰ provides in-depth insights on these cost components, which we have used for our estimates (see above diagram). The figures published in this study tend to show that LBCs generate a margin of only 6.67% on the collection and transport of cocoa beans, whereas the COCOBOD apparently fully allocates the gross margin it generates to:

- cover its own costs of operations (logistics, warehousing...)
- support the sector through investments in financing, inputs (fertilisers...) and infrastructure (roads...)
- build up stabilization fund (which has been used intensively in 2018 to compensate for the fall of international cocoa prices and sustain the minimum farmgate price).

¹⁶⁹ FAO and BASIC, "Comparative study on the distribution of value in European chocolate chains", 2020, p. 188: https://lebasic.com/wp-content/uploads/2020/07/BASIC-DEVCO-FAO_Cocoa-Value-Chain-Research-report_Advance-Copy_June-2020.pdf

¹⁷⁰ IMANI, Exploring revenue management & producer pricing mechanism within Ghana's cocoa sector, 2019

In terms of public taxes, although their level seems inferior in Ghana than Côte d'Ivoire, there are actually several budget lines of the COCOBOD (e.g. investments in public infrastructure) which are taken in charge directly by the central Government in Ghana and financed by the taxes on cocoa. As a result, some of the expenses of the COCOBOD could be considered as reducing the burden of necessary spending from the Ghanaian government, and a direct comparison of both level of taxes would be misleading.

At the level of cocoa farmers, as the vast majority of them do not earn a living wage¹⁷¹ and a significant part remain below the poverty line.

Quite similarly to the situation in Côte d'Ivoire, the lack of saving capacity, due to the low incomes, inhibits investment in the cocoa farms on the short term, and the resulting low yields and instability of cocoa incomes reinforce their choices not to invest in their farms over the medium run. After 15 to 20 years, cocoa trees' yields naturally decline and the tree becomes more and more vulnerable to diseases, reinforcing further this vicious cycle and pressuring towards the expansion of cocoa growing areas, and ultimately deforestation as one of the only leverages for farmers to maintain revenues¹⁷². In the end, the cocoa producers' children are not encouraged to take over the family cocoa farm. They choose either to swell the ranks of rural exodus or to cultivate other crops than cocoa¹⁷³.

This situation has been most recently objectified by a study conducted by the World Bank in 2018, poverty rates among cocoa farmers in Ghana reach approximately 24%¹⁷⁴. Another study conducted the same year by True Price on behalf of the Tony's chocolaterie Brand estimated that on average Ghanaian cocoa farmers' households earned in 2017 an annual income of 10,844 GHS per year, which is almost twice less than what they considered to be a living income, which was estimated by the researchers at 18,854 GHS or 3,800 euros per year for a family of 6 people.

This last estimate has been further confirmed by a more recent study conducted for the Cocoa Barometer in January 2020 estimates the living income for cocoa farmers in Côte d'Ivoire at 3,948 USD (i.e. 3,520 euros) per household per year¹⁷⁵.

Thus, we have considered that they were not able to cover the costs of a decent living for their families. Hence, no margin is visible at their stage of the chain.

¹⁷¹ Cocoa Barometer, Necessary Farm Gate Prices for a Living Income: Existing Reference Prices are Too Low, 2020

¹⁷² J. P. Colin & F. Ruf, « Une économie de plantation en devenir. L'essor des contrats de planter-partager comme innovation institutionnelle dans les rapports entre les autochtones et étrangers en Côte d'Ivoire », *Revue Tiers Monde*, 2011/3 n°207

¹⁷³ BASIC, *The Dark side of chocolate*, 2016

¹⁷⁴ World Bank, *Ghana: Priorities for ending poverty and boosting shared prosperity (systematic country diagnostic)*, 2018

¹⁷⁵ Cocoa Barometer, Necessary Farm Gate Prices for a Living Income: Existing Reference Prices are Too Low, 2020

3.2.2.2. Certified cocoa

According to statistics published prior to the UTZ/Rainforest Alliance merger, Ghana stands out as the second biggest origin of certified cocoa for:¹⁷⁶

- UTZ (28% of its worldwide certified cocoa area in 2019)
- Rainforest (40% of its worldwide certified cocoa area in 2019)
- Fair Trade (20% of its worldwide certified cocoa area in 2019)

As for Côte d'Ivoire, the organic certification development in the country is very limited with a total area of 18,260 Ha in 2019, but quickly increasing (organic cocoa area almost doubled since 2018).¹⁷⁷

Similarly to Côte d'Ivoire, the results of our estimates tend to show that the two certified value chains – Rainforest/UTZ and Fairtrade – are not so different from one another, even when compared to the conventional cocoa value chains.

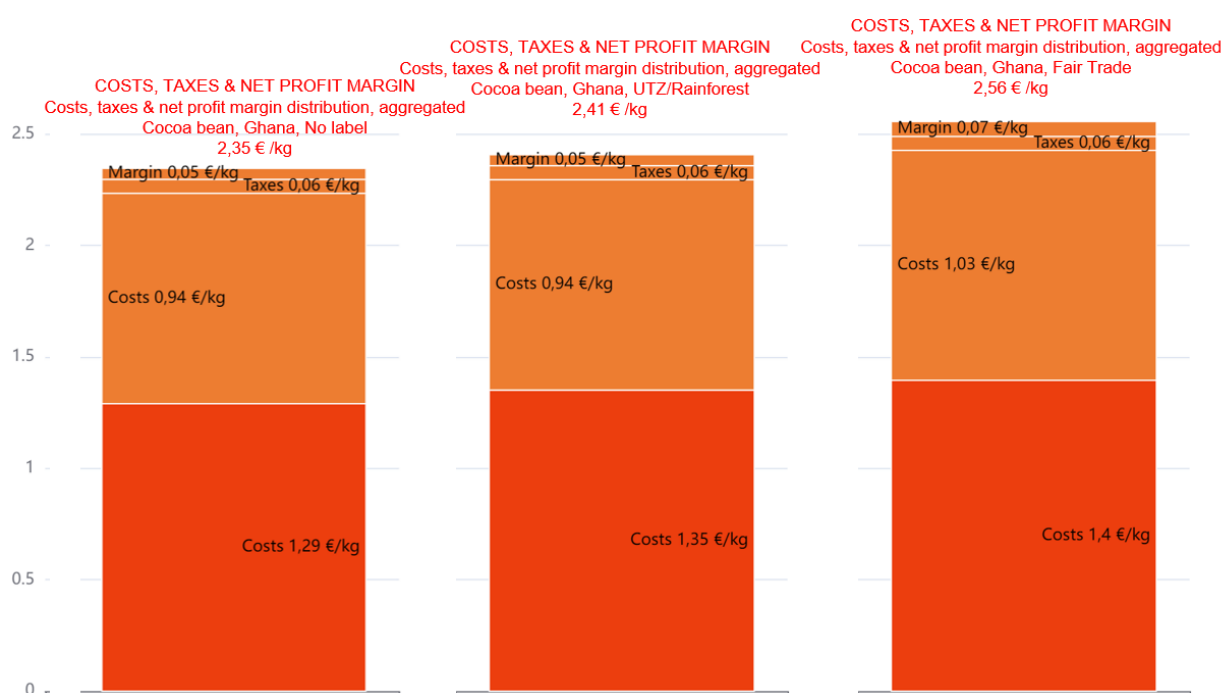


Figure 58. Distribution of value of Conventional, UTZ/Rainforest and Fair Trade cocoa in Ghana (from farmers to export) in 2020 (2019/2020 harvest). Source: BASIC, 2022

The main benefit farmers get from the Rainforest/UTZ as well as Fairtrade seem to lie in the premium they receive. The premium received by farmers for Rainforest/UTZ is slightly higher than that for Fair Trade (but the latter is often split into two with only half going to farmers and the remainder being invested by the cooperative in services to communities).¹⁷⁸ Prices to the producer are mildly higher than conventional prices: UTZ/Rainforest and Fair Trade respectively fetch 1.35 and 1.40 euros/kg as against 1.29 euros/kg in conventional (approximately 5% and 9% increase respectively).

¹⁷⁶ <https://standardsmap.org/en/trends> accessed on July 28th, 2022

¹⁷⁷ Ibid.

¹⁷⁸ Fair Trade International, Cocoa Monitoring Report, 2017

As for Côte d'Ivoire, different qualitative studies commissioned over the past years by the sustainable certifications (especially UTZ/Rainforest) indicate a small increase in yields and improvement of living conditions¹⁷⁹. The same has been documented for Fairtrade.

The limited increase of yields can be even more deceptive for farmers as certifications require an important investment in workforce¹⁸⁰. As most of the cocoa trees in Ghana are older and the producers then have to invest a lot of time and energy in their work for a very low increase in yields in the end. These low percentage increases also call into question the efficiency of the agricultural practices promoted by the UTZ/Rainforest and fair trade standards and their appropriation by the producers¹⁸¹.

As a result, according to existing studies, this small price increase is not enough to enable most of the farmers to earn a living income.¹⁸² In this context, the main benefit farmers get from the Rainforest/UTZ as well as Fairtrade seem to lie in the premium they receive, as it is also the case in Côte d'Ivoire. The main difference between the two schemes is thus attached to this Premium, as their respective social and environmental conditions are relatively similar:

- A lower Premium amount for Rainforest/UTZ (approximately 0.07 USD/kg on average) which is directly paid by the buyer to producers, but not systematically as often related to the quality of the cocoa produced,
- A higher Premium amount for Fairtrade (0.10 USD/kg in 2018¹⁸³) which is paid by the buyer to the cooperative, over which the latest monitoring and evaluation data published by Fairtrade¹⁸⁴ tend to show that around half is transmitted to farmers, the rest being collectively invested by the cooperative in services to communities (education, health, gender projects...) and in strengthening the capacity of the producer organisation itself¹⁸⁵.

More details and explanations on the specificities of Ghanaian cocoa can be found in the Chapter 3 of the [2018 version of the study](#) on the distribution of value, cost, taxes and margins of French cocoa / chocolate value chains.¹⁸⁶

¹⁷⁹ V. Ingram & al., « Impact of UTZ Certification... », op. cit.

¹⁸⁰ S. Lemeilleur, Y. N'Dao & F. Ruf, « The productivist rationality behind a sustainable certification process: Evidence from the Rainforest Alliance in the Ivorian cocoa sector », 2015.

¹⁸¹ F. Ruf, Y. N'Dao & S. Lemeilleur, « Certification... », op. cit.

¹⁸² Cocoa Barometer, Necessary Farm Gate Prices for a Living Income: Existing Reference Prices are Too Low, 2020

¹⁸³ <https://www.fairtrade.org.uk/Media-Centre/News/December-2018/Cocoa-farmers-to-earn-more-through-a-higher-Fairtrade-Minimum-Price> retrieved on March 25th, 2020

¹⁸⁴ Fairtrade International, Cocoa Monitoring Report, 2017

¹⁸⁵ Fairtrade International, Cocoa Monitoring Report, 2017

¹⁸⁶ FAO and BASIC, "Comparative study on the distribution of value in European chocolate chains", 2020, p. p179

3.3. Cameroon

3.3.1. Main characteristics of the Cameroonian cocoa sector

With a production in 2020 of approximately 280,000 tonnes,¹⁸⁷ Cameroon is tied with Nigeria for the position of the world's 4th-largest producer of cocoa (after Côte d'Ivoire, Ghana, and Ecuador). Its production has increased in recent years, from an average of 250,000 tonnes in the late 2010s to 290,000 tonnes in the year elapsed between August 1st, 2020 and July 15th, 2021.¹⁸⁸

Cocoa cultivation in Cameroon brings together more than 50% of the agricultural population and covers between 400,000 and 600,000 hectares.¹⁸⁹ The estimate of the number of cocoa farmers varies widely depending on the source: from 500,000 producers to nearly 1 million small producers, and between 300,000 and 600,000 households.¹⁹⁰ Yields are between 350 and 450 kg per hectare.

86% of cocoa production in Cameroon is provided by small producers (less than 3 hectares per household), the majority (84%) cultivate cocoa under shade. There are also some medium producers in the country (approximately 12 hectares) and a few large ones (approximately 25 hectares), a model that apparently does not manage to reach its breakeven point.

Cocoa farmers in Cameroon have the choice between several possibilities for selling their beans:

- The 'cozers' who are small informal buyers,
- Intermediate buyers,
- Cooperatives that channel a bit less than 40% of the total cocoa production but are in a difficult position. It is difficult to know the number of producers who are members of cooperatives because there is a very high volatility in membership. Any cocoa farmer can access it if they wish, and the price of shares to join cooperatives are affordable. However, exchange services are not always provided and trust between the producer and the cooperative's representative is sometimes lacking.¹⁹¹

Since the 2010s, the average price offered to producers corresponds to roughly 66% of the FOB price, with a slight downwards dip in the late 2010s. And most recently, the cocoa production has been affected by the drop in international prices and unrest in the Southwest region.

While State support was massive until the 1980s, it was replaced by a series of public organisations that have para-fiscal and budgetary revenue to carry out certain public service missions or lead projects for more ad hoc interventions. However, coordination of public action is weak, and the public support reaches only a small number of producers.¹⁹²

¹⁸⁷ International Cocoa Organisation (ICCO) - [ICCO Quarterly Bulletin of Cocoa Statistics, Vol. XLVIII, No2, Cocoa year 2021/22, 31 May 2022](https://www.icco.org/wp-content/uploads/Production_QBCS-XLVIII-No.-2.pdf); https://www.icco.org/wp-content/uploads/Production_QBCS-XLVIII-No.-2.pdf

¹⁸⁸ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun – 2020 and BusinessInCameroon.com, "Cocoa: 2020-2021 has been a record-breaking season, the NCCB says", 23 August 2021 and BusinessInCameronn.com, "Cameroon cocoa production witnesses a 12% rise," 11 August 2021, cited by Cameroon National Shippers' Council, <http://t.ly/aJQ7>

¹⁸⁹ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

¹⁹⁰ Ibid.

¹⁹¹ Ibid.

¹⁹² Ibid.

Liberalisation has had positive effects on production: doubling of the volumes produced between 1993 and 2013, in particular due to the development of competition between firms and intermediaries who offer attractive prices to producers to ensure their supply.¹⁹³

As of 2019, the final destination of cocoa production in Cameroon can be divided into 4 categories:¹⁹⁴

- 54% is exported as non-certified dry beans (131,000 tonnes in 2018-19) which is still the dominant chain in Cameroon.
- 23% is exported as certified dry beans (55,000 tonnes in 2018-19), which represents a new set up which has emerged in recent years and is growing rapidly thanks to investments by multinational companies.
- 22% is processed in Cameroon to be exported in the form of cocoa mass by Barry-Callebaut (around 53,200 tonnes in 2018-19).
- less than 0.01% is consumed locally (2,300 tonnes in 2018-19).

3.3.2. Key results on distribution of value, costs, taxes, and net margins, (production to export)

In the following sections, we examine the breakdown of costs, taxes, and profit margins in the value chain, from production through to export (but before international freight) for Cameroonian cocoa.

3.3.2.1. Conventional cocoa

According to our model of the cocoa value chain, the share of value associated with cocoa cultivation in 2020 is slightly higher than the long-term trend of 66% of the export price (taking into account the existence of an ‘informal tax’ levied on cocoa farmers, as documented in the recent research work commissioned by the European Commission).¹⁹⁵ In 2020, farmers have captured approximately 72% of the export price. The level of taxation is significant, as a result of the combination of both the specific cocoa tax and the general taxation (the Value Added Tax not being refunded anymore). As a result, taxes represent 0.18 euros/kg i.e. more than 10% of the FOB export price of cocoa beans (the second highest among the 5 countries analysed).

At the level of cocoa farmers, as the vast majority of them do not earn a living wage¹⁹⁶ and remain below the poverty line. This has been most recently confirmed by the study on living income in rural Ghana conducted in 2020 by the University of Ghana and supported by the GIZ which showed that an estimated 83% of cocoa farmers households lie below the living income threshold.¹⁹⁷

Thus, we have considered that they were not able to cover the costs of a decent living for their families. Hence, no margin is visible at their stage of the chain.

¹⁹³ Ibid.

¹⁹⁴ Ibid.

¹⁹⁵ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun, 2020

¹⁹⁶ Cocoa Barometer, Necessary Farm Gate Prices for a Living Income: Existing Reference Prices are Too Low, 2020

¹⁹⁷ University of Ghana, Living Income Report - Rural Ghana - Cocoa growing areas, 2022

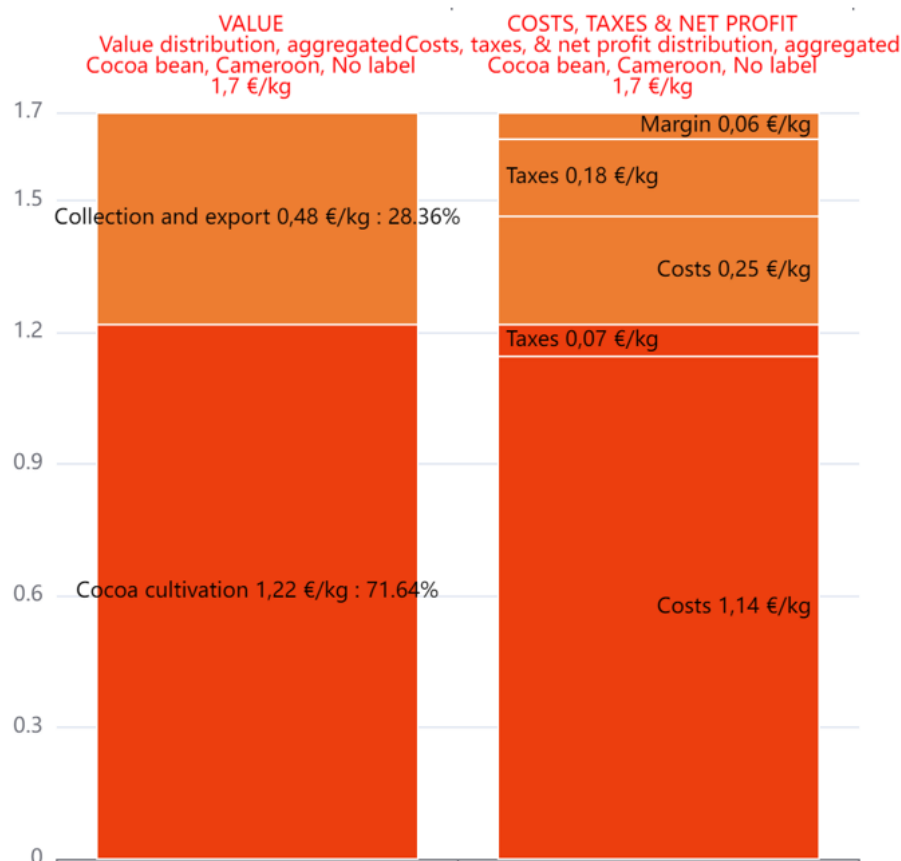


Figure 59. Distribution of value in Cameroon (from farmers to export) in 2020 (2019/2020 harvest). Source: BASIC, 2022

3.3.2.2. Certified cocoa

In 2019, 54% of the cocoa beans is exported as non-certified, 23% is exported as certified and 22% is processed in Cameroon to be exported in the form of cocoa mass. The only independent certification in the country appears to be UTZ/Rainforest and covers a bit more than 60,000 Ha in 2020.

However, information is scarce on the prices and premium received by farmers (which is *a priori* very close to the situation documented in both Côte d'Ivoire and Ghana), and available data was too limited not enable us to make estimates on certified cocoa value chains. Additional research work in this area would be needed, especially in the context of the recently increasing importance of certified schemes in the Cameroonian cocoa sector.

More details and explanations on the specificities of Cameroonian cocoa can be found in the Chapter 3 of the [2018 version of the study on the distribution of value, cost, taxes and margins of French cocoa / chocolate value chains](#).¹⁹⁸

¹⁹⁸ FAO and BASIC, "Comparative study on the distribution of value in European chocolate chains", 2020, p. 216

3.4. Nigeria

3.4.1. Main characteristics of the Nigerian cocoa sector

Nigeria's production of cocoa stood at 290,000 tonnes in the 2020-2021 crop year, making it tied with Cameroon for the position of the world's 4th largest producer country.^{199,200} The Nigerian cocoa sector is dominated by smallholder farmers numbering at 300,000-350,000 with some commercial plantations.²⁰¹ An estimated 1.4 million people depend on cocoa for their livelihood in Nigeria.²⁰²

The cocoa sector is an important player in the Nigerian economy. Cocoa is the second contributor to the country's GDP and the first export commodity after crude oil.^{203 204} It is also the second source of foreign exchange after crude oil.²⁰⁵ Cocoa is mostly sold in bean form: reports consider that cocoa beans represent 80% to 90% of the total volume exported, the remainder being divided into cocoa butter and cocoa paste.²⁰⁶

The average cocoa farm size in Nigeria is very small, typically 1 to 2.5 hectares of cocoa (with shading crops) and sometimes additional hectares of other crops. Yield stands approximately between 300kg and 400kg per hectare, a relatively low figure. It is extremely common for farmers to contract labourers to assist with farm work, especially at peak times of the harvest.

Farmer cooperatives are reportedly only mildly developed: a Nigerian cocoa expert interviewed in 2022 stated that although there are no official statistics, a reasonable estimate would be that 30% of cocoa farmers are organised in proper cooperatives with an elected board and a paid manager, while the remainder are organised as "small groups" who lack formal leadership and whose main characteristic is loyalty to a single buyer.²⁰⁷

The Nigerian cocoa market was under state control until 1986, when Structural Adjustment Programmes initiated by the World Bank led to the dismantling of the Nigerian Cocoa Board. In its place, the government licensed approximately 120 Licensed Buying Agents (LBAs) who purchase cocoa through field officers called 'facteurs.' In addition to the LBAs, there are merchants working for processors and exporters who may purchase and resell cocoa on a smaller scale.²⁰⁸ Cooperatives may also work directly with exporters, though in this case the latter take a 8% fee for transport to the exporter.²⁰⁹

¹⁹⁹ ICCO, Quarterly Bulletin of Cocoa Statistics, Vol. XLVIII, No. 1., Cocoa year 2021/22. Published: 28 February 2022

²⁰⁰ FAOSTAT, 2020 data

²⁰¹ Nigerian Export Promotion Council, "Cocoa," 2020 and BASIC Interview with cocoa sector expert, 16 May 2022

²⁰² USAID, "Nigeria Cocoa Value Chain Analysis," October 2012

²⁰³ Gama et al., "Estimation of short and long-run effects of cocoa price fluctuation on export and area harvested in Nigeria," 2021

²⁰⁴ Nigerian Export Promotion Council, "Cocoa," 2020

²⁰⁵ BASIC Interview with cocoa sector expert, 22 April 2022

²⁰⁶ IsDB, "Rebuilding inclusive global value chains as a pathway to global economic recovery," 2022, citing PwC, 2020

²⁰⁷ BASIC Interview with cocoa sector expert, 16 May 2022. Another expert contacted stated that cooperatives are the backbone of the Nigerian cocoa sector, but it is unclear whether "small groups" were included or not in the definition.

²⁰⁸ BASIC, Interview with cocoa sector expert, 17 June 2022; BASIC, Interview with cocoa sector expert, 21 June 2022

²⁰⁹ For the below, PIND, "Cocoa Value Chain Assessment Report," 2018

Nigeria’s farmgate-to-FOB price ratio is one of the highest in the West African region, with farmers estimated to capture approximately 65% to 80% of FOB price (see Annex for details). Because Nigeria’s market is liberalised, this price can vary from place to place within a single campaign. There are differing views regarding the profitability of cocoa farming: while some studies have shown that Nigerian farmers cultivating cocoa manage to meet critical needs²¹⁰ sector experts assert that farmers are price takers and generally very poor, much below the living income.²¹¹

3.4.2. Key results on distribution of value, costs, taxes, and net margins, (production to export)

In the following sections, we examine the breakdown of costs, taxes, and profit margins in the value chain, from production through to export (but before international freight) for Nigerian cocoa.

3.4.2.1. Conventional cocoa

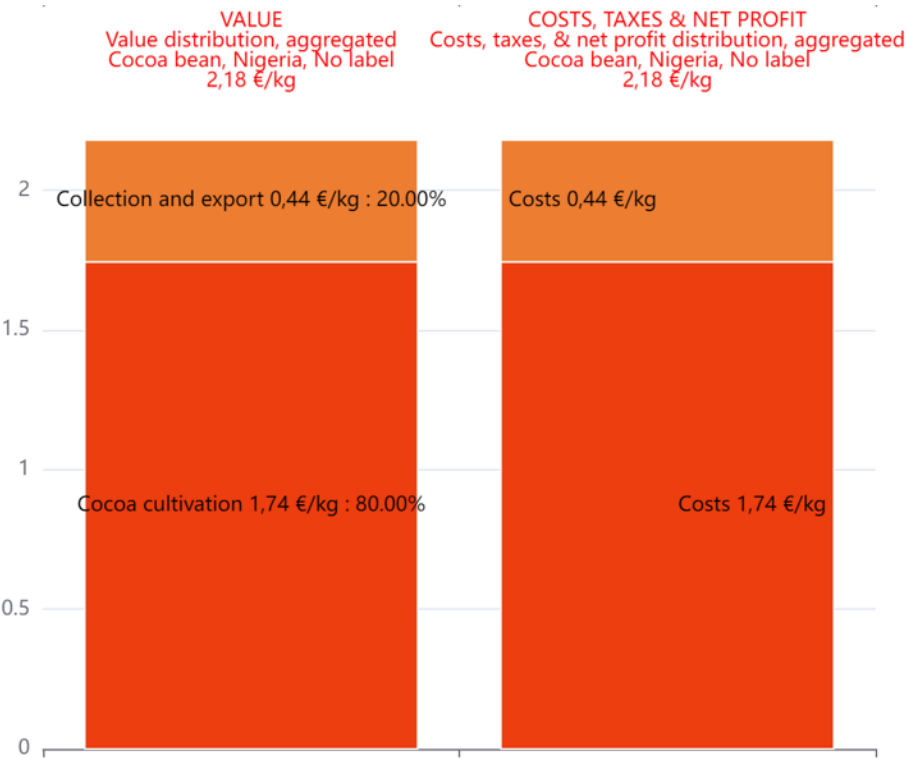


Figure 60. Distribution of value in Nigeria (from farmers to export) in 2020 (2019/2020 harvest). Source: BASIC

According to our estimates, farmers captured approximately 80% of the farmgate price in 2020,

²¹⁰ Ogunleye et al., “Effects of Social Capital Dimensions on Income of Cocoa Farming Households in Osun State,” 2020 and Popoola et al., “Technical Efficiency of Cocoa Production in Southwest Nigeria,” 2015.

²¹¹ BASIC Interviews with cocoa sector experts, May to June 2022

receiving 1.74 euros/kg for their cocoa beans. Costs associated with collection and transport are estimated at 0.44 euros/kg, or approximately 20% of the export price.

Quantitative information on costs and margins for the collection and export segment of the value chain could not be obtained. However, BASIC team was made aware of a number of taxes and fees that mean the cost of doing business in Nigeria is not negligible.²¹²

According to the experts interviewed, the majority of cocoa farmers do not earn a living wage and remain below the poverty line, hence we have considered that they were not able to cover the costs of a decent living for their families and no margin is visible at their stage of the chain.

3.4.2.2. Certified cocoa

Certification schemes appear to be poorly developed in Nigeria, except for the Rainforest/UTZ certification. It is unclear to what extent the Fair Trade certification is developed in Nigeria or how well-developed organic farming is.

Additional explanations on the specificities of Nigerian cocoa can be found in the Appendix 8.2 of this report.

3.5. Ecuador

3.5.1. Main characteristics of the Ecuadorian cocoa sector

Ecuador was in 2021 the third-largest cocoa producing country in the world, with exports reaching a peak of 360,000 tonnes in 2021.²¹³ The agricultural sector is quite important for the Ecuadorian economy: it represents 8.5% of the national GDP and 25% of the Ecuadorians depends on it for their livelihood. Among the export crops, cocoa is third, long after banana and shrimps.²¹⁴

One of the defining characteristics of Ecuadorian cocoa is the existence of different quality of cocoa being cultivated in the country: the CCN-51 cocoa and the Cacao Arriba, also known as “cacao nacional” from which is produced Fine Flavour Cocoa (FFC). Cocoa Arriba is the variety for which Ecuador is known worldwide (with flavour notes of fruits and flowers which are sought for on the

²¹² Our research identified the following potential taxes and fees required to run a cocoa export business in Nigeria: Registration taxes for LBAs ; Annual dues to the Cocoa Association of Nigeria (CAN); Cocoa grading (necessary to move cocoa); Warehousing tax (paid on annual basis); Income tax; Export tax; Standards Organisation of Nigeria certificate; NAFDAC certification (National Agency for Food and Drug Administration and Control). On arrival in Europe, Nigerian beans are also subject to tax because as of 2022, Nigeria still has not signed an Economic Partnership Agreement with the EU, leaving it at a comparative disadvantage to both Ghana and Côte d'Ivoire – that is, Nigerian cocoa beans and cocoa products are subject to a 4.6% to 6.2% tax (depending on the state of processing) on exports to EU countries.

²¹³ EcuadorTimes.net, “Cocoa broke a record in 2021,” 11 February 2022, citing the National Association of Cocoa and Industrialised Exporters of Ecuador (Anecacao).

²¹⁴ UNCTAD, Política nacional de exportación de productos verdes del Ecuador, 2015

world market) while the CCN-51 is mostly well-known for its high yields, resistance to disease and high content of fat (ideal for cocoa butter production) but poor(er) taste.

Even though Ecuador produces over 60% of the global FFC volumes, it does not succeed to valorise it significantly on the world market compared to other origin such as Colombia, Peru or the Dominican Republic.²¹⁵ This seems to be mainly due to the lack of quality control from the commercial intermediaries and the frequent mix of CCN-51 with FFC.

Ecuador has an estimated 100,000 cocoa producers, mostly smallholder farmers (owning 5 hectares on average) as well as some large plantations, who cultivate around 537,000 hectares for a production amounting to 264 000 tonnes in 2016. Within these producers, an estimated 80% cultivate less than 10 hectares, 15% between 10 to 20 hectares and 5% more than 20 hectares. Over the recent years, bigger cocoa plantations have developed: on the total production area, survey informs that an estimated 9% of the plantations could average from 21 to 50 hectares and 1% exceeding 51 hectares.²¹⁶

The cocoa supply chain in Ecuador is entirely private led, with very little intervention from the State. There is a high number of intermediaries (up to 1,000 actors) that buy mostly unfermented cocoa from the farmers and then sell and deliver it to around 30 exporters located in the country (the largest being Transmar which bankrupt in 2016, Blommer, Walter Matter, ED&F Man, and Daarnhouwer). Even though the cocoa sector is liberalised in Ecuador, the average farmgate price achieved by farmers remained at roughly over 80% of the FOB price since 2014.

The exports of semi-processed products represent a very small share of exports compared to cocoa beans. Nonetheless, there are some grinding and chocolate manufacturing facilities within the country, an important part being oriented towards the domestic or regional end-consumer market (Ecuacocoa, Edeca, Infelersa, etc.).

3.5.2. Key results on distribution of value, costs, taxes, and net margins, (production to export)

In the following sections, we examine the breakdown of costs, taxes, and profit margins in the value chain, from production through to export (but before international freight), for Ecuadorian cocoa.

3.5.2.1. Conventional cocoa

Ecuador illustrates the potential variations in value distribution - from farming to exports - associated with different varieties of cocoa, i.e.:

- on the one hand, a standard quality cocoa linked to unsorted varieties which are not valorised because of the lack of quality management by the commercial intermediaries who frequently mix CCN-51 with Fine Flavour Cocoa.

²¹⁵ CFN, Ficha sectorial cacao y chocolate, 2018 ; 65% according to WCF's estimates in 2013

²¹⁶ Rosero 2002 in Vallasso 2015

- on the other hand, specific cocoa varieties which are either linked to Fine and Flavour Cocoa or higher productivity CCN51. Of these, the sorted fine and flavour varieties are associated with +26% increase in farmgate price. Industrialised production of CCN51 generates a net margin about 9%, with prices in 2020 which are equivalent to those of unsorted cocoa.

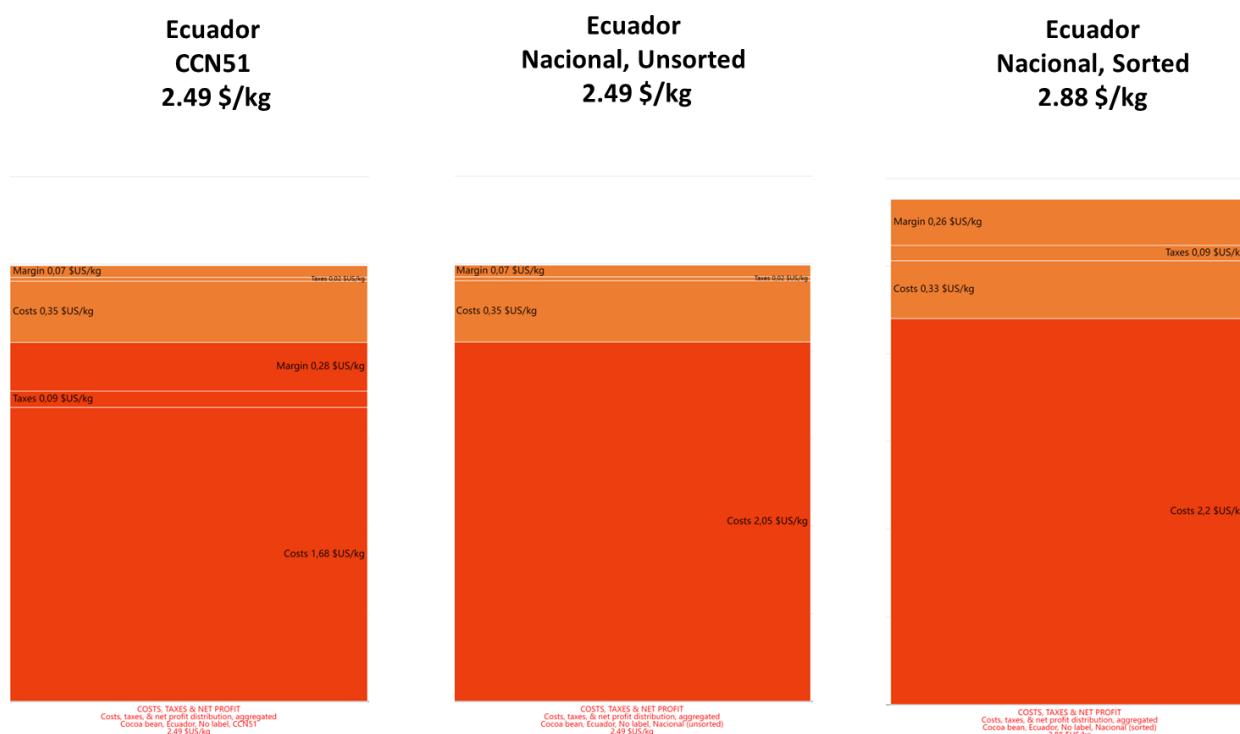


Figure 61. Distribution of value, cost, taxes and net profits in Ecuador (from farmers to export) in 2020 (2019/2020 harvest) – Nacional unsorted, Nacional sorted, and CCN51. Source: BASIC, 2022

The fact that the cocoa sector is liberalised leaves room for greater potential of differentiation of cocoa production than in the other countries analysed in this study, but is associated with a quite polarised producer base:

- On the one hand, small to mid-size (industrialised) plantations and small-holder farmers organised in cooperatives which benefit from private and public support and produce the high(er) quality and high(er) yield varieties, achieving better income for farmers and profits for plantations (cf. bar in the middle and on the right in the above diagram).
- On the other hand, non-organised smallholder farmers who produce the majority of exported cocoa volumes and remain for a large part below the poverty line (cf. bar on the left in the above diagram).

Downstream, there is a series of 4 to 5 intermediaries that channel the cocoa beans from these small producers up to exporters in Guayaquil. These intermediaries most often do not sort the varieties of cocoa collected and perform a fermentation of very poor quality whereby cocoa beans are piled up for some time, then quickly dried in the sun. They add very little value to the chain (except transport and warehousing services) and even partly spoil the potential quality of Ecuadorian cocoa. These intermediaries are predominantly (small groups of) individuals which make their living on the local cocoa trade. As a result, the estimates for collection and export should be analysed differently than in the other producing countries: the collectors' margin we have estimated, which could be

interpreted as quite high compared to Côte d'Ivoire or Ghana (amounting to more than 8% of the FOB export price), actually corresponds to the personal income of a majority of intermediaries who are small entrepreneurs, and the corresponding money is used to sustain the living of their family (like for small cocoa farmers). In the end, Ecuador is probably the country where the net margin associated with the collection, transport, warehousing of cocoa is the smallest among the countries analysed.

In terms of public taxes, as the cocoa sector is totally liberalised in Ecuador, the only revenue for public authorities corresponds to the income tax which can be estimated at 0.07 euros/kg and 3% of the FOB export value of Ecuadorian (higher quality) cocoa.

3.5.2.2. Certified cocoa

Ecuador appears to be a small origin of certified cocoa for the 4 systems analysed:²¹⁷

- UTZ (2% of its worldwide certified cocoa area in 2019)
- Rainforest (3% of its worldwide certified cocoa area in 2019)
- Fairtrade (1% of its worldwide certified cocoa area in 2019)
- Organic (4% of its worldwide certified cocoa area in 2019)

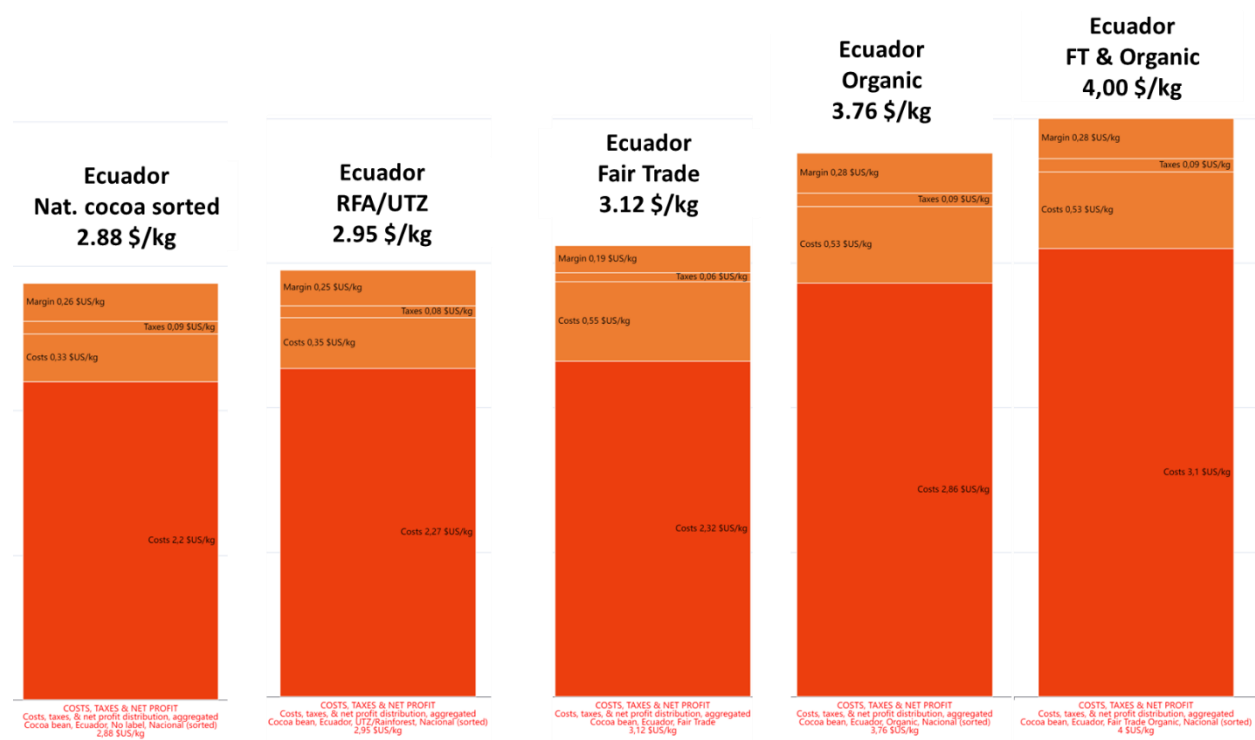


Figure 62. Distribution of value, cost, taxes and net profit in Ecuador (from farmers to export) in 2020 (2019/2020 harvest) – UTZ/Rainforest (Nacional sorted), Fair Trade, Organic (Nacional sorted) and Fair Trade Organic (Nacional sorted). Source: BASIC

²¹⁷ <https://standardsmap.org/en/trends> accessed on July 28th, 2022

The results of our estimates highlight 4 different types of certified value chains:

- The two first types correspond to the Rainforest/UTZ-certified and the Fair Trade-certified producers (not combined with organic). They appear to be variants of the conventional 'qualitative cocoa' value chain, farmers receiving a price mildly higher than conventional, and mainly benefiting from the premium they get (higher in the case of Fair Trade).
- The other two types correspond to farmers who are organised in cooperatives which have been supported or had the resources to enter in the organic certification. Part of them were already Fair Trade certified, thereby benefiting from more secured and remunerative markets and longer-term partnerships with small(er) cocoa importers and brands in Europe which have triggered a virtuous circle of higher and more secured profitability, specialisation in Fine Flavour Cocoa and protection of their traditional agroforestry systems of cocoa production.

As illustrated above, our estimates and model show that the certification for which the farmers obtain the greatest share of value in absolute terms is - in decreasing order - Fair Trade Organic, followed by Organic, Fair Trade, and UTZ/Rainforest respectively. In comparison with FOB export prices, it is interesting to notice that the four certifications are almost equivalent, each granting approximately 77% of value to the farmer (with the exception of Fair Trade at 74%).

The organic certification has been an asset, both in terms of higher prices for farmers and the barrier to entry that it has created with other Ecuadorian producers who are not able to comply with the traceability requirements up to the export stage.

An important proportion of these farmers were already Fairtrade certified, thereby benefiting from more secured and remunerative markets, additional premiums as well as longer term partnerships with small(er) cocoa importers and brands in Europe.

The combination between organic and Fairtrade appears to be creating a virtuous circle of higher and more secured profitability which enables farmers to specialise in Fine and Flavour Cocoa (FFC), achieve good quality standards, and protect and promote traditional agroforestry systems of cocoa production.

More details and explanations on the specificities of Ecuadorian cocoa can be found in the Chapter 3 of [the 2018 version of the study](#) on the distribution of value, cost, taxes and margins of French cocoa / chocolate value chains.²¹⁸

²¹⁸ FAO and BASIC, "Comparative study on the distribution of value in European chocolate chains", 2020, p. 200 https://lebasic.com/wp-content/uploads/2020/07/BASIC-DEVCO-FAO_Cocoa-Value-Chain-Research-report_Advance-Copy_June-2020.pdf

Total French market modelled – 406 Mn € (2018)

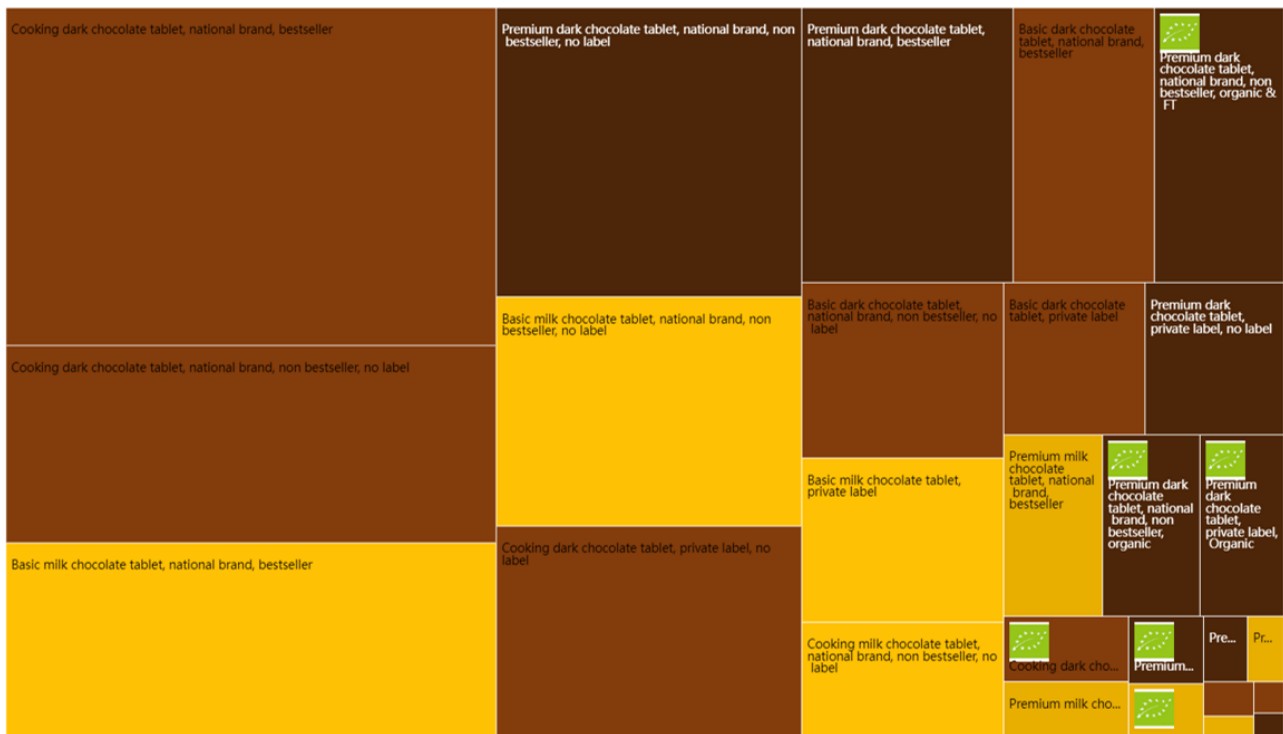


Figure 63. Global view of the types of chocolate tablets modelled through the 2 studies in Germany and France. Source: BASIC, 2022

Before comparing the quantitative estimates obtained, it is important to recall the differences of scopes between the two studies (cf. diagram above):

- First main difference, the French study is based on 2018 data whereas the German one is based on 2020 data.
- Secondly, the scope of products taken into account for the modelling and analysis is more extensive in the case of Germany as it includes chocolate tablets with hazelnuts (because of their significant share of the German consumer market), while in France only plain chocolate tablets have been analysed. As a result, the products modelled for the study of German cocoa/chocolate chains are worth 630 million € of consumer sales, whereas they account for a lower consumer value of 406 million euros in the case of French value chains.
- Still related to the scope of products modelled for the 2 studies, the portfolio of chocolate tablets reflects the taste and appeal of consumers and the dynamics of the market in each of the two countries. Consequently, as illustrated in the diagram above, the milk chocolate tablets, and the certified chocolate tablets make up a much larger share of the market in Germany than in France, the latter being associated with a high consumption of dark chocolate.
- Finally, there is also a difference regarding the distribution channel analysed as sales in discounters were not modelled in the French study because of their low share of the chocolate market (and the absence of discounters' data in the French IRI database).

Regarding the issue of the reference year used for the data, we have investigated whether the fact that the German study was based on 2020 data, a very specific year because of the impact of Covid, was problematic for the comparative analysis with the results of the French study. After looking specifically at this issue, it appeared that while there were undeniable variations and evolutions in

2020 because of the pandemic, the annual figures we have used are not as disrupted as expected from previous years, including for consumer sales. Indeed, part of the initial drops in sales caused by the confinement(s) in spring 2020 have been compensated after the summer 2020 and, from an annual perspective, the retailers' and discounters' sales were much less disrupted than the ones in less mainstream distribution channels such as duty free shops and independent chocolate shops.

Following the investigation of the different issues detailed above, we considered that a comparison between the two studies does make sense if the scope of chocolate products taken into account are as close as possible, always bearing in mind the variations in terms of year of data and structure of the market.

As a result, we conducted a comparative analysis of the quantitative estimates obtained firstly for dark plain chocolate tablets and secondly for milk plain chocolate tablets (we have decided to keep retailers and discounters in the scope to look at the effects of the latter on the results, considering that their impact would have been negligible in the French results due to their low market share).

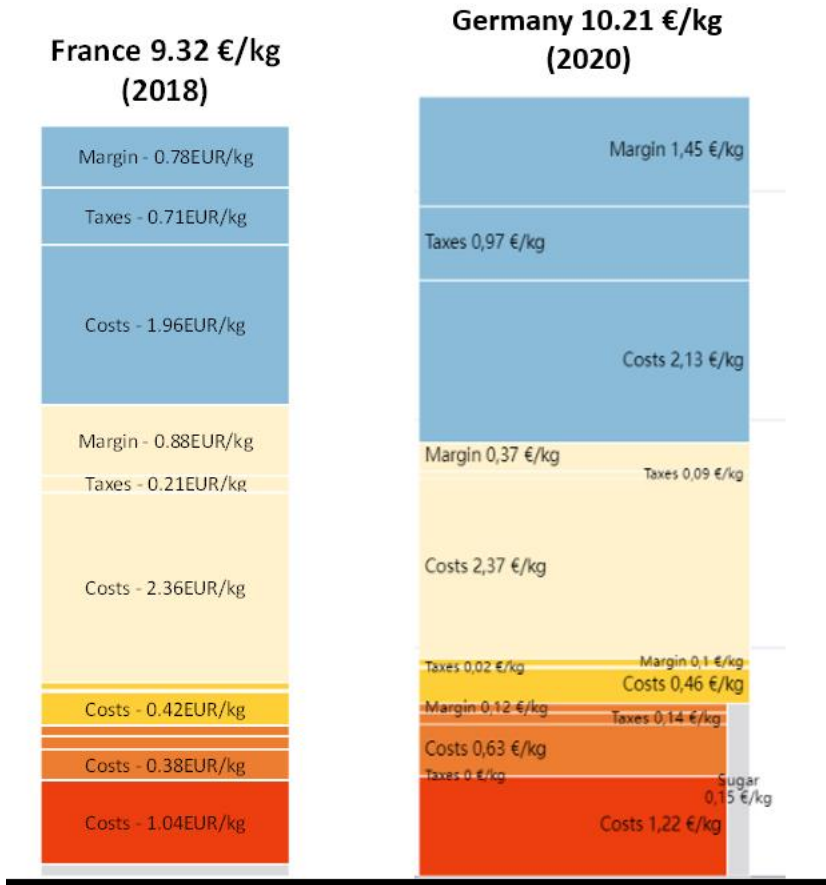


Figure 64. Comparison of the distribution of value, costs, taxes and margins for dark plain chocolate tablets sold in France (2018 data) and Germany (2020 data). Source: BASIC, 2022

Looking first at the case of dark plain chocolate tablets, the main observations that can be made are the following (recalling that the two studies relate to different reference years, 2018 and 2020) :

- Firstly, the (weighted) average price to consumers is slightly higher in Germany: 10.24 €/kg compared to 9.72 €/kg. According to our analysis, this can be mainly explained by the fact that

the dark chocolate tablets are the most sold in the French market, making it the main field of competition between retailers, which probably compete more fiercely than in Germany to maintain lower prices of these products to consumers in order to attract them in their stores.

- The second most striking difference is linked to the margins generated by retailers on the one hand and brands/manufacturers of finished products on the other. Regarding retailers, it appears from our results that they manage to generate a substantially higher margin on dark chocolate products in Germany than in France (1.44 €/kg for the former vs. 0.78 €/kg for the latter). This is mirrored by a much lower margin for brands/manufacturers of finished products in Germany than in France (0.37 €/kg for the former vs. 0.88 €/kg for the latter). This is firstly due to the much higher share of Private label products sold in Germany (cf. section 2) but also to the lower margins achieved by National brands in Germany, mainly because of the line approach of retailers and discounters. Indeed, according to this line approach, retailers and discounters apply uniform selling prices to consumers, but also uniform prices of purchase to the National brands that supply them, whatever the level of their costs of production (see section 2 for more details). This creates a downward economic pressure not only on National brands but also on the actors situated upstream in German cocoa/chocolate chains. The situation is very different in France where each chocolate tablet can have a different selling price to consumers - and purchase price to National brands – not only linked to its costs of production, but also to its selling performance: ‘Best seller’ products have a lower price to consumers (to attract them in retail stores) and generate a higher margin for National brands in France (because of the higher negotiation power of brands on these products) whereas non best-seller products tend to be associated with a higher consumer price and a low(er) margin for National brands.²¹⁹
- Looking at the costs of actors upstream of retailers and discounters, it appears that the internal costs of brands/manufacturers of finished products are of the same order of magnitude in France and Germany for dark plain chocolate tablets, whereas their costs of supply are substantially higher in Germany. This is not so much linked to the costs of cocoa/chocolate processing nor the costs of cocoa farming which are quite similar between the two studies, but due to the costs of collection and transport which appear to be much higher for German cocoa value chains. This is firstly the consequence of the difference of reference year (2018 for France and 2020 for Germany) and in particular the occurring of Covid in 2020 which has impacted very substantially the costs of sea freight, but also to a lower extent the costs of transports in all producing countries. According to our estimates, these higher costs upstream in the case of German chains seem to create a squeeze on brands/manufacturers of finished products who have almost not transmitted these increases to retailers and discounters in 2020.
- At the level of cocoa farmers, the differences in the costs related to cocoa cultivation can be explained by two factors: the first one is the difference in the year of reference for the calculations (2018 for the French study and 2020 for the German study); the second one is the difference of the chocolate tablets included in the basket of product purchased by consumers (the French consumers spending more money than their German counterparts on plain dark

²¹⁹FAO and BASIC, "Comparative study on the distribution of value in European chocolate chains", 2020, p.94 https://lebasic.com/wp-content/uploads/2020/07/BASIC-DEVCO-FAO_Cocoa-Value-Chain-Research-report_Advance-Copy_June-2020.pdf

chocolate and premium tablets which contain a higher percentage of cocoa); and finally the fact that an additional producer country – Nigeria – was added for the German study.

The case of milk plain chocolate tablets confirms these findings, with some specificities associated with this type of tablets, compared to dark plain ones (see illustration on next page).

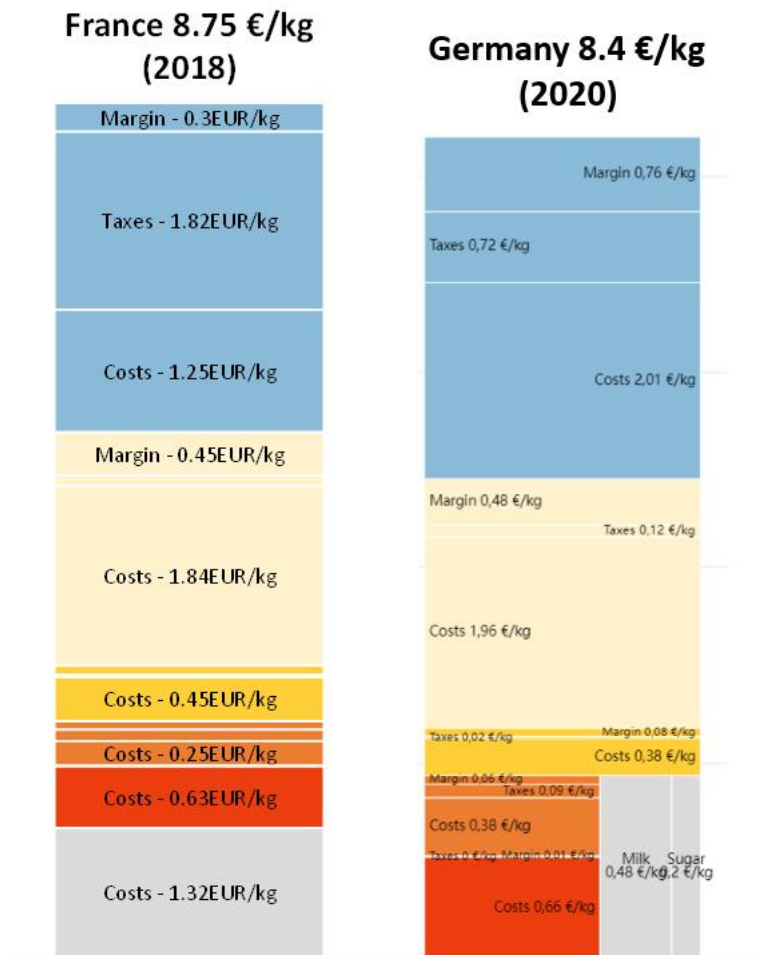


Figure 65. Comparison of the distribution of value, costs, taxes and margins for milk plain chocolate tablets sold in France (2018 data) and Germany (2020 data). Source: BASIC, 2022

As illustrated in the diagram above:

- In the case of milk chocolate tablets, the (weighted) average price to consumers is this time lower in Germany than in France. This can be explained by the same underlying factor that applied to dark chocolate tablets analysed earlier: **as milk chocolate tablets are the most sold in Germany, they constitute the heart of the market competition between retailers and discounters**, which probably compete more fiercely than in France to maintain lower prices of these products to consumers in order to attract them in their stores.
- Regarding margins of retailers on the one hand and brands/manufacturers of finished products on the other, the results are similar as the one described earlier for dark chocolate tablets: the retail margins appear much higher in Germany than in France, and for Germany, they are substantially higher than the margins of brands/manufacturers. This situation is also

the result of a very specific French regulation according to which the VAT on milk chocolate tablets is 20% compared to only 6% for dark chocolate tablets (because the latter is considered both as a staple product for all consumers and a healthier type of product). As a result of this very high VAT level, the French retailers appear to make lower margins than the brands/manufacturers, which is the opposite situation as that to Germany. When looking at the margins of brands/manufacturers, they seem to be of the same order of magnitude in France and Germany.

- Looking at the upstream stages of the chain, as previously, the costs of cocoa/chocolate processing and cocoa farming are of the same order of magnitude between the two countries, while the costs of collection and transport of cocoa (including sea freight) are much higher in the case of Germany. **The main difference between the two studies is the costs of other ingredients**, because of differences in recipes and most of all differences in the sources of data used for the price of powdered milk (which translated in much higher cost of milk in the case of the French study).

Looking more transversely at the two studies, our findings show that **the majority of value creation in the cocoa/chocolate chains in the two countries is linked to intangible leverages - marketing segmentation, brand reputation** - which are essentially managed by the last stages of the chain (retailers and discounters as well as brands) and which largely prevail over the origin/terroir and the specific work of farmers which are rarely valued by consumers at the end of the chain.

This appears to be linked to the fact that most consumers consider that the percentage of cocoa and the brand reputation are what matter most and define the quality of chocolate tablets sold by retailers and discounters, especially in the premium segment, and not the terroir or the work of farmers, probably as a result of the marketing and advertisement campaigns.

Upstream, a high level of industrialisation and large economies of scale at the stages of trading and processing of cocoa and chocolate have enabled to largely democratise the consumption of chocolate thanks to the (relatively) low price level achieved at the consumer level, but which make it harder to differentiate the specificities of cocoa (terroir, flavours...) and hampers the capacity of farmers and producer countries to get recognition and value for their work.

4.2. Comparison between producing countries

In producing countries, our research shows that the main differences in value and costs distribution stem from 3 principal factors: the type of regulation and State's involvement in the sector, the type of cocoa varieties, and the evolution of cocoa world prices.

The case studies of Côte d'Ivoire and Ghana show that stronger regulation systems and the guarantee of a homogeneous, stable and predictable quality of cocoa associated with a high reliability of supply enable to generate more stable prices for farmers country-wide. However, this is also most often associated with a lower share of export value accruing to cocoa farmers and tend to homogenize cocoa farms which produce comparable lots of unsorted mixes of products having consistent physical characteristics but that can hardly be differentiated on the market.

In contrast, the case study of Ecuador illustrates the higher valorisation and prices that can be achieved when differentiating varieties of cocoa which are the results of a liberalised sector in which dedicated strategies have been developed by Ecuadorian cocoa farmers and private actors with the support of significant investments and capacity building. This brings positive results for small to mid-size (industrialised) plantations and organised small-holder farmers who produce the high(er) quality and high(er) yields, achieving better income in the case of smallholder farmers and generating net benefits in the case of plantations. In the meanwhile, non-organised smallholder farmers still produce the majority of exported cocoa volumes and remain for a large part below the poverty line as in Western African cocoa producing countries.

The case studies of Cameroon and especially Nigeria are closer to the latter results obtained on Ecuador, these two African countries sharing the same key characteristic of liberalised cocoa sector. The only difference related to the differentiation among cocoa farmers based on quality of production which is very little detectable in Cameroon and Nigeria. This seems to show that differentiation is not an automatic result of liberalisation, but rather a potential that needs a clear strategy and significant investments in order to become a reality. These results on Cameroon and Nigeria provide a first basis for comparing between regulated and liberalised cocoa sectors as their geographical and cultural situation is quite close to Côte d'Ivoire and Ghana.

Beyond these elements, it is also worth recalling that our model shows that **across most producing countries, no net margin is generated by cocoa farmers** (except in very specific cases – see section on Ecuador for further details). The income they earn (even taking into account other paid activities) do not allow most of them to achieve a decent living for their families.

Our model also enables to take a dynamic view at the data. When looking at the evolution of cocoa farmgate prices in Côte d'Ivoire, Ghana and Ecuador²²⁰ **on a long term basis (2013-2020), the farmgate price is characterized by significant fluctuations** (see diagram below).

²²⁰ Nigeria and Cameroon could not be included in the comparison above, as sufficiently reliable data could not be found for the farmgate price over the same period. As far as Côte d'Ivoire and Ghana are concerned, data of FOB price were not available for the year 2020 in the international trade statistics and figures were thus derived from the long series of 2013 to 2019 and from the import price (CIF) in Europe. The elaboration of reliable data in each producing country of production, prices and stocks is however a key step towards transparency that would inform the public debate and the policy making around a better remuneration of cocoa beans to address the current sustainability concerns, that may be worsened with the impact of climate change.

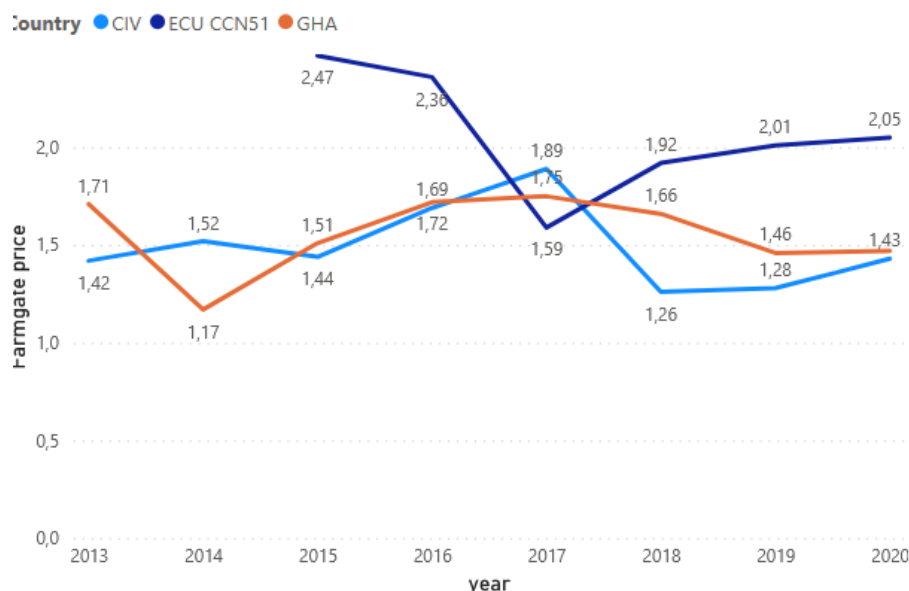


Figure 66 Comparison of farmgate price in Ivory Coast, Ghana and Ecuador, USD per kg (2013-2020). Source: BASIC based on official authorities' data (2022)

This result is all the more important that the literature converges on the fact that the income of cocoa farmers is central to addressing the various sustainability issues of the cocoa sector. Indeed, these challenges – especially deforestation and child labour – are strongly related to the price received by the majority of small cocoa farmers which appears to be insufficient to enable them to cover their costs of production and the basic needs of their families, thus creating negative feedback loops in which cocoa farmers are trapped.²²¹

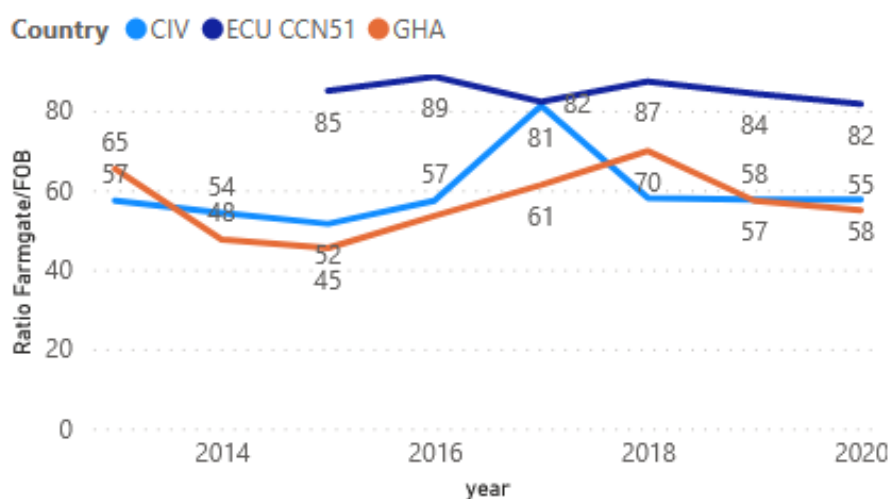


Figure 67 Comparison of the ratio of the farm gate price in the FOB price for Côte d'Ivoire, Ghana and Ecuador, USD per kg (2013 - 2020). Source: BASIC (2022)

²²¹ BASIC, "The Dark side of Chocolate", 2016.

If looking at the ratio between the cocoa farmers' prices and the FOB export price of cocoa beans in the three production countries listed earlier, the Ecuador appears to have the highest ratio (an average of 82% of the export price when excluding fine flavour Cacao Nacional), most probably linked to its liberalized cocoa sector. In comparison, the ratio in Côte d'Ivoire reached on average 60% over the period with a sharp increase in 2017 followed by a quick decline (reaching in 2020 the same level as in 2013), while the ratio in Ghana apparently decreased over the same period from 65% to 55% of the export price (see diagram above). In these two countries (Côte d'Ivoire and Ghana), this lower ratio is related to a higher level of taxation on the sector which however does not enable to leverage enough public money to meet the public spending of the State in cocoa growing regions to maintain essential public services (education, health, transport, etc.) according to our estimates (see the section on Côte d'Ivoire for more details).

A last important takeaway of our estimates relates to the fluctuations of FOB export prices in the producing countries analysed if compared to the evolution of consumer prices over the same period (see diagrams below).

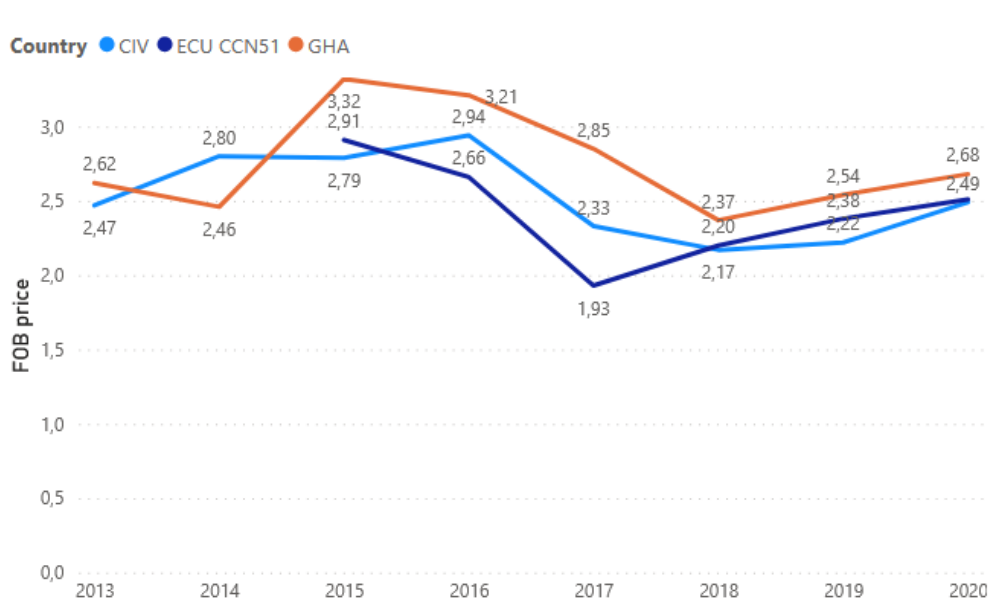


Figure 68 Comparison of FOB price in Côte d'Ivoire, Ghana and Ecuador, USD per kg (2013-2020). Source: BASIC based on Comtrade data (2022)

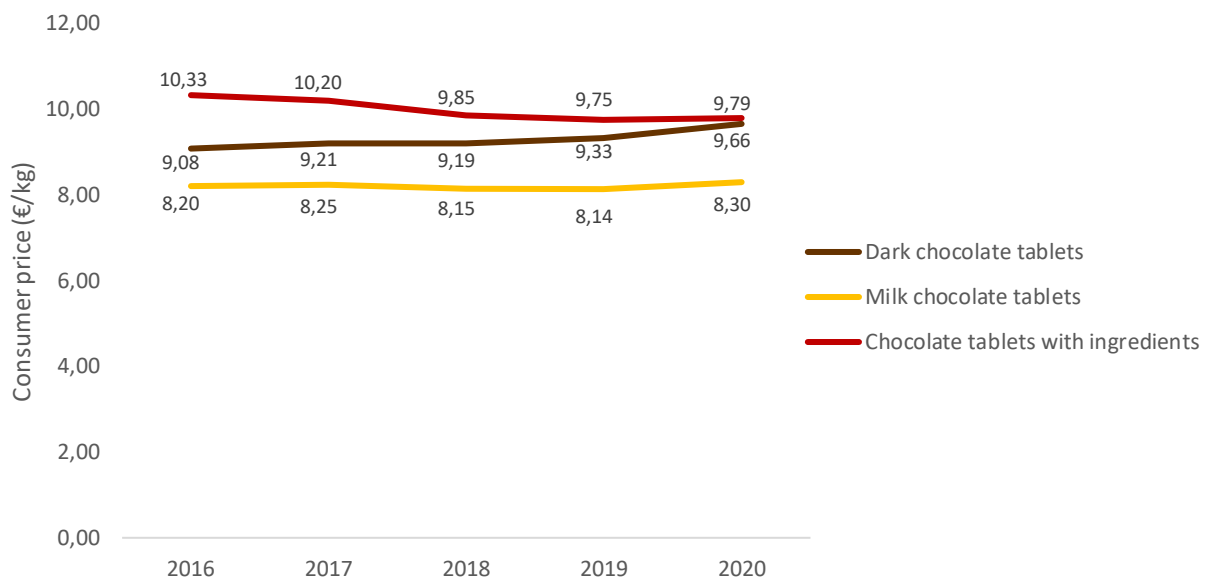


Figure 69 Comparison of consumer prices of dark, milk chocolate, as well as chocolate tablets with ingredients tablets in the German retail market Source: BASIC (2022)

As shown above, the annual fluctuations in producing countries have reached between 6% and 40% between 2016 and 2020. In stark contrast, at the other end of the chain, the consumer prices in German retailer and discounter stores have only fluctuated by 0.3% to 3%. This both demonstrates the role played by industrial and retail actors in the chain which shield consumers from price fluctuations, but also that it is the producing countries that suffer mostly from price fluctuations. Regarding this last part of the analysis, it is important to stress that the data from 2020 prevents from analysing the impact of the Living Income Differential (LID) on the FOB price, as the policy reform came into effect in October 2020 and would have only impacted the last trimester of 2020 and rather the 2020/2021 harvest campaign.

5. Abbreviations

ADM	Archer Daniels Midland
ANECACAO	Ecuador National Association of Cocoa Exporters and Industrial Actors (Asociación Nacional de Exportadores de Cacao e Industrializados del Ecuador)
BCEAO	Bank of Central and West African States (Banque Centrale des Etats d'Afrique de l'Ouest)
Caobisco	Association of Chocolate, Biscuit and Confectionery Industries of Europe
Caistab	Cocoa Stabilisation Fund (<i>Caisse de stabilisation et de soutien des prix des produits agricoles</i> in French) created in 1960 and dismantled in 1999
CCC	Conseil Café Cacao
CCN51	"Colección castro naranjal 51", a hybrid from forastero and trinitario cocoa varieties
CERDI	Center for Studies and Research in International Development (France)
CIF	Cost Insurance and Freight (Incoterm)
CIRAD	Agricultural Research Centre for International Development (France)
CRA	Commodities Risk Analysis
DeStatis	Federal Statistical Office (Germany)
EC	European Commission
EU	European Union
EUR	Euro
FAO	UN Food and Agricultural Organisation
FCFA	West African Franc, currency of eight independent states in West Africa
FOB	Free on board (Incoterm)
GHS	Ghanaian Cedi (currency)
GISCO	German Initiative on Sustainable Cocoa
GIZ	German Agency for International Cooperation
GVC	Groupements à vocation coopérative
ICCO	International Cocoa Organisation
IMF	International Monetary Funds
INSEE	National Institute of Statistics and Economics Studies in France
IRI	Information Resources, Inc.
KIT	Royal Tropical Institute (Netherlands)
MAGAP	Ministerio de Agricultura, Ganadería, Acuacultura y Pesca
Mn	Million
Bn	Billion
IISD	International Institute for Sustainable Development
ILO	International Labour Organisation
NGO	Non-Governmental Organisation
GDP	Gross Domestic Production
RFA	Rainforest Alliance
RSCE	Roundtable for a Sustainable Cocoa Economy
UEMOA	West African Economic and Monetary Union
UN Comtrade	Statistics data base of international trade of the United Nations
UNCTAD	United Nations Conference for Trade and Development
USAID	United States Agency for International Development
USD	United States Dollars
VCA4D	Value Chain Analysis for Development
XAF	Central African Franc, currency of six independent states in Central Africa

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7. Glossary

7.1. General glossary

Chocolate and chocolate products

Chocolate is the product obtained from cocoa products and sugars which contains not less than 35% total dry cocoa solids, including not less than 18% cocoa butter and not less than 14% dry non-fat cocoa solids. Chocolate products are products which contain the same ingredients, but in lower proportions (cf. directive 2000/36/CE of the European Parliament and of the Council).

Commoditisation

Commoditisation is the process by which a product is characterised by:

- Product homogeneity: the property must be presented homogeneously without specific lots and no identifiable unit;
- Product standardisation of the mode of production: the units must be interchangeable;
- Free market exchange;
- Supply to the market guaranteed by the absence of constraints from governments or private organisations;
- Unpredictability of supply and demand;
- Possibility of storage as a necessary condition for the existence of futures exchange.

Fair Trade

Fair Trade is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalised producers and workers – especially in the South. Fair Trade organisations have a clear commitment to Fair Trade as the principal core of their mission. They, backed by consumers, are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade.

(Definition issued by FINE, the coordination of international fair trade networks: Fairtrade International, World Fair Trade Organisation and European Fair Trade Association)

Certification

Formal assessment (attested in writing by issuing a certificate) given by a third party that a product, service or system meets the fair trade requirements (see definition above).

(Global) value chains

(Global) value chains refer to:

- The set of economic activities ranging from the production of raw materials up to the end consumption of final product(s) and their end of life treatment,
- The set of economic actors vertically related that performs these activities.

7.2. Model glossary

Low range brand/products: a brand the majority of whose products is sold at a price below 7€/kg.

Mid-range brand/products: a brand the majority of whose products is sold at a price above 7€/kg and which is not identified as premium.

Premium brand/products: a brand the majority of whose products is sold at as a product with a high cocoa percentage, i.e. above 65% for dark chocolate.

National brand: a brand that is owned by a company whose core business is manufacturing and branding (and not retailing).

Private label: a brand that is owned by a company whose core business is retailing.

Modelled product: product for which we have a complete model (downstream, upstream, and price). In our model, there are 284 different modelled products in our database.

Modelled finished product (or modelled chocolate tablet): modelled product at the end of the value chain, whose price is thus the final retail price for consumers. In our model, there are 62 different modelled finished products.

Modelled finished product scope: a group of several modelled finished products that have common features (recipe, range, ...) amongst the 62 finished modelled products.

8. Appendices

8.1. Global description of the methodology

8.1.1. Conceptual framework

Our analysis of value chains is both quantitative and qualitative, based on the conceptual framework of Global Value Chains.

The concept of Global Value Chains (GVCs) derives from the world systems theory developed by Immanuel Wallerstein in the 1970's. He introduced the concept of global commodity chains (GCCs) defined as “networks of labour and production processes whose end result is a finished commodity.”²²² In 1994, Gereffi and Korzeniewicz revived the concept in order to better understand the impacts of growing trade liberalisation, focusing on the strategies and actions of lead firms conceived as the core actors in a globalised economy.²²³ In 2005, Gereffi, Humphrey and Sturgeon consolidated the global commodity approach with the theory of Global Value Chains (GVC).²²⁴

In comparison with other approaches, it provides a valuable new view on international trade:²²⁵

- They enable to analyse the whole set of economic activities and actors ranging from the production of raw materials up to the end consumption of final products, whereas traditional economic trade theory only focuses on supply and demand.
- They offer a framework to investigate the interactions between the configuration of global chains (input-output, key nodes, governance and institutions...) and their economic determinants (supply & demand, value & cost breakdown, price & income dynamics...).
- They focus on the institutional context of power relations in which trade is embedded, the characteristics of economic governance and share of value, with key agents setting the rules of the game, while economic trade theory assumes that “buyers and sellers in different markets meet each other as independent agents”.

Over the past 20 years, Global Value Chain analyses have been flourishing approaches used for studying the dynamics of globalisation and economic governance. Widely adopted by researchers and economists, it has attracted growing interest from international institutions such as the World Bank, the OECD and the ILO have to investigate industrial upgrading and poverty alleviation in industries such as food, clothing and electronics.

²²² Hopkins and Wallerstein (1986: 159)

²²³ Gereffi and Korzeniewicz, *Commodity Chains and Global Capitalism*, 1994

²²⁴ Gary Gereffi, John Humphrey, and Timothy Sturgeon. “The Governance of Global Value Chains.” *Review of International Political Economy* 12, no. 1 (February 2005): 78–104

²²⁵ Gibbon, Bair and Ponte (2008) “Governing Global Value Chains: An Introduction,” *Economy and Society*, Vol. 37, No. 3, pp. 315-338

8.1.2. Operational framework

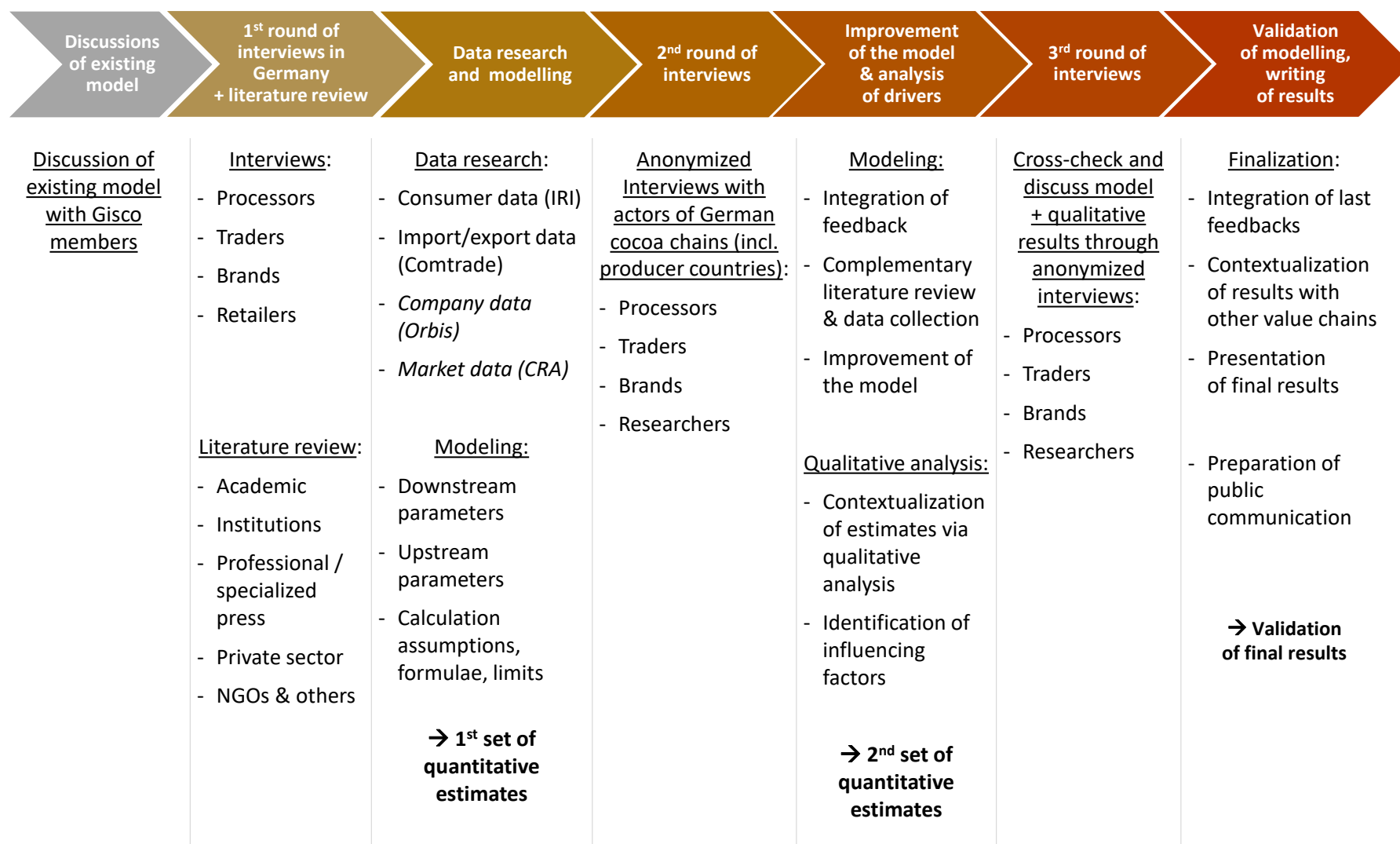


Figure 70. Overview of the methodology developed and used to conduct the study. Source: BASIC, 2022

A – Preliminary phase: discussion of the model developed to analyse French cocoa value chains

In the course of 2019 and 2020, BASIC developed a first model to estimate the distribution of value, costs, and net profit margins for chocolate products marketed in France, on behalf of the European Commission's Directorate-General for International Partnerships (DG INTPA), the Investment Centre of the Food and Agriculture Organisation (FAO) and the European Cocoa Association (ECA).

This model consists in 3 key parts of cocoa/chocolate value chains:

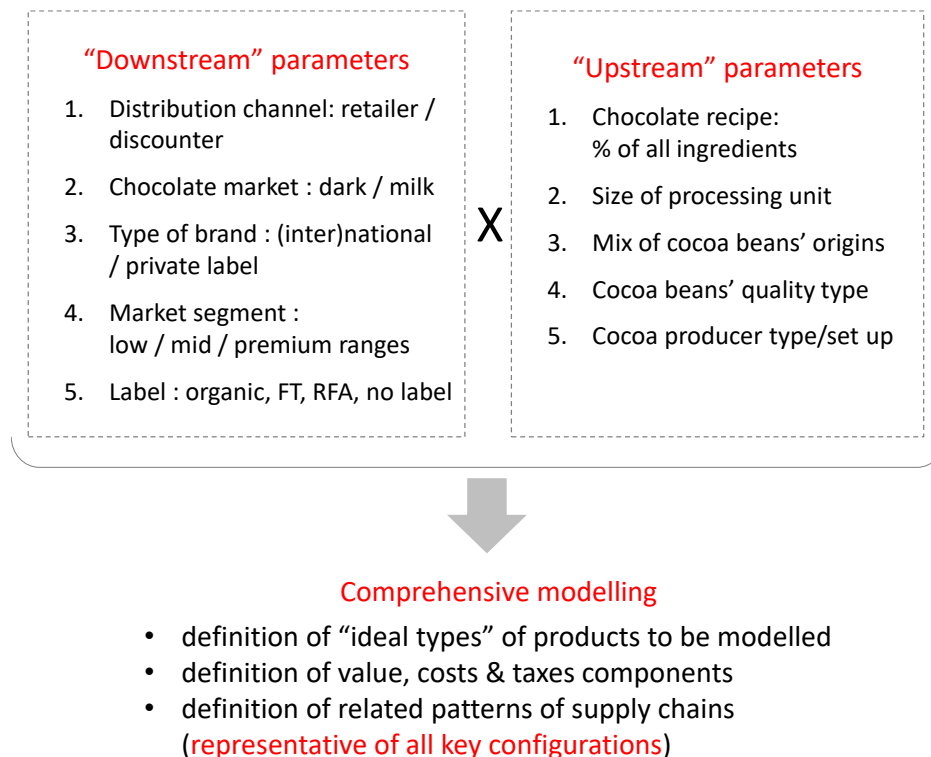
- A 'consumer' part, based on a first-level analysis of market dynamics in a chocolate consuming country in order to understand its key building blocks in terms of market segmentation, branding, competitive landscape between key actors... and accordingly define the products to be modelled as well as their key characteristics.
- A 'downstream' part based on a first-level analysis of the cocoa chain in the chocolate consuming country. In order to build our model, we investigate the organisation of the sector as a whole and more specifically the structure of each set of cocoa industry actors (traders, transporters, logistics & warehouses, processors, brands, retailers).
- An 'upstream' part based on a first-level analysis of the cocoa chain in each producer country, from cocoa growers up to the harbour, and exported in two forms: either as cocoa beans or as processed cocoa (cocoa paste/butter and/or cocoa powder).

Distribution and consumption in the consumer country (supermarkets' chains)				
Processing of cocoa & manufacturing of chocolate in the consumer country, cross-checked with average situation in EU				
Warehousing and transport from the docks in the consumer country, cross-checked with average situation in EU				
Transport and trading costs				
Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in producing country A	Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in producing country B	Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in producing country C	Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in producing country D	Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in producing country E

For the present study on the German cocoa-chocolate value chains, the first phase of the work has consisted in discussing the model developed for the French market (see above) with members of GISCO, notably on:

- the building blocks of the existing model,
- the associated assumptions and calculation formulae,
- the public sources of data used,
- the limits of the current estimates,
- proposals of improvements and amendments

B – Enrichment, amendment and adaptation of the model



Based the discussions of phase A, the model has been further adapted to specificities of the German market we have conducted a first round of interviews with German actors and an extensive literature review to better understand the context of the German chocolate market and related value chains, investigating more particularly:

- the "downstream" parameters linked to the end market dynamics: distribution channels²²⁶, type of brand²²⁷, market segmentation²²⁸ and certification schemes²²⁹,
- the "upstream" parameters: average recipes with all ingredients²³⁰, size of processing units, average mix of cocoa origins, type of cocoa beans' quality, type of cocoa producer set-up,
- the "ideal types" of modelled products, based on the above parameters, for each product category (dark chocolate tablets – plain & with hazelnuts, milk chocolate tablets – plain and with hazelnuts, confectionery chocolate bars, cocoa breakfast powder),
- the key operational stages in the chain, from cocoa farmers down to end consumers, and related countries included in our scope of research:
 - o final product manufacturing and distribution retail in Germany,
 - o cocoa farming to exports in Cote d'Ivoire, Ghana, Ecuador, Cameroon and Nigeria,

²²⁶ Traditional retailers (REWE and EDEKA groups) and discounters (Schwarz group/Lidl and Aldi Nord and Süd)

²²⁷ (Inter)National Brand or Private Label (i.e. supermarkets' brands)

²²⁸ Low-range, mid-range and premium range

²²⁹ UTZ/Rainforest Fair Trade (i.e. Fairtrade International & other Fair Trade labels) and Organic

²³⁰ cocoa paste and butter, cocoa powder, sugar but also milk powder, cereals, palm oil... depending on the product

- the components of value, costs and taxes associated with each operational stage and country previously determined, from cocoa farming down to end consumers, and the related modes of calculation for each of them (prices of input and prices of output²³¹, cost and tax components, net profit margins),
- the main combination patterns that link all previous elements together (modelled products, operational stages in the chain, countries of operations, associated components of value, costs, taxes, and resulting net profit margins). These patterns enable us to map out and model the different value chains attached to each product analysed.

C – Data research and literature review

Based on this first version of the model for German cocoa/chocolate value chains, we have then identified, collected, and processed all publicly available data (both coming from free of charge and fee-charging) which appeared to be relevant for the building of estimates for all main actors and operations in the cocoa-chocolate chains, from cocoa cultivation to consumer purchases.



Figure 71. Framework for the estimation of costs, taxes, and net profit margins. Source: BASIC 2021

231 e.g. public data point, derived from costs/net profit margin or gross margin reference data, etc. In total, 12 calculation modes have been set up in our final modelling

More precisely, we have collected and processed data on prices, costs, and taxes for the following stages of cocoa/chocolate chains:

- end consumers,
- retail (in supermarkets),
- finished goods manufacturing and selling (national and international brands as well as chocolate manufacturers working for retailers' private labels),
- cocoa processing stages in Europe (industrial chocolate couverture manufacturers, cocoa grinders, cocoa pressers),
- collection, warehousing, and transport of cocoa in producing countries up to the import stage in Europe,
- cocoa cultivation by farmers, exploring potential differences depending on most common producer set-ups.

Our modelling of costs has enabled us to differentiate between:

- internal costs of economic actors: manufacturing costs, packaging, logistics, sales force, marketing, research & development, investments and amortisation...
- taxes paid to public authorities (tax on cocoa production & exports, income tax, value added tax, social contribution of employees...) at the different stages of the chain, differentiating between producer countries (Côte d'Ivoire, Ghana, Ecuador, Cameroon and Nigeria) and consumer countries (Germany),
- certification costs.

In addition to cocoa, estimates for the share of costs associated with beet sugar, milk powder and hazelnuts - the other main ingredients of chocolate tablets – have been developed in order to build comprehensive estimates. These 3 ingredients have been analysed at a pan-European level, including for a contextualisation purpose of cocoa value chains. Only estimates of the procurement costs have been performed, but no estimates of the distribution of value, costs, taxes, and net profit margins for these specific ingredients. In addition, in order to build estimates for the case study of confectionery bar (countlines), other ingredients (in particular palm oil, wheat flour...) have been investigated for the calculations of costs and value distribution of the manufacturing stage.

A specific attention has been given to the cross-checking of data. In all the cases where more than one data point was available for the same stage of the chain (e.g. Prodcum and CRA for cocoa processing, Comtrade and official Bareme in Côte d'Ivoire for cocoa beans export, etc.), the collected data has been compared and analysed in order to identify discrepancies and better understand the methodological differences between data sources (in terms of scope, assumptions, limitations...). Based on this assessment, the choice of the most relevant data point (or the decision to calculate averages...) has been submitted to GISCO members and other commissioners for validation.

The main sources of information we have used for this work are:

- Quantitative data from available public databases (both free of charge and fee-charging) with the support of BDSI:
 - o IRI for consumption data, UN Comtrade for imports-exports, Caobisco and CRA for semi-processed cocoa products, ICCO for cocoa production prices...
 - o Orbis database for companies' accounts and ProdCom (Eurostat) for sectoral accounts,
 - o Data on farmers was collected from different sources depending on the country: ICCO, CCC & Bareme in Côte d'Ivoire, VCA4D, USAID, Ministry of agriculture Anecacao in Ecuador...
- Complementary literature review: publicly available reports, either published by universities & academic researchers (CIRAD, KIT, CERDI...), national and international institutions (FAO, BCEAO, ICCO...), ministries of agriculture or economy, private actors (ECA...) and NGOs,

D – Second round of bilateral interviews

Based on the previously detailed stages of the work, the results we have obtained on the distribution of value, costs, taxes, and net profit margins have then been confronted with key actors of the sector and of the different stages of the cocoa/chocolate chains in order to test the relevance and reliability of our model and the orders of magnitude of our estimates. In spite of more than 3 different rounds of emails and attempts of contacts, nobody from retailers or discounters network agreed to participate in these interviews – this was the only stage in the chain for which interviews could not be conducted.

More specifically, the following elements were discussed with interviewees:

- the building blocks of the model,
- the associated assumptions and calculation formulae,
- the public sources of data used,
- the limits of the current estimates,
- proposals of improvements

All the interviews conducted have been anonymised and were based on non-disclosure agreements signed with the interviewees. These interviews have been utterly valuable to improve and confirm the robustness of the model and the relevance of quantified estimates.

E – Improvement of the model and first analysis of drivers

Based on the outcomes of the previous phase, amendments, adaptation and improvements have been brought to the model. This has required additional data collection and literature review in order to feed the model with enriched data and to consolidate the assumptions.

In addition, a complementary qualitative research has been conducted on each of the 3 key parts of the cocoa/chocolate chains in order to put the results in the context of local specificities, legal framework, business dynamics:

- 1) On the ‘consumer’ part so as to better understand the evolving trends of consumers in Germany, and to collect key facts and figures on the chocolate consumer market (conventional as well as certified).
- 2) On the ‘downstream’ part in order to better contextualize the situation of each type of actor in Germany (retailers and discounters, brands, processors, traders). Key facts and figures have also been collected for each stage of the chain to better contextualize the results.
- 3) On the ‘upstream’ part in each producer country included in the scope of the research, from cocoa farmers up to exports. The objective of this last part of research was to collect key additional facts and figures on countries of production, especially on Nigeria which is a new country compared to the study on French cocoa/chocolate value chains. This has enabled us to better understand their national specificities (economic, social...) and the influences of both public regulations and the organisation of the sector on the distribution of value and costs from cocoa farming to exports.

Finally, we have investigated the factors that appear to be the most influential on the distribution of value, costs and taxes along the chain.

F – Third and final round of bilateral interviews

As previously a last round of presentations of the results and discussions have been conducted with key actors of German cocoa/chocolate value chains in order to perform a “reality check” of the relevance and reliability of the obtained results.

These bilateral interviews have enabled us to discuss:

- Quantitative results:
 - o the changes made to the model,
 - o the revised quantified estimates obtained,
- Qualitative results:
 - o the contextualisation of these estimates,
 - o the factors that have the greater influence on the distribution of value, costs, taxes, and margins.

As for the previous round of interviews, new attempts were made to contact and conduct interviews with people working in retail and discount groups. In particular, we have extracted the most relevant results regarding retailers and discounters, synthesised key questions for them and showed the differences with results obtained in 2020 on French cocoa/chocolate chains. Unfortunately, here too nobody from retail or discount companies agreed to answer our questions and emails.

G – Validation of modelling and writing of results

Finally, the last stage of the work has consisted in:

- a transversal analysis of the factors which have the bigger influence on the distribution of value, costs and taxes along the cocoa/chocolate chains;
- an additional comparative analysis between the cocoa/chocolate value chains analysed earlier and 2 other European commodities' value chains: beet sugar and milk powder. The objective of this last part of the work is to contextualize the results obtained for cocoa/chocolate and these 2 other products cultivated (sugar beet and cow milk) and processed in Germany and more largely at European level.

A final meeting has been organised with GISCO members and the other commissioners in June 2022 in order to:

- present the web tool enshrining the final model and quantified estimates obtained,
- present the main findings of the transversal analysis.

8.2. The Nigerian cocoa sector

8.2.1. Cocoa production in Nigeria: background

According to ICCO, Nigeria's cocoa bean production stood at 250 000 in 2019/20, 290 000 in 2020/2021, and is forecast at 280 000 tons for 2021/22.²³² This makes Nigeria tied with Cameroon for the position of fourth-largest producing country in the world, behind Côte d'Ivoire, Ghana, and Ecuador.^{233,234}

Relative to other West African countries, Nigeria has not kept up with the pace of expansion in terms of tons produced: while Côte d'Ivoire's production has decupled and Ghana's doubled since the 1970s, Nigeria's production rose a mere 10% from around 300,000 tons to 330,000, having seesawed back and forth between a minimum of 100,000 tons and a maximum of 345,000 tons, in the period 1970 to today.²³⁵ The discovery of crude oil in commercial quantities in the 1970s (at which time Nigeria was the world's second-largest cocoa producer) is partly to blame for the decline in cocoa production until the late 1990s, when the government took a renewed interest in developing and supporting the cocoa sector.²³⁶

8.2.1.1. Estimated number of farmers

The Nigerian cocoa sector is dominated by smallholder farmers numbering at 300 000 – 350 000 with some commercial plantations.²³⁷ Cocoa also provides a livelihood to “millions of investors and farmers in different areas as trade, transport, processing, and export of cocoa products.”²³⁸ An estimated 1.4 million people depend on cocoa for their livelihood in Nigeria.²³⁹

8.2.1.2. Estimated cocoa surface area

There are contradictory reports on the current surface area of cocoa produced in Nigeria. FAOSTAT and the Nigerian Export Promotion Council respectively estimate the cultivated area to be around 1.2 million and 1.4 million hectares respectively.²⁴⁰ The Nigerian Raw Material Research and Development Council (RMRDC), however, places the current cultivated hectares at 600.000 hectares. This variation in the figures likely explains the discrepancies in figures on yield presented below (RMRDC's estimates of yield are higher than those of FAOSTAT). Another intermediate figure states that 800 000 hectares are under cultivation.²⁴¹

²³² FAOSTAT data reports slightly higher production levels, around 325.000-350.000 tons in the years 2017 to 2020, but these are estimates based on imputation methodology.

²³³ ICCO, Quarterly Bulletin of Cocoa Statistics, Vol. XLVIII, No. 1., Cocoa year 2021/22. Published: 28 February 2022

²³⁴ FAOSTAT, 2020 data

²³⁵ Balogun and Obi-Egbedi, “Resource use efficiency and productivity of Cocoa Farmers in Idanre LGA of Ondo State, Nigeria,” 2012

²³⁶ PIND, “Cocoa Value Chain Assessment Report,” 2018

²³⁷ Nigerian Export Promotion Council, “Cocoa,” 2020 and BASIC Interview with cocoa sector expert, 16 May 2022

²³⁸ Gama et al., “Estimation of short and long-run effects of cocoa price fluctuation on export and area harvested in Nigeria,” 2021

²³⁹ USAID, “Nigeria Cocoa Value Chain Analysis,” October 2012

²⁴⁰ For 1.4 million hectares: Nigerian Export Promotion Council, “Cocoa,” 2020. For 1.2 million hectares: FAOSTAT, 2020 data

²⁴¹ PIND, “Cocoa Value Chain Assessment Report,” 2018

8.2.1.3. Location of cocoa production

Nigerian cocoa is currently significantly grown in 14 states (all states but Lagos State and Bonny State, and Kwara and Kogi states where cocoa production is on the sharp decline).²⁴² The leading state for production is Ondo State to the west of the country.²⁴³ Cocoa's heartland is found in States in the southwest of Nigeria, with the exception of Cross River State, another big cocoa producer located in the southeast.²⁴⁴

8.2.1.4. Place of cocoa in the Nigerian Economy

The cocoa sector is an important player in the Nigerian economy. Cocoa is the second contributor to the country's GDP after crude oil²⁴⁵ and is also the first export commodity after crude oil,²⁴⁶ it is also the second source of foreign exchange after crude oil.²⁴⁷ It is estimated that in 2020, Nigeria exported approximately 292 million USD worth of cocoa beans. ,

8.2.1.5. Destination for Nigerian cocoa exports

As of data reported in 2020, the main trading partner for Nigerian cocoa is the Netherlands, accounting for approximately 43% of cocoa exports. Next in line is Germany, representing 17% of exports.

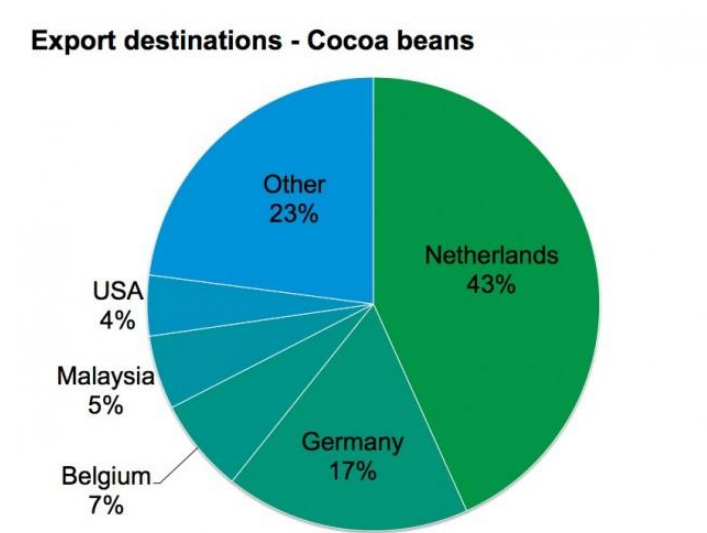


Figure 72. Principal destinations for Nigerian cocoa (undated but post-2018). Source: Nigerian Export Promotion Council, 2020

²⁴² Etaware, "Some Identifiable Factors Responsible for the Variation in Cocoa Production in Nigeria and Other Cocoa Producing Nations, Adjudicated by Their Contributions to the Global Market," *Frontiers in Agronomy*, 2022

²⁴³ Adefemi, "Profitability and Efficiency Analysis of Cocoa Marketing in Ondo State, Nigeria," 2019, citing IITA, 2007

²⁴⁴ FAO, "Analysis of incentives and disincentives for cocoa in Nigeria," February 2013

²⁴⁵ Gama et al., "Estimation of short and long-run effects of cocoa price fluctuation on export and area harvested in Nigeria," 2021

²⁴⁶ Nigerian Export Promotion Council, "Cocoa," 2020

²⁴⁷ BASIC Interview with cocoa sector expert, 22 April 2022

8.2.2. Typical profile of a Nigerian cocoa farm

8.2.2.1. Area cultivated and yields

Cocoa farms in Nigeria tend to be small. According to one estimate, 95% of cocoa farmers in Nigeria are smallholders growing cocoa on 1 to 2 hectares.²⁴⁸ Also according to the same source, 70% of cocoa farmers also diversify into other crops, and those who do tend to farm a total of 3 hectares, occasionally 3.5 or 4 hectares in total, cocoa included. These statistics echo the findings of Akanni and Dada, who in a random sampling of farmers in southwestern Nigeria (Nigeria's cocoa heartland) found that approximately 80% of cocoa farmers farmed less than 5 hectares;²⁴⁹ in a study by PIND in the Niger Delta, the figure was 66% farming less than 5 hectares.²⁵⁰

As concerns yields, statistics diverge, but comparing the available data, a reasonable estimate seems to be between a modest 300 and 400 kg of cocoa beans per hectare. Indeed, FAOSTAT calculations place the yield of cocoa plantations at a very low figure, ranging between 270 and 300 kg/ha for the last ten years.²⁵¹ Estimates from the Nigerian Raw Material Research and Development Council (RMRDC) place the yields higher, at around 400 to 500 kg/ha – still a relatively low figure, but possibly a result of the fact that RMRDC deems that the surface area under cultivation is much less.²⁵² In November 2021, the Cocoa Farmers Association of Nigeria (CFAN) put yields at around 300 to 350 kg/ha.²⁵³ In an interview conducted by BASIC with a Nigerian cocoa expert, the figure given was 400 kg/ha.²⁵⁴

8.2.2.2. Family farms, hired labour, and migrant workers

According to one cocoa sector expert, an important transformation in the last 40 years has been the displacement of the family-based farm model by an individual ownership model, as individuals seek to secure their access to land and run a business independently from their parents. There appear to be no reliable statistics on the percentage of Nigerian farms that are owner-farmed as opposed to sharecropped. One expert interviewed volunteered the following figures: 30% of farms tended by sharecroppers and 70% tended by owners.²⁵⁵

²⁴⁸ BASIC Interview with cocoa sector expert, 22 April 2022; similar figures given by another cocoa sector expert, 16 May 2022 (90% are farming 1 hectare or less)

²⁴⁹ Akanni and Dada, "Analysis of Labour-Use Patterns among Small-Holder Cocoa Farmers in South Western Nigeria," 2012

²⁵⁰ PIND, "Cocoa Value Chain Assessment Report," 2018 "Cocoa Value Chain Assessment Report," 2018. A study in Osun and Ogun states found that 46% of farmers farmed between 2.5 and 5 hectares, but this statistic included crops other than cocoa. Adeola et al., "Livelihood Trajectories in Nigeria's Cocoa economy: Evidence from South West Nigeria," October 2019

²⁵¹ FAOSTAT, 2010-2020 data

²⁵² Raw Material Research and Development Council (RMRDC), 2021, cited in Daily Trust, "Why cocoa yields remain poor in Nigeria," 14 November 2021

²⁵³ Nigerian Tribune, "Cocoa Farmers Plan Summit To Address Challenges In Sub-Sector," 24 November 2021

²⁵⁴ BASIC Interview with cocoa sector expert, 11 May 2022

²⁵⁵ BASIC Interview with cocoa sector expert, 16 May 2022

Individual owners can hardly farm their land alone. As the ideal number of workers is said to be around approximately 3 labourers per hectare to tend to a cocoa farm,²⁵⁶ individual owners rely strongly on hired labour to run their farms. A case study in Ondo State found that the vast majority (93%) of sampled farmers make use of hired labour.²⁵⁷ (This is validated by another study which found, conversely, that only eight percent (8%) of cocoa farmers interviewed used only family labour).²⁵⁸ These can be local workers, and if they are not local, they are likely to come from neighboring states, and less often from neighboring countries entirely.²⁵⁹

Reliance on hired labour increases dramatically during the harvesting season when there is an intensive course of time-bound operations. This is the reason why, according to one expert, “100% of cocoa farms will use hired labour at one point or another.”²⁶⁰

There are different types of labour contracts. Reportedly, it is increasingly common for farmers to make use of labour-contracting agencies, which relieves them of the burden of finding workers. Most often, labourers are hired on an annual basis and paid at the end of the year in cash or in kind (in kind being often a motorcycle). Another remuneration scheme is for the labourer to receive a portion of the farm’s annual profit.²⁶¹ Finally, some are employed as daily labourers, paid typically 1.92 GBP per day for men and 1.53 GBP per day for women. According to the same study, a smallholder cocoa farmer will spend “approximately 153.84 GBP on labour per year, while farmers with larger farms might spend a minimum of 320.51 GBP.”²⁶²

The cause for the low yields include declining soil fertility, ageing cocoa trees, losses due to diseases and pests, and non-optimal farm management.²⁶³

8.2.2.3. Degree of farmer organisation

Reports diverge as to the extent to which cocoa farmers in Nigeria are organised. In 2012, USAID reported that “Smallholder farmers tend to be unorganised and lack group cohesion to access credit from lending institutions.”²⁶⁴ A Nigerian cocoa expert contacted in 2022 stated that although there are no official statistics, a reasonable estimate would be that 30% of cocoa farmers are organised in proper cooperatives with an elected board and a paid manager, while the remainder are organised as “small groups” who lack formal leadership and whose main characteristic is loyalty to a single

²⁵⁶ BASIC Interview with cocoa sector expert, 22 April 2022. It is unclear whether this figure represents the quantity of labour required year-round or the minimum number of workers needed to cover the peak season of July/August through December, when the main harvest takes place. (For a seasonal calendar of production activities see Adeola et al., “Livelihood Trajectories in Nigeria’s Cocoa economy: Evidence from South West Nigeria,” October 2019)

²⁵⁷ Adefemi, “Profitability and Efficiency Analysis of Cocoa Marketing in Ondo State, Nigeria,” 2019.

²⁵⁸ Oluyole et al., “Farm Labour Structure and Its Determinants among Cocoa Farmers in Nigeria,” May 2013

²⁵⁹ BASIC Interview with cocoa sector expert, 22 April 2022

²⁶⁰ BASIC Interview with cocoa sector expert, 16 May 2022

²⁶¹ This appears to be the category that in 2013 was found to be the main remuneration scheme in Ondo State; According to one 2013 study, the main mode of remuneration – approximately 44% in Ondo State – is sharecropping – i.e., “the sharecropper provides all the labour required for cocoa production and will later [be] entitled to a certain proportion of cocoa proceeds realised from the farm.” Oluyole et al., “Farm Labour Structure and Its Determinants among Cocoa Farmers in Nigeria,” May 2013

²⁶² Kehinde et al., “Cocoa commercialisation in Nigeria : Issues and prospects,” 2022. Wages in 2013 ranged between approximately 3.40 to 3.90 USD per day, depending on the task. Oluyole et al., “Farm Labour Structure and Its Determinants among Cocoa Farmers in Nigeria,” May 2013

²⁶³ USAID, “Nigeria Cocoa Value Chain Analysis,” 2012

²⁶⁴ USAID, “Nigeria Cocoa Value Chain Analysis,” 2012

buyer.²⁶⁵ In the case of cooperatives, fermentation and drying are usually done collectively, while in the small groups case, farmers perform fermentation and drying individually.²⁶⁶ One expert interviewed opined that cooperatives were more present and stronger in areas where there were Fair Trade or UTZ/Rainforest certifications.²⁶⁷

8.2.3. State policy towards cocoa

8.2.3.1. Brief history of state policy towards cocoa

Cocoa marketing has been liberalised in Nigeria since 1986, when the World Bank and IMF-led Structural Adjustment Policies (SAPs) resulted in the dismantling of the Nigerian Cocoa Board (NCB) and its state branches. Before 1986, the NCB was the sole purchaser and exporter of cocoa in Nigeria, through each of its state offices, which Licensed Buying Agents (LBAs). Simply put, “the boards appointed Licensed Buying Agents (LBA) who could either be companies, individuals or cooperative societies to purchase, bag, store, grade and transport to the boards’ port stores.”²⁶⁸ Surpluses accumulated in years of high prices were nominally set aside as a stabilisation fund to maintain stable prices to farmers in bad years.

The NCB was not immune to criticism: complaints against the NCB included corruption, bureaucratic inefficiency, re-routing of funds intended for stabilisation to other uses,²⁶⁹ and acting merely as a taxation agent making margins on the backs of poor farmers.²⁷⁰

Nonetheless, farmers interviewed by the Agricultural Research Policy in Africa (APRA) unit in 2021 reported that they felt better off under the NCB days: the report states that “Though the marketing board era had its associated challenges, cocoa farmers fared better under it than under the liberalised cocoa market period, mainly as a result of its organised system of input and post-harvest monitoring supports.”²⁷¹ Specifically, while the liberalisation was supposed to deliver better prices and good returns for the government, “cocoa farmers were left with little or no support for production, and the quality of cocoa beans dropped because quality check mechanisms associated with the marketing board system were scrapped.”²⁷² Local cartels replacing the government-approved local buyers used their leverage to squeeze low prices out of producers.²⁷³

The Cocoa Association of Nigeria (CAN) was established as a successor to the NCB in 1986: its main role is to represent Nigeria in international cocoa organisations, but also to arbitrate conflicts “on buyers of cocoa from Nigeria where issues have arisen bordering on quality, contract violations, trade

²⁶⁵ BASIC Interview with cocoa sector expert, 16 May 2022. Another expert contacted stated that cooperatives are the backbone of the Nigerian cocoa sector, but it is unclear whether “small groups” were included or not in the definition.

²⁶⁶ BASIC Interview with cocoa sector expert, 16 May 2022

²⁶⁷ BASIC Interview with cocoa sector expert, 11 May 2022

²⁶⁸ Adefemi, “Profitability and Efficiency Analysis of Cocoa Marketing in Ondo State, Nigeria,” 2019

²⁶⁹ Adefemi, “Profitability and Efficiency Analysis of Cocoa Marketing in Ondo State, Nigeria,” 2019

²⁷⁰ Gama, “Estimation of short and long-run effects of cocoa price fluctuation on export and area harvested in Nigeria,” 2021

²⁷¹ Kehinde Adesina et al. (APRA), “Cocoa Commercialisation in Nigeria: Issues and Prospects,” January 2022

²⁷² Kehinde Adesina et al. (APRA), “Cocoa Commercialisation in Nigeria: Issues and Prospects,” January 2022. This point was confirmed in a BASIC Interview with cocoa sector expert, 21 June 2022

²⁷³ Kehinde Adesina et al. (APRA), “Cocoa Commercialisation in Nigeria: Issues and Prospects,” January 2022

regulations, [and] government policies affecting cocoa marketing.”²⁷⁴ The CAN mainly represents LBAs and processors, and much less farmers, which tend to be represented by the Cocoa Farmers’ Association of Nigeria, established in 2000. The same year saw the constitution of the National Cocoa Development Committee (NCDC), which had as its mandate to revive the flagging cocoa sector by coordinating the Cocoa Development Program in 14 producing states.

With the liberalisation of the cocoa market, private traders began to enter the market; over 120 firms, both local and international, were registered with the Nigeria Export Promotion Council (NEPC) in the early 2010s. However, a handful of them account for the majority of sales to exporters in Nigeria.²⁷⁵

8.2.3.2. Current government support to the cocoa sector

The Nigerian government executes its policy in support of the cocoa sector through a variety of agencies: this includes the Federal Ministry of Agriculture and Rural Development (FMARD) as well as the State Commissions for Agriculture, the State Tree Crops Development Authorities, State Produce Inspection Departments, the Nigerian Export Promotion Council, the Raw Materials Research and Development Council (RMRDC), and the Cocoa Research Institute of Nigeria (CRIN). These entities nominally distribute subsidised inputs, specifically fertilizers, pesticides, seeds pods, seedlings, as well as administering agricultural extension services.²⁷⁶ There are some criticisms that these programs are underdeveloped relative to demand.²⁷⁷

Under the aegis of the World Cocoa Foundation’s African Cocoa Initiative II (2016-2021), new mechanisms were also put in place for pre-harvest financing. These took the form of tripartite agreements between banks, traders, and cooperatives: traders were financed by banks, and in turn gave the money to cooperatives to distribute to farmers, who paid back the money to the trader in kind after harvest.²⁷⁸

8.2.3.3. Market regulation: a liberalised cocoa economy

Nigeria does not have a central cocoa authority, unlike Côte d'Ivoire and Ghana.²⁷⁹ Instead, trade is completely liberalised: cocoa is traded by over 120 licensed companies (LBAs), both local and international, registered with the Nigeria Export Promotion Council (NEPC). Of these, it is often said that about 20 sell to exporters.²⁸⁰ In addition to LBAs, there are merchants working for processors and exporters who may purchase and resell cocoa on a smaller scale.²⁸¹

Although the Nigerian market is nominally fully liberalised, the concentration of exporters down the chain appears to have a negative impact on price transmission to farmers. For instance, taking the

²⁷⁴ PIND, “Cocoa Value Chain Assessment Report,” 2018

²⁷⁵ Gama, “Estimation of short and long-run effects of cocoa price fluctuation on export and area harvested in Nigeria,” 2021

²⁷⁶ BASIC Interview with cocoa sector expert, 11 May 2022. There was also, as of 2016, a voucher system enabling cocoa farmers to pay agricultural inputs half-price by presenting a voucher; the input supplier would then cash in the voucher with the Federal government (BASIC Interview with cocoa sector expert, 11 May 2022).

²⁷⁷ BASIC Interviews with cocoa sector experts, 16 May 2022 and 22 April 2022

²⁷⁸ BASIC Interview with cocoa sector expert, 11 May 2022

²⁷⁹ Confectionery News, “Nigeria and Cameroon to discuss joint plan for cocoa premium price,” 16 October 2019

²⁸⁰ PIND, “Cocoa Value Chain Assessment Report,” 2018 and BASIC Interview with cocoa sector experts, 16 May 2022 and 17 June 2022

²⁸¹ BASIC, Interview with cocoa sector expert, 17 June 2022; BASIC, Interview with cocoa sector expert, 21 June 2022

case study of the years 2006 to 2010, a major increase in international prices, which translated to higher export prices in Nigeria, was not translated to farms: farmgate price remained the same. An analysis at the time argued that “the growth of international prices was captured by the export firms but not by producers,” meaning that “the high concentration of export companies results in strong market power in price fixation at the expense of producers.”²⁸² The CFAN – Cocoa Farmers Association of Nigeria - expressed disappointment in February 2022 that the liberalised nature of the cocoa market in Nigeria made it challenging for Nigerian farmers to access something like the Living Income Differential in place in Côte d’Ivoire and Ghana.²⁸³ Value chain from farm to port.

8.2.4. Value chain from farm to port

8.2.4.1. Production costs to farmers

Farmers must outlay many costs to grow their cocoa: wages for labourers to conduct operations on the farm, but also inputs like pesticides, fertilizers, seedlings, and farming implements. These are obtained directly from input suppliers, sometimes on a credit basis. LBA factors and agents may also provide farmers with credit in exchange for cocoa pods after harvest.²⁸⁴

8.2.4.2. Role of “Factors” and Licensed Buying Agents

In the next phase, cocoa is typically purchased by “factors,” who are dealers working for Licensed Buying Agents. Factors do not have any interaction with processors or exporters – that is the role of LBAs. Collection of beans is done through:²⁸⁵

1. Either individual LBAs employing their own intermediaries (“factors”). In the next stage, these LBAs market the cocoa “ex-store,” meaning that they deliver the consignment directly to the exporter’s warehouse.
2. Either cooperative Multipurpose Unions (cooperatives) which aggregate from their members and other farmers, using their own factors. In the next stage, cooperatives tend to market their cocoa “on-store,” meaning that it is the intermediate processor/exporter who sends the trucks to collect the cocoa beans from the cooperative. This service performed by the exporter decreases the sale price of the cocoa beans by approximately 7.5%.

LBAs also perform quality control on beans and sometimes re-clean or re-dry them. According to one expert interviewed, one challenge is traceability, as beans are usually “collected by aggregators from different farms and mixed up together to meet supply orders.”²⁸⁶

It should be noted that one study described an additional intermediary in the value chain – “merchants,” who stand between LBAs and exporters. This is the only study describing such an

²⁸² FAO, “Analysis of incentives and disincentives for cocoa in Nigeria,” February 2013

²⁸³ ThisDay, “Nigerian Cocoa Farmers Losing \$400 per Tonnes to West Africa Counterparts,” 1 February 2022

²⁸⁴ PIND, “Cocoa Value Chain Assessment Report,” 2018

²⁸⁵ For the below, PIND, “Cocoa Value Chain Assessment Report,” 2018

²⁸⁶ BASIC Interview with cocoa sector expert, 11 May 2022

intermediary; the most plausible explanation is that the “merchants” referred to are traders who work for exporters.²⁸⁷

At this step in the value chain, another factor impacting costs is logistics. In Nigeria, transporting cocoa can be a challenge due to poor infrastructure. In some more remote areas, bad roads mean only motorcyclists can ferry cocoa beans to their destination, and this costs more than hiring a truck or bus.²⁸⁸

8.2.4.3. International buyers and taxes

The PIND study found that “there are 20 regular exporters operating in the cocoa sector, but only three of them control 50% of cocoa beans export.”²⁸⁹

The cost of doing business in Nigeria is high. According to an interview given by the Managing Director of Tulip Cocoa Processing back in 2011, there were “at least 16 different charges, taxes, and levies to be paid between the farm gate and final destination.”²⁹⁰ The following are some of the taxes and other government and para-governmental fees identified to date:

- Registration taxes for LBAs
- Annual dues to the Cocoa Association of Nigeria (CAN)
- Cocoa grading (necessary to move cocoa)
- Warehousing tax (paid on annual basis)
- Income tax
- Export tax
- Standards Organisation of Nigeria certificate
- NAFDAC certification (National Agency for Food and Drug Administration and Control)
- EU Import Taxes²⁹¹

8.2.4.4. Local processing and policy towards local processing

Processing of cocoa at the local level is moderately well developed in Nigeria. Reports place exports of cocoa beans at 80% to 90% of the crop, the remainder being divided into cocoa butter and cocoa paste. For instance, as of 2018, cocoa beans accounted for almost 90% of the 804 million USD of Nigerian cocoa exports. The remaining part of exports was divided between cocoa butter (67 million USD in 2018) and cocoa paste (28 million USD). Statistics published in 2020 report a slightly higher local processing capacity, with only 80% of beans being exported and the remaining 20% being processed locally.²⁹²

²⁸⁷ PriceWaterhouseCoopers, “Transforming Nigeria's Agricultural Value Chain,” September 2017

²⁸⁸ Daily Trust, “Nigeria's Cocoa Output May Drop Over Weather, Rising Input Cost,” 26 September 2021

²⁸⁹ PIND, “Cocoa Value Chain Assessment Report,” 2018

²⁹⁰ USAID, “Nigeria Cocoa Value Chain Analysis,” 2012

²⁹¹ As of 2022, Nigeria still has not signed an Economic Partnership Agreement with the EU, leaving it at a comparative disadvantage to both Ghana and Côte d'Ivoire – that is, Nigerian cocoa beans and cocoa products are subject to a 4.6% to 6.2% tax (depending on the state of processing) on exports to EU countries. USAID, “Nigeria Cocoa Value Chain Analysis,” 2012; European Commission, “Overview of Economic Partnership Agreements,” updated February 2022; USDA, “Global Cocoa Market Study,” 2021

²⁹² IsDB, “Rebuilding inclusive global value chains as a pathway to global economic recovery,” 2022, citing PwC, 202

It is estimated that from 2008 to 2018, of 20 cocoa processing companies in the country, about 14 have closed. The main factors involved appear to have been “erratic electricity supply, which constitutes 40% of production cost; ... illegal forms of taxation during transportation of raw materials (beans); and high interest rates (25%).”²⁹³ Indeed, while international companies had access to finance in the single digits, local companies “needed to cope with rates as high as 25%, putting them at a competitive disadvantage.”²⁹⁴ Government policy has also played a role: the Export Expansion Grant having effectively subsidised exporters to the detriment of local processors, at least until it was abandoned in 2016.²⁹⁵ According to one interviewee, an announced government policy of tax relief for local processors was never implemented.²⁹⁶ Further, it has been argued that cooperatives and LBAs prefer to sell to exporters rather than processors, as the latter offer lower prices for the cocoa. As a result, processors struggle to get their hands on cocoa.²⁹⁷ Finally, because Nigeria does not have an EPA agreement with the EU, processed cocoa is burdened with taxes that do not impact cocoa beans.²⁹⁸

8.2.5. Quality standards

According to CFAN, Nigerian cocoa used to be considered high quality, but standards have fallen in recent decades.²⁹⁹ The PIND study found that there was little awareness amongst farmers of the importance of quality beans, and of the fact that improving bean quality could pay off in the long run.³⁰⁰ According to another expert, the situation is currently such that “money chases cocoa” and there is little incentive to improve quality in such a context.³⁰¹

Other observers have argued that without the universal quality controls that were in place during the era of the NCB, Nigeria (like Cameroon and Côte d’Ivoire) became caught in a downward quality spiral. Specifically,

“Without universal quality controls, private actors can exploit farmers by marketing a sub-standard cocoa product for the premium quality price. This creates a vicious downward circle in product quality, as the entry of sub-par products into the market erodes the origin’s quality reputation and reduces the price premium for a produce. In turn, this diminishes the incentives for all parties to protect the quality of their products. The result can be quality collapse, which was the outcome of cocoa market liberalisation in Cameroon, Côte d’Ivoire and Nigeria.”³⁰²

²⁹³ PIND, “Cocoa Value Chain Assessment Report,” 2018

²⁹⁴ USAID, “Nigeria Cocoa Value Chain Analysis,” 2012

²⁹⁵ PIND, “Cocoa Value Chain Assessment Report,” 2018

²⁹⁶ BASIC Interview with cocoa sector expert, 16 May 2022

²⁹⁷ PriceWaterhouseCoopers, “Transforming Nigeria’s Agricultural Value Chain,” September 2017

²⁹⁸ See footnote above: As of 2022, Nigeria still has not signed an Economic Partnership Agreement with the EU, leaving it at a comparative disadvantage to both Ghana and Côte d’Ivoire – that is, Nigerian cocoa beans and cocoa products are subject to a 4.6% to 6.2% tax (depending on the state of processing) on exports to EU countries. USAID, “Nigeria Cocoa Value Chain Analysis,” 2012; European Commission, “Overview of Economic Partnership Agreements,” updated February 2022; USDA, “Global Cocoa Market Study,” 2021

²⁹⁹ Daily Trust, “Nigeria Will Become Africa’s Biggest Cocoa Producer/Exporter By 2027 If...,” 1 May 2022

³⁰⁰ PIND, “Cocoa Value Chain Assessment Report,” 2018

³⁰¹ BASIC Interview with cocoa sector expert, 16 May 2022

³⁰² Kehinde et al., “Cocoa commercialisation in Nigeria : Issues and prospects,” 2022

According to one cocoa sector expert interviewed for this study, Nigerian beans tend to be mixed in with Ivorian or Ghanaian beans downstream.³⁰³

8.2.6. Cocoa price dynamics

8.2.6.1. Average price received

Farmgate price in Nigeria appears to range from 65 to 80% of the FOB price, with variation from place to place and from time to time, both during the buying season and across years. Farmgate price in Nigeria is said to be unstable because of the liberalisation of the market and the predatory practices of certain buyers who exploit farmers' lack of knowledge on market price.

- In October 2019, farmgate prices were at 720,000 Nairas per ton, or 2,353 USD at the time, having risen from a September 2019 value of 650,000 Nairas per ton.³⁰⁴ They then rose to above 890,000 Naira as a result of currency devaluation in 2020.³⁰⁵
- For the 2021-2022 campaign, FOB prices were around 2,200 – 2,300 USD per ton,³⁰⁶ while farmgate prices were said to hover around 750,000 Naira, i.e. 1,803 USD, with slight variations from place to place.³⁰⁷ This means farmers received approximately 80% of FOB price. This parallels the findings of a 2009 study, which said farmers captured 79% of FOB price.³⁰⁸

However, according to one cocoa sector expert, farmgate prices can drop to as low as 1,500 USD when buyers pressure farmers.³⁰⁹ One cocoa sector expert opined that a 2,000 USD farmgate price for 2,200 FOB price (90% of FOB price goes to farmers) is a realistic figure, as there has in the past (2014 to 2016 specifically) been situations where farmgate prices were above world market prices.³¹⁰ Another study dating to 2015 states that at the time, farmers captured 65 to 70% of FOB price, but that ICCO had previously reported higher percentages (80% of the ICCO price for 2014-2015 and 75% of the ICCO price for 2007-2008).³¹¹

In a study conducted with Nigerian cocoa farmers in 2019, it was found that “price instability” was farmers’ number-two preoccupation at 97.8%, just after “financial challenge” at 100%.³¹²

³⁰³ BASIC Interview with cocoa sector expert, 11 May 2022

³⁰⁴ Confectionery News, “Nigeria and Cameroon to discuss joint plan for cocoa premium price,” 16 October 2019

³⁰⁵ Bloomberg, “Nigerian Cocoa Exporters Struggle as Prices Jump on Devaluation,” 24 August 2020

³⁰⁶ BASIC Interview with cocoa sector expert, 22 April 2022

³⁰⁷ Nigerian Price, “Cocoa Prices in Nigeria (June 2022),” June 2022

³⁰⁸ ISDB, “Rebuilding inclusive global value chains as a pathway to global economic recovery,” 2022, citing Grinsven, 2009

³⁰⁹ Basic Interview with cocoa sector expert, 22 April 2022

³¹⁰ BASIC Interview with cocoa sector expert, 6 June 2022

³¹¹ SEO Economics, “Determination of Cocoa Prices in Cameroon, Nigeria, Ghana, Côte d’Ivoire and Indonesia. Appendix to Report Market Concentration and Price Formation in the Global Cocoa Value Chain,” 2016

³¹² Adefemi, “Profitability and Efficiency Analysis of Cocoa Marketing in Ondo State, Nigeria,” 2019

8.2.6.2. Profitability of cocoa production

Despite the difficulties mentioned above, at least two independent different studies conducted in Nigeria – in 2015, and in 2020 – found that cocoa farming is more profitable than other agricultural activities.³¹³ The 2020 study based on 2018 fieldwork in Ondo State found an average net farm income of 540,306.4 Naira, equivalent to approximately 1,492.56 USD at the time.³¹⁴ The 2015 study based on fieldwork in three states – Ondo, Osun and Ekiti – found an average profit per year of 390,809.41 Naira per year, equivalent to approximately 1,963.87 USD at the time. The broad discrepancy in profitability of farms in the three states³¹⁵ disappears once the net profit is adjusted to account for the variation in cocoa bean output in the sampled farms in the three states. In other words, when farm profitability is adjusted by yield, then the profit margins are more similar: 1,220.38 USD/ton in Ondo State, 1,374.18 USD/ton in Osun State, and 1,540.11 USD/ton in Ekiti State.³¹⁶ It is unclear, however, whether this income is sufficient for the farmers and their family to survive. Studies have found that poverty in Nigeria was especially severe among smallholder cocoa farmers, but that “Despite characteristically low income, low or no access to production inputs, low productivity, illiteracy and lack of access to information and basic necessities of life, which describe these farmers as being poor, [a] majority find a leverage to meet critical needs from cocoa enterprise.”³¹⁷ It should be noted that these critical needs of farmers would not be up to the level of a decent living income for them.

8.2.6.3. Market mechanism for setting prices

Because the market in Nigeria is highly liberalised, cocoa prices in Nigeria generally follow the London and New York futures markets prices. Nigerian cocoa is sometimes sold with a premium relative to the ICCO world price; this appears to vary from year to year.³¹⁸ According to one interviewee, the price of Nigerian cocoa tends to track with that of Cameroon, which is slightly higher than the price in Ghana or Côte d’Ivoire.³¹⁹ However, because the cocoa sector is non-regulated, there can be significant variation in farmgate prices from place to place.³²⁰

³¹³ A third study based in Ondo State in 2012 found an average net farm income of 1,634,182.72 Naira, equivalent to approximately 10,342.93 USD at the time. This figure is not cited in the main text as it seems unrealistic. See Onoja et al., “Profitability and Yield Determinants in Nigerian Cocoa Farms: Evidence from Ondo State,” 2012

³¹⁴ Ogunleye et al., “Effects of Social Capital Dimensions on Income of Cocoa Farming Households in Osun State,” 2020

³¹⁵ In USD equivalent, 3,414.52 USD for Ekiti State as opposed to 1,632.29 USD for Ondo and 1,481.73 USD for Osun.

³¹⁶ Popoola et al., “Technical Efficiency of Cocoa Production in Southwest Nigeria,” 2015. In this study, the average price per kg of cocoa was 384.87 Nairas, equivalent to 1,934.02 USD.

³¹⁷ Kehinde et al., “Cocoa commercialisation in Nigeria : Issues and prospects,” 2022

³¹⁸ According to a 2013 study, “while Nigerian cocoa used to receive a premium in the average of USD 75 per ton when compared to that of Cote d’Ivoire (the major international producer), such premium disappeared since the 1990s, following the dismantling of the Nigerian Cocoa Board and the relaxation in quality control” – FAO, “Analysis of incentives and disincentives for cocoa in Nigeria,” February 2013. Reports of farmgate prices higher than the world price in 2014 to 2016 suggest that in these years, there was effectively a premium (BASIC Interview with cocoa sector expert, 6 June 2022). The USDA “Global Cocoa Market Study” (2021) reported that on the New York futures market, Nigeria was part of the high-quality Group A, “(deliverable at a premium of USD 160 per ton), which includes beans from Ghana, Côte d’Ivoire, Nigeria, Sierra Leone and Togo.” The ICCO October 2021 Monthly Cocoa Market Report states that in Europe, the country differential for Nigeria dropped by 72% in the year 2021 relative to 2020, from 390 USD to 109 USD per ton; on the U.S. market, the country differential fell by 40%, from 407 USD/ton to 244 USD/ton.

³¹⁹ BASIC Interview with cocoa sector expert, 11 May 2022

³²⁰ BASIC Interview with cocoa sector expert, 11 May 2022

8.2.7. Certification schemes in Nigeria

Certification schemes appear to be poorly developed in Nigeria, except for the Rainforest/UTZ certification. The first UTZ certification in Nigeria goes back to 2011, when Archer Daniels Midland (ADM) in cooperation with exporter Saro Agro-Allied certified almost 2,000 Nigerian cocoa farmers.³²¹ Today, at least one European-owned local Nigerian processor/exporter sources virtually all of its cocoa through the Rainforest/UTZ certification scheme, covering 20 000 farmers.³²²

An article in 2021 quoted the Nigerian RMRDC³²³ chief as saying that “the role of cocoa certification in raising farmers’ income and promoting ecologically sound cultivation methods was yet to be fully appreciated and implemented in Nigeria; and certification projects presently have little impact.”³²⁴

In several states, there are bean-to-bar counters – approximately 15, as of fall 2021.³²⁵ They do not necessarily aim to export: at least some of the demand comes from Nigeria’s middle class in urban centers.

A 2018 survey of cocoa farmers by PIND found that awareness of certification programs among cocoa farmers was only at 10%.³²⁶ It is unclear to what extent the FairTrade certification is developed in Nigeria.

³²¹ “ADM to offer UTZ cocoa for the first time following Nigerian certification,” ConfectioneryNews.com, 20 May 2011

³²² BASIC Interview with cocoa sector expert, 16 May 2022

³²³ Raw Materials Research and Development Council

³²⁴ Daily Trust, “Why cocoa yields remain poor in Nigeria,” 14 November 2021

³²⁵ Daily Trust, “Nigeria’s Cocoa Industry Adding Value With Bean-To-Bar Model — Adhuze,” 18 October 2021

³²⁶ PIND, “Cocoa Value Chain Assessment Report,” 2018



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