



Food and Agriculture
Organization of the
United Nations

BASIC

Comparative study on the distribution of value in European chocolate chains

Research report

Advance Copy

Published by
the Food and Agriculture Organization of the United Nations
and
Bureau d'analyse sociétale pour une information citoyenne

FAO and BASIC. 2020. Comparative study on the distribution of value in European chocolate chains. Paris.
DOI link [to be added]

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) or Bureau d'analyse sociétale pour une information citoyenne (BASIC) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO or BASIC in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO or BASIC.

ISBN [to be added]

© FAO, 2020



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence
(CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons license. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original English edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization <http://www.wipo.int/amc/en/mediation/rules> and any arbitration will be in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL)

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

Executive Summary

CONTEXT, SCOPE AND OBJECTIVES OF THE STUDY

The low level of income of the large majority of small cocoa farmers, especially in Western Africa, has been a growing issue in the cocoa sector for the past 3 decades, and **ensuring a living income for small cocoa farmers has become a pressing issue across producing countries.**

This has gained ever more publicity as both the **Ivorian and the Ghanaian public authorities have decided, in consultation with the industry, to set a fixed "living income differential" (LID) of 400 USD per tonne on all cocoa contracts sold by either country for the 2020/21 season;** funds raised through this LID will be used to help increase payments to farmers¹.

This has triggered critical questions such as:

- What would be the additional costs along the chain?
- What would be the impact on the profitability of business actors?
- What are possible scenarios to distribute additional costs among actors of the cocoa chains?

To date, there had been no in-depth study on the distribution of value and costs along cocoa/chocolate chains, which is nonetheless indispensable information in order to **facilitate an informed collective debate** on the above-mentioned questions with all stakeholders of the sector, and based on objectified data and information.

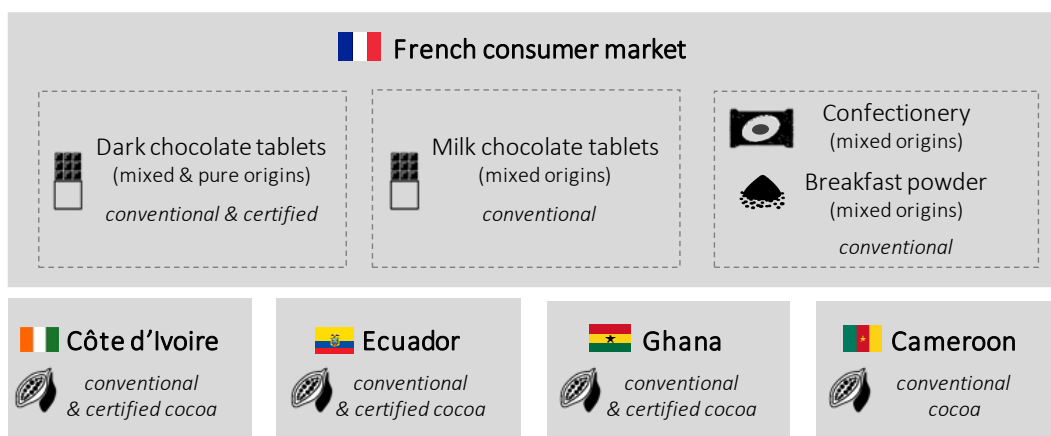


Figure 1. Scope of the study on the distribution of value in European chocolate chains. Source: BASIC

The ambition of this study is to bridge this knowledge gap, at least partially, by investigating the French market of dark and milk chocolate tablets as well as confectionery bars and breakfast cocoa powder (sold in supermarkets' stores) that are made of a mix of cocoa, conventional and certified, grown in Côte d'Ivoire, Ghana, Ecuador and Cameroon (as illustrated above).

The main objectives of the study are two-fold:

¹ Reuters. "Côte d'Ivoire, Ghana add 'living income' cocoa premium to fight poverty". Reuters, 2019. <https://mobile.reuters.com/article/amp/idUSL8N24B55M> visited on May 11th, 2020.

1. Estimate the **detailed distribution of value, costs and profits for different chocolate products** from cocoa farmers down to consumers, and investigate the factors that influence this distribution, both upstream in the countries of cocoa production and downstream in the country of consumption (France).
2. **Compare the part of value accruing to farmers** for the different chocolate products and producer countries analysed with other key mass-consumed food products sold in France.

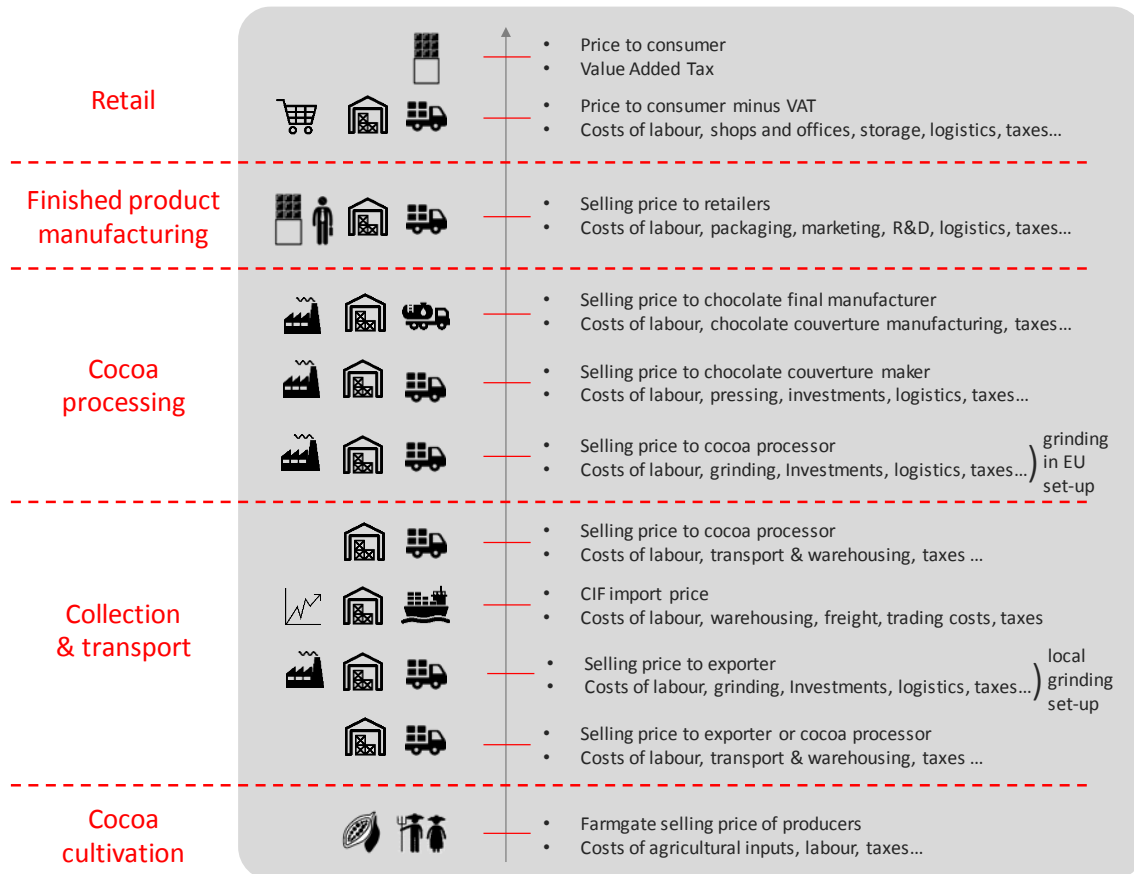


Figure 2. Main stages of cocoa/chocolate value chains investigated in the study. Source: BASIC

In order to fulfil these objectives, a **sound and reliable methodology has been developed:**

- **to model the markets** related to the chocolate products analysed as well as associated **value chains** from cocoa farmers to end consumers,
- **to collect, process and cross-check statistical data** from public and private databases, as well as stemming from publicly available reports, that make it possible to make credible estimate of the value, internal costs, taxes and net margins attached to each of the main stages of the chain:
 - o **retail** (in French supermarkets' stores),
 - o **finished goods manufacturing** and selling, i.e. national and international brands as well as chocolate manufacturers working for retailers' private labels,
 - o **cocoa processing** stages in Europe, i.e. cocoa grinders, cocoa pressers as well as industrial chocolate couverture manufacturers,
 - o **collection, warehousing, and transport** of cocoa in producing countries - including potentially local grinding and/or pressing of cocoa - up to the import stage in Europe,
 - o **cocoa cultivation** by farmers, exploring potential differences depending on most common producer set-ups.

DISTRIBUTION OF VALUE AND COSTS FROM FARMERS TO CONSUMERS

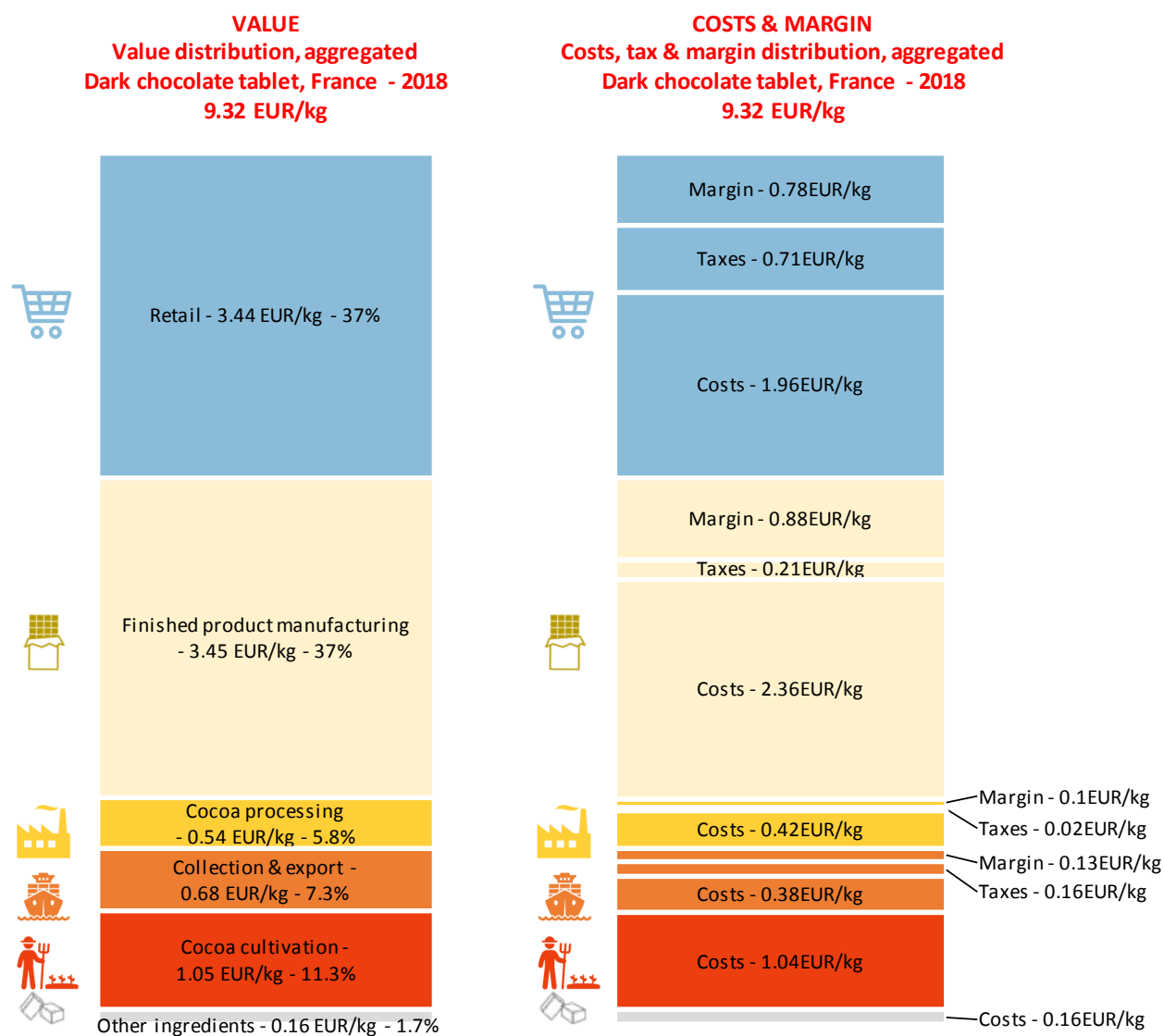


Figure 3. Distribution of value, costs and margins of plain dark chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC

The first main result of the research is the **asymmetry of the value creation along the cocoa/chocolate chain**, as illustrated above in the case of plain dark chocolate tablets.

On average 70% of the total value and 90% of the total margins generated from cocoa farmers to end consumers accrue to the two last actors in the chain: brands and retailers. Upstream, only 18.6% of the total value and less than 7.5% of the total margin are generated by actors in cocoa producing countries (from cocoa cultivation up to bean exports).

At the beginning of the chain, cocoa farmers only receive on average 11% of the final price, whereas a **high percentage of them are living under the poverty threshold** (as exemplified by the latest estimates conducted by the World Bank in Côte d'Ivoire and Ghana)².

² World Bank, Au pays du cacao : comment transformer la Côte d'Ivoire, 2019 and World Bank, Ghana: Priorities for ending poverty and boosting shared prosperity (systematic country diagnostic), 2018

👉 In this context, our research shows that the 3 main factors linked to “downstream” actors (retailers and brands) have a very significant impact on this distribution of value and costs i.e.:

- the **type of brand** (national brand Vs private label),
- the **marketing mix** (basic, cooking, premium),
- the **products’ performance** (best-sellers Vs other products).

These downstream factors generate important changes on the price to consumers and on the distribution of value and margins between the two last stages of the chain, i.e. at the level of retailers as well as (inter)national brands (and to a lesser extent manufacturers of Private Label).

At the other end of the chain, the **value and costs associated with all other upstream stages** (from cocoa cultivation to chocolate couverture manufacturing) **are much more stable**.

👉 In contrast, all upstream factors analysed have a quite limited impact, if any, on the distribution of value and costs from cocoa farmers to end consumers, whether it is:

- the **country of origin** (even when highlighted on the packaging of the finished good),
- the **percentage of cocoa** in the final product (for the same marketing mix),
- the **country of first processing**.

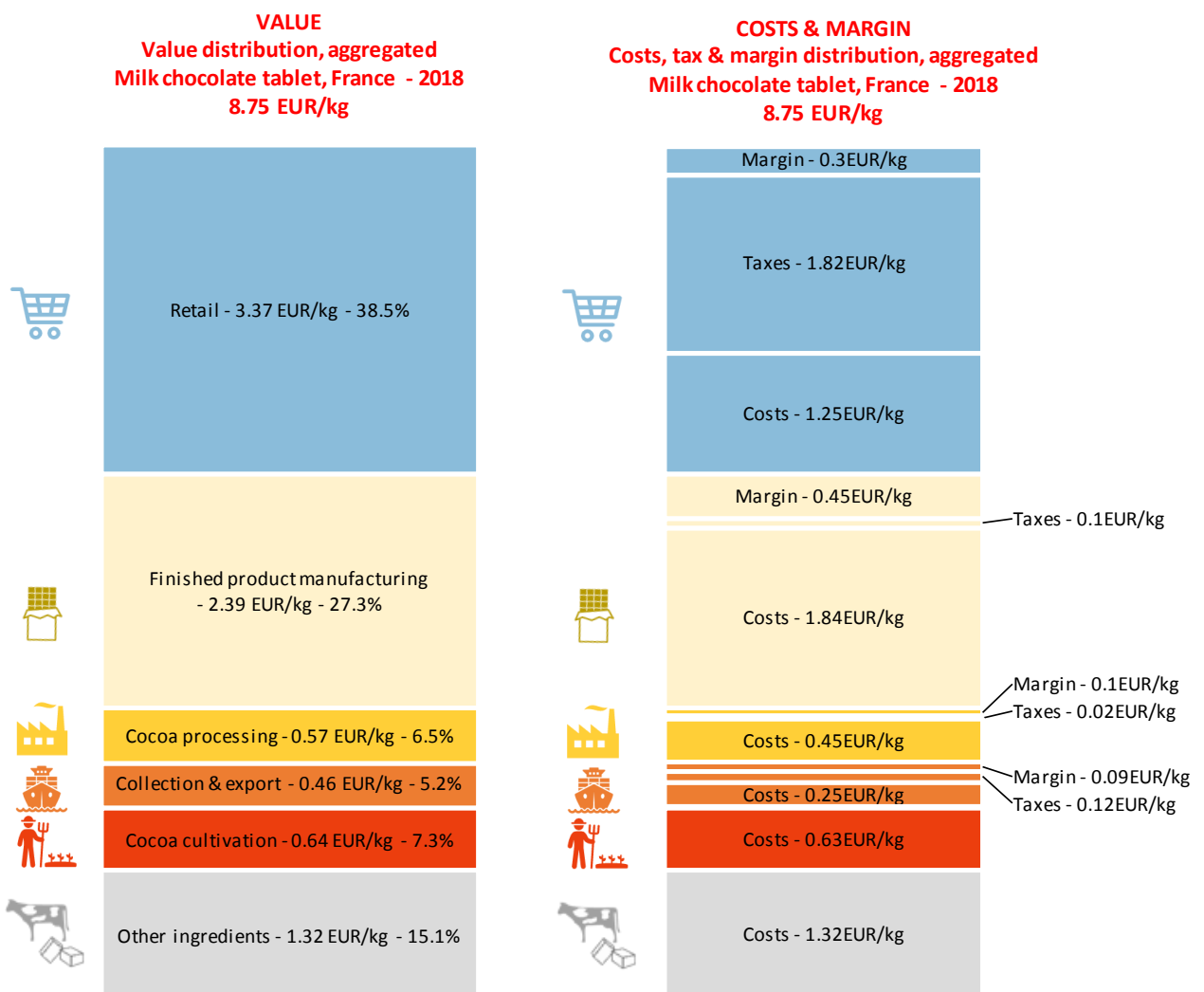



Figure 4. Distribution of value, costs and margins of plain milk chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC

These results also apply to **plain milk chocolate tablets** (results for which are illustrated above) **and the other products analysed** in the study (countline confectionery bars and cocoa breakfast powder).

The **only major differences** are the **higher level of Value Added Tax applied in France** (20% instead of 5.5% for plain dark chocolate) and **higher value of other ingredients** (milk being as expensive as cocoa), which create a **stronger pressure/squeeze of all stages of the chain**, as plain milk chocolate tablets and confectionery bars are sold to French consumers at a slightly lower price per kilo than dark tablets.

 These findings can be largely explained by fact that the **majority of value creation in the chain is linked to intangible leverages** (marketing segmentation, brand reputation...) which are essentially managed by brands and retailers and largely prevail over the origin/terroir and the specific work of farmers which are rarely valued at the consumer end of the chain.

This is further amplified by:

- the **complexity of the cocoa/chocolate chain** which is associated with a **high level of industrialisation and large economies of scale at the processing stage which have enabled to largely democratise the consumption of chocolate** thanks to the (relatively) low price level achieved at the consumer level, but which hampers the capacity of cocoa farmers and producer countries to get recognition and value for their specificities (terroir, flavours...).
- the **consumers**, because of the marketing and advertisement made by major brands, **consider that the percentage of cocoa is what matters most and defines the quality of chocolate tablets sold by retailers** (especially in the premium segment) **and not the terroir or the work of farmers**.

As a result, **there is too little incentive for cocoa producing countries to develop large-scale product differentiation strategies**.

DISTRIBUTION OF VALUE AND COSTS IN PRODUCING COUNTRIES

In this context, based on the official data published by the countries' public authorities (e.g. barème in Côte d'Ivoire) and the information from customs authorities, **our results show that in 2018:**

- the lower share of value for cocoa cultivation was achieved in Côte d'Ivoire and Cameroon (with a respective producer price of 1.07 euros/kg and 1.15 euros/kg),
- followed by Ghana which reached a producer price of 1.41 euros/kg,
- and finally, Ecuador for which the cocoa producer price reached 1.63 euros/kg for isolated small-holder farmers selling unsorted cocoa, and 1.86 euros/kg for organised farmers selling sorted "cacao nacional" (fine flavour).

In comparison, the share of value associated with collection, transport, warehousing and exports is much more similar among the 4 countries, from 0.48 euros in Ecuador (unsorted cocoa) to 0.63 euros/kg in Côte d'Ivoire. **The main difference is associated with taxes which range from 0.06 euros/kg in Ecuador up to 0.29 euros/kg in Côte d'Ivoire**. The case of Ghana must be analysed separately as it is the only country which has maintained a public monopoly on export and trading of cocoa beans through the Cocobod. Therefore, the State derives revenues not only from the taxes levied but also from the margins (i.e. profits) generated by the public Cocoa Marketing Company (as a result, the tax share in Ghana cannot be compared with the other producing countries).

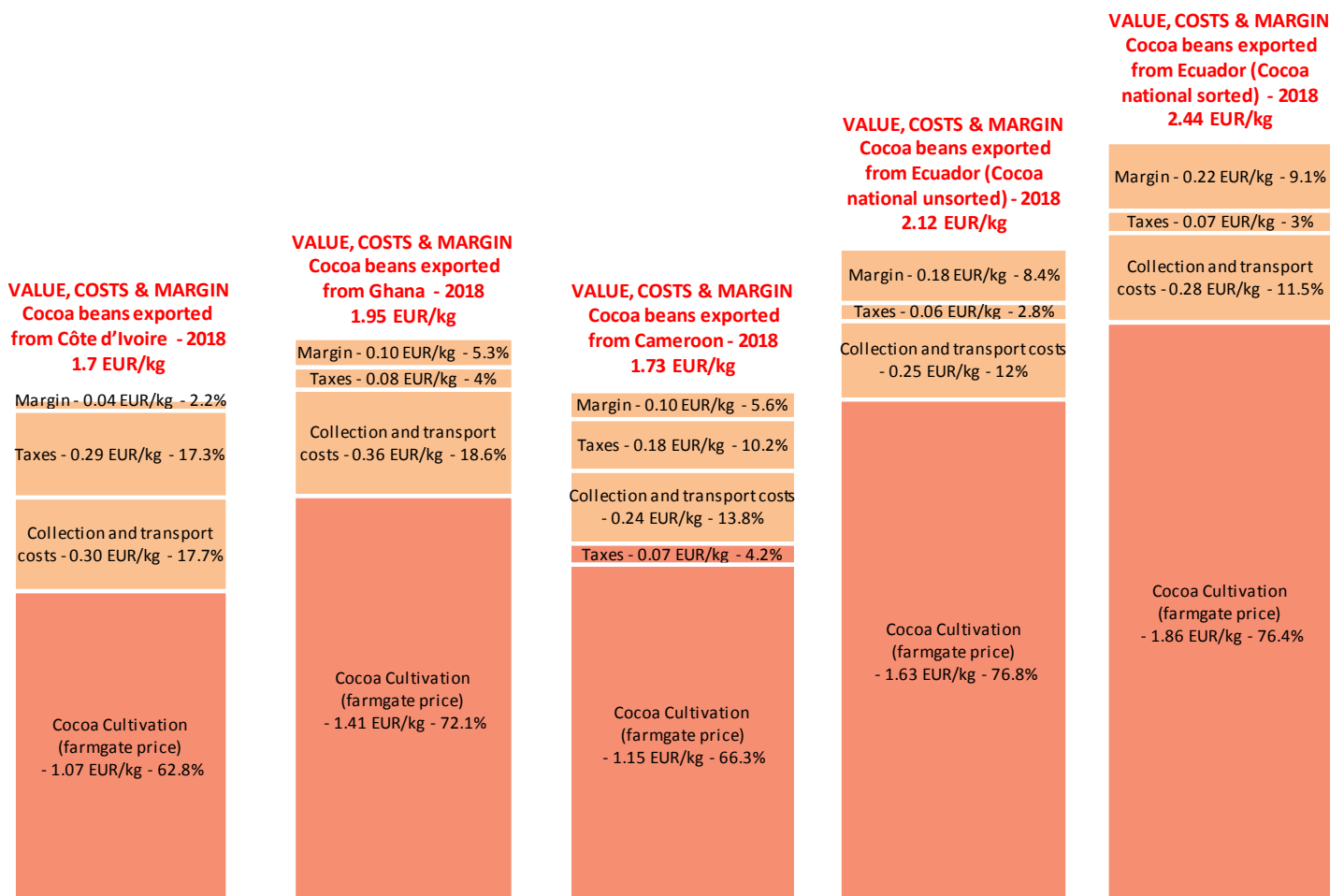



Figure 5. Breakdown of Free on Board value in Côte d'Ivoire, Ghana, Cameroon and Ecuador in 2018 (cocoa harvest 2017/18). Source: BASIC

Our research shows that, within producing countries, 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**, especially the ones **offering finer flavours and/or higher yields**, and the type of associated **agricultural practices**,
- **the evolution of cocoa world prices**.


 The case studies of Côte d'Ivoire and Ghana show that stronger regulation systems enable more stable prices for producers country-wide, especially in times of negative price shocks, but are most often 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, and if possible increase it over time, these case studies show that **a key lever lies in the guarantee of a homogeneous, stable and predictable quality of cocoa** as well as the reliability of the supply. In complement, the creation and maintaining of a **mitigation fund** seems to be the main available and effective tool to buffer market volatility, in particular potential price falls. As a result, these countries are 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.

In contrast, the case study of Ecuador illustrates the potential variations of 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**,
- on the other hand, **specific cocoa varieties** which are either linked to **higher quality of aroma** (Fine and Flavour Cocoa) or **higher productivity** (CCN51)³, and which are both more profitable than standard cocoa quality: sorted fine and flavour varieties are associated with +15% farmgate price while industrialised production of CCN51 generates an estimated net margin of +8-10%.

These are the results of **differentiation strategies developed by Ecuadorian producers and private actors which have required significant investments and capacity building.**

 In Ecuador, the fact that the cocoa sector is liberalised leaves room for greater potential of differentiation of cocoa production, but is associated with a quite polarised producer base between the farmers who can achieve it and all the others.

On the one hand, small to mid-size (industrialised) plantations and organised small-holder farmers benefiting from private and public support are the ones who produce the high(er) quality and high(er) yield varieties, achieving better income in the case of smallholder farmers and generating net benefits in the case of plantations. 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. Cameroon, the other liberalised country analysed, also shows signs that such polarisation processes are emerging and developing, but to a lesser extent, between certified and non-certified producers.

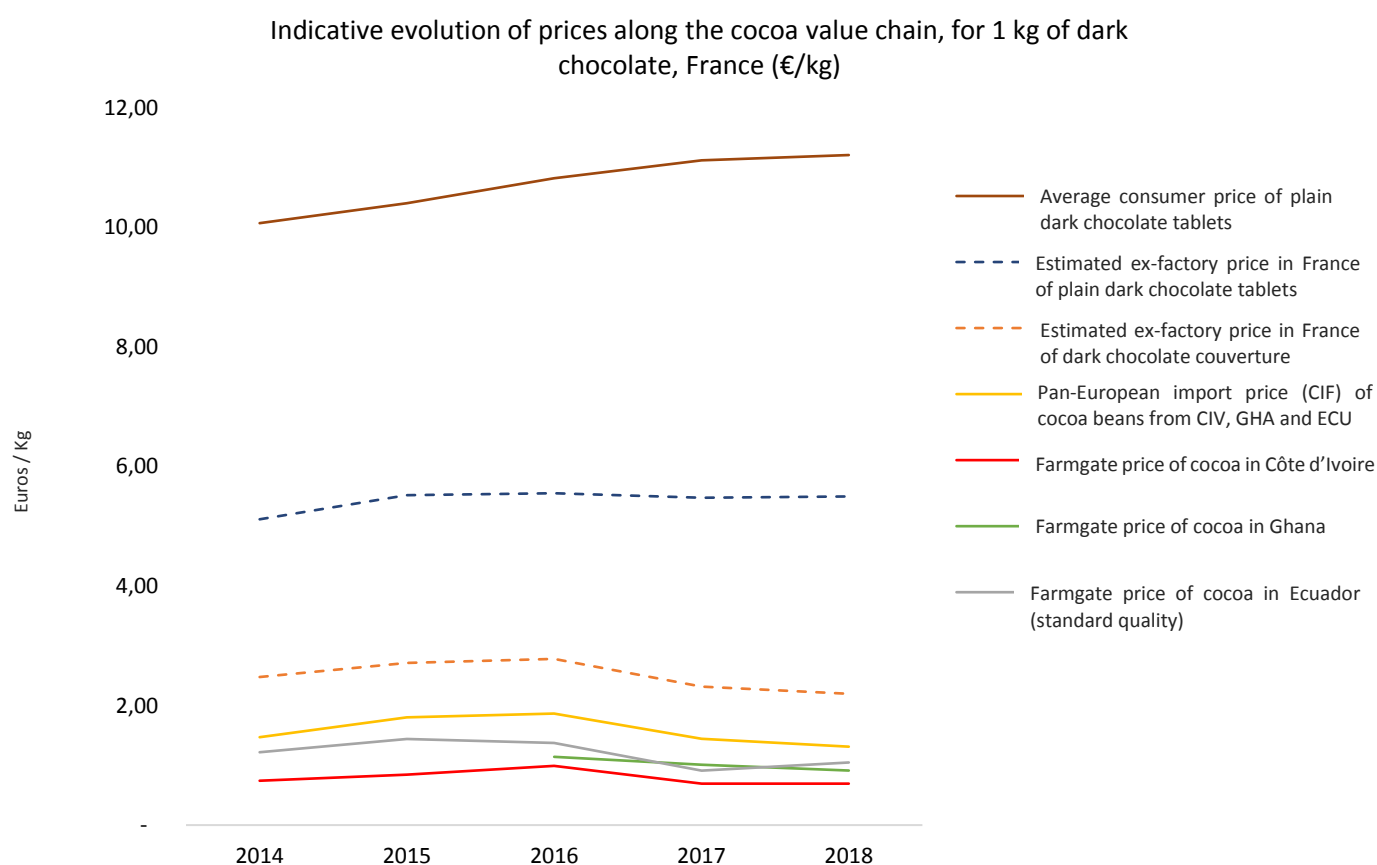


Figure 6. Evolution of the prices of the 'averaged' dark chocolate tablet at different stages 2014-2018. Source: BASIC

³ On average, yields in Côte d'Ivoire, Ghana and Cameroon lie between 350 kg/ha and 450 kg/ha. In Ecuador, according to the Ministry of Agriculture (MAGAP), average yields for cacao nacional reach 350 kg/ha while for CCN51 they reach 650 kg/ha

The evolution of cocoa world market prices is the third and last factor influencing the value and costs distribution within producing countries.

As the LIFFE-ICE cocoa price increased by more than 20% between 2014-2016, then fell by 35% in 2017 and 2018, public data show that the cocoa farmgate price has followed similar trends (with the partial exception of Ghana where the Cocobod used its mitigation fund to buffer part of the price drop).



At the end of the chain, the combined share of value for retailers and brands has increased in 2014-2016, thereby transmitting to consumers the cocoa world price increase; it has continued to build up until 2018 despite the fall in cocoa world prices in 2016-2018, achieving a growth of +15% compared to 2014.

EFFECTS OF CERTIFICATION SYSTEMS ON VALUE AND COSTS DISTRIBUTION


To improve the situation of cocoa farmers, several certifications schemes have been developed since the 1990s with the goal of promoting the production and consumption of products produced to higher social and/or environmental standards than the market norm.




Figure 7. Distribution of value, for certified 'Premium' plain dark chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC

The main such schemes used in the cocoa sector – Rainforest Alliance and UTZ (now merged), fair trade and organic – **represented in 2016** a combined area of **2.3 million to 3.8 million ha of cocoa** (roughly 30% of the world global cocoa area) and **2.1 million tonnes of cocoa** (40% of world global production)⁴.

In all the cases analysed, **the share of value accruing to retailers and national brands are quite similar** between conventional and certified tablets, **and the share of value accruing to all other actors only varies moderately** (for example between 10.2% and 11.6% for certified dark ‘Premium tablets’, compared to 8.2% for conventional tablets).

 Whatever the certification analysed, the overall value distribution from raw material to end consumption is not profoundly changed, except in certain cases where multiple certification schemes are attained (in particular the combination of organic and fair trade).

Significant changes can be observed at the level of cocoa farmers in the case of organic certification especially when combined with fair trade (for example, in the case of dark ‘Premium’ chocolate tablets, farmers reached an estimated 2.7 euros/kg which is 87% more than in the case of non-certified tablets).

 Beyond the requirements of these certifications, changes in value distribution seem to be strongly linked to:

- **greater partnership relationships** between actors all along the chain (farmers, cooperatives, processors, brands, retailers),
- **greater value creation** associated with the growing demand from certain consumers who are ready to pay more for “green and fair” chocolate made from cocoa of identified origins.

In fine, our research shows that the certification systems analysed have mixed results:

- on the one hand, the organic certification, especially in combination with fair trade, is associated with a higher valuation of the work of farmers and of the terroir of cocoa, but only concerns a minority of cocoa farmers who are able to enter these demanding certification systems,
- on the other hand, the UTZ/Rainforest certification and the Fairtrade certification, when they are not combined with organic, appear to **serve mainly as “licences to operate” in the eyes of many brands and retailers** willing to demonstrate their conformity with social and environmental criteria while ensuring productivity (for UTZ/Rainforest), **with difficulties in most cases to translate these commitments into higher prices to consumers** when these certifications are not combined with organic.

POTENTIAL REPERCUSSIONS OF THE “LIVING INCOME DIFFERENTIAL”

In 2019, Côte d’Ivoire and Ghana, in consultation with the industry, have decided to bring a **more systemic change by establishing a concerted “living income differential” (LID) of 400 USD per tonne for the 2020/21 season**, with the objective of improving the livelihood of their cocoa farmers.

⁴ ITC, FIBL and IISD, “The State of Sustainable Markets”, 2018

In order to investigate the consequences of this decision on the sector in France, we have used the calculation tool we have developed on cocoa/chocolate value chains in order to **build simulations of the potential price transmission of the LID on the different actors of the cocoa-chocolate value chain** (consumers, retailers, brands, manufacturers, processors, traders, transporters...) for the French market of plain dark and milk chocolate tablets.



Our modelling shows that **the cost transmission of the LID introduced at origin by Côte d'Ivoire and Ghana could result in a consumer price increase of +1.5% for milk chocolate tablets and +2.0% for dark chocolate tablets.**

These economic issues and their implications would need to be discussed more in-depth through an **inclusive process among all stakeholders of the cocoa sector (public authorities, farmers, processors, brands, retailers, consumers and NGOs), based on informed/objectified data so as to enable them to understand each other's perspectives**, in particular:

- The significant role played by retailers and the critical importance of chocolate and confectionery products for their economic balance, as one of the few sources of profitability at a time when their business model is more and more questioned.
- The 2 very distinct business models that exist along the rest of the chain: low(er) volumes/high margins (for certain international brands, smaller national brands but also smaller processors and quality-specialised farmers) and high volume/low margins (transporters, traders, processors, main international brands and private label manufacturers).
- The need for significant public spending on essential services (roads, education, health...) to ensure sustainable living conditions in cocoa producing regions.



In order to support this move, 3 main proposals are made:

- 1. Expand the current study to include other important cocoa producing countries and consuming markets, and build-up on it to develop a permanent 'observatory' tool on the distribution of value and costs in the cocoa sector hosted by an existing institution in order to facilitate a multi-stakeholder discussion at the national and global levels through the sharing of objectified and cross-checked data.**
- 2. Secure and promote the development of tripartite agreements between farmers' organisations, industry players and retailers that aim at guaranteeing decent prices for producers and protecting the environment.**
- 3. Promote and strengthen farmers' organisations in producing countries and help develop their capacity to differentiate cocoa varieties and improve their quality, their access to credit improve their quality, their access to credit and their capacity to invest (in their business and their communities).**

Table of contents

| | |
|--|----|
| Executive Summary | 4 |
| CONTEXT, SCOPE AND OBJECTIVES OF THE STUDY | 4 |
| DISTRIBUTION OF VALUE AND COSTS FROM FARMERS TO CONSUMERS | 6 |
| DISTRIBUTION OF VALUE AND COSTS IN PRODUCING COUNTRIES | 8 |
| EFFECTS OF CERTIFICATION SYSTEMS ON VALUE AND COSTS DISTRIBUTION | 11 |
| POTENTIAL REPERCUSSIONS OF THE “LIVING INCOME DIFFERENTIAL” | 12 |
| Abbreviations | 18 |
| List of figures | 19 |
| Glossary | 26 |
| Technical overview of the cocoa chain | 28 |
| Introduction..... | 29 |
| Objectives, scope, and methodology of the study..... | 31 |
| Key objectives of the study..... | 31 |
| Scope | 31 |
| Global description of the methodology..... | 33 |
| Conceptual framework | 33 |
| Operational framework | 34 |
| Transversal analysis | 40 |
| Limitations | 41 |
| 1. Chapter 1: The global context of the cocoa-chocolate value chains | 43 |
| 1.1. Brief historical insights on cocoa production & chocolate consumption | 43 |
| 1.2. Chocolate consumption..... | 45 |
| 1.3. From chocolate products down to cocoa beans..... | 47 |
| 1.3.1. Structural evolutions at global level..... | 47 |
| 1.3.2. Main actors of cocoa-chocolate chains at global level..... | 50 |
| 1.3.2.1. Retailers..... | 50 |
| 1.3.2.2. Chocolate brands..... | 51 |
| 1.3.2.3. Chocolate manufacturers | 53 |
| 1.3.2.4. Cocoa grinders..... | 55 |
| 1.3.2.5. Cocoa traders and transporters..... | 56 |
| 1.4. Cocoa cultivation | 56 |
| 1.5. Certified cocoa value chains | 58 |
| 1.6. Main learnings on the global context of cocoa-chocolate value chains..... | 63 |

| | |
|--|-----|
| 2. Chapter 2: Distribution of value, costs & margins from French consumers up to cocoa farmers in 4 countries..... | 64 |
| 2.1. Introduction: Why investigating the distribution of value along cocoa chains? | 64 |
| 2.2. Context of French cocoa/chocolate value chains | 65 |
| 2.2.1. The French consumer market for chocolate products | 65 |
| 2.2.2. Main actors of cocoa-chocolate chains in France | 66 |
| 2.2.2.1. Retailers..... | 66 |
| 2.2.2.2. Chocolate brands..... | 67 |
| 2.2.2.3. Chocolate manufacturers | 69 |
| 2.2.2.4. Cocoa sourcing | 71 |
| 2.2.3. Main learnings on French cocoa-chocolate value chains | 74 |
| 2.3. Analysis of 4 key product types: plain dark & milk chocolate tablets, confectionery bars and cocoa breakfast powder..... | 75 |
| 2.3.1. Key background information on value & cost distribution..... | 75 |
| 2.3.1.1. Contextualisation of the chosen product categories & cocoa origins | 75 |
| 2.3.1.2. Reading guide for estimates | 77 |
| 2.3.2. Plain dark chocolate tablets | 79 |
| 2.3.2.1. Modelling of the plain dark chocolate tablets' category | 79 |
| 2.3.2.2. "Averaged" results for plain dark chocolate tablets | 80 |
| 2.3.2.3. Investigation of downstream factors influencing the distribution of value, costs, taxes & margins ... | 82 |
| 2.3.2.4. Investigation of upstream factors influencing the distribution of value, costs & margins | 96 |
| 2.3.2.5. Main learnings on plain dark chocolate tablets..... | 101 |
| 2.3.3. Milk chocolate tablets from mixed origins..... | 102 |
| 2.3.3.1. Modelling of the plain milk chocolate category | 102 |
| 2.3.3.2. "Averaged" results for plain milk chocolate tablets | 103 |
| 2.3.3.3. Investigation of downstream factors influencing the distribution of value, costs & margins | 105 |
| 2.3.3.4. Investigation of upstream factors influencing the distribution of value, costs & margins | 114 |
| 2.3.3.5. Main learnings on plain milk chocolate tablets | 115 |
| 2.3.4. Case study of chocolate confectionery (countlines) | 116 |
| 2.3.5. Case studies of breakfast cocoa powder | 117 |
| 2.3.6. Main learnings on the 4 product categories analysed (dark & milk chocolate tablets, confectionery bars, breakfast powder) | 121 |
| 2.4. Influence of cocoa certifications on the distribution of value, costs & margins | 122 |
| 2.4.1. The French consumer market and actors associated with cocoa certifications | 122 |
| 2.4.2. Modelling of certifications | 123 |
| 2.4.3. Results for certified plain dark chocolate tablets..... | 124 |
| 2.4.4. Results for certified plain milk chocolate tablets | 133 |
| 2.4.5. Main learnings on the influence of certifications..... | 137 |

| | | |
|----------|---|-----|
| 2.5. | Transversal analysis of each stage of the chain, across the products analysed | 138 |
| 2.5.1. | Retailing | 138 |
| 2.5.2. | Final product manufacturing..... | 143 |
| 2.5.3. | Cocoa processing (including chocolate manufacturing)..... | 150 |
| 2.5.4. | Cocoa cultivation, collection and exports | 151 |
| 2.5.5. | Main learnings on the transversal analysis of actors | 153 |
| 3. | Chapter 3: Focus on the distribution of value, costs & margins within producer countries | 154 |
| 3.1. | Côte d’Ivoire | 154 |
| 3.1.1. | Conventional cocoa | 154 |
| 3.1.1.1. | The Ivorian cocoa sector and its main characteristics | 154 |
| 3.1.1.2. | Structure of the cocoa-chocolate value chain in Côte d’Ivoire..... | 159 |
| 3.1.1.3. | Economic strategies and business models of the main actors in the Ivorian cocoa sector | 160 |
| 3.1.1.4. | Key results/figures on value distribution from production to FOB..... | 164 |
| 3.1.1.5. | Focus on the farmers’ share of value | 167 |
| 3.1.2. | Certified cocoa | 169 |
| 3.1.2.1. | Facts and figures on certifications | 169 |
| 3.1.2.2. | Key results/figures on value distribution from production to FOB..... | 171 |
| 3.1.3. | Main learnings on the case study of Côte d’Ivoire | 175 |
| 3.2. | Ghana | 176 |
| 3.2.1. | Conventional cocoa | 176 |
| 3.2.1.1. | The Ghanaian cocoa sector and its main characteristics | 176 |
| 3.2.1.2. | Structure of the cocoa-chocolate value chain in Ghana | 183 |
| 3.2.1.3. | Economic strategies and business models of the main actors in the Ghanaian cocoa sector | 186 |
| 3.2.1.4. | Key results/figures on value distribution from production to FOB..... | 187 |
| 3.2.1.5. | Focus on the farmers’ share of value | 190 |
| 3.2.2. | Certified cocoa | 192 |
| 3.2.2.1. | Facts and figures on certifications | 192 |
| 3.2.2.2. | Key results/figures on value distribution from production to FOB..... | 194 |
| 3.2.3. | Main learnings on the case study of Ghana | 196 |
| 3.3. | Ecuador | 197 |
| 3.3.1. | Conventional cocoa | 197 |
| 3.3.1.1. | The Ecuadorian cocoa sector and its main characteristics | 197 |
| 3.3.1.2. | Structure of the cocoa-chocolate value chain in Ecuador | 202 |
| 3.3.1.3. | Economic strategies and business models of the main actors of Ecuadorian cocoa sector | 203 |
| 3.3.1.4. | Key results/figures on value distribution from production to FOB..... | 204 |
| 3.3.2. | Certified cocoa | 207 |
| 3.3.2.1. | Facts and figures on certification | 207 |
| 3.3.2.2. | Key results/figures on value distribution from production to FOB..... | 209 |
| 3.3.3. | Main learnings on the case study of Ecuador..... | 212 |

| | | |
|----------|--|-----|
| 3.4. | Cameroon | 213 |
| 3.4.1. | Conventional cocoa | 213 |
| 3.4.1.1. | The Cameroun cocoa sector and its main characteristics | 213 |
| 3.4.1.2. | Structure of the cocoa-chocolate value chain in Cameroon..... | 217 |
| 3.4.1.3. | Economic strategies and business models of the main actors in the Cameroonian cocoa sector..... | 218 |
| 3.4.1.4. | Key results/figures on value distribution from production to FOB..... | 220 |
| 3.4.2. | Certified cocoa | 221 |
| 3.4.3. | Main learnings on the case study of Cameroon..... | 222 |
| 4. | Chapter 4: Comparison with other non-cocoa products..... | 223 |
| 4.1. | Comparison between chocolate and other mass-consumed food products produced & sold in France | 223 |
| 4.2. | Comparison between the cocoa/chocolate value chain and the coffee value chain | 224 |
| 5. | Chapter 5: Transversal analysis & recommendations | 228 |
| 5.1. | Transversal analysis | 228 |
| 5.2. | Recommendations..... | 232 |
| 5.2.1. | For International organisations in partnership with stakeholders of the sector: proposal of creation of a permanent 'observatory' on prices and costs in cocoa | 232 |
| 5.2.2. | For business operators (upstream & downstream) | 233 |
| 5.2.3. | For the EU | 233 |
| 5.2.4. | For producer countries..... | 233 |

Abbreviations

| | |
|---------------|---|
| ADM | Archer Daniels Midland |
| ANECACAO | Asociación Nacional de Exportadores de Cacao e Industrializados del Ecuador |
| BCEAO | Banque Centrale des Etats d’Afrique de l’Ouest |
| 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 |
| CIF | Cost Insurance and Freight (Incoterm) |
| CTOC | United Nations Convention against Transnational Organised Crime |
| EC | European Commission |
| EU | European Union |
| EUR | Euro |
| FAO | Food and Agricultural Organisation |
| FCFA | West African Franc, currency of eight independent states in West Africa |
| FLO | Ex-name of Fairtrade International (Fairtrade Labelling Organisation) |
| IMF | International Monetary Funds |
| FOB | Free on board (Incoterm) |
| GHS | Ghanaian Cedi (currency) |
| GVC | Groupements à vocation coopérative |
| ICCO | International Cocoa Organisation |
| INSEE | National Institute of Statistics and Economics Studies in France |
| 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 |
| REDD+ | United Nations Programme on Reducing Emissions from Deforestation and Forest Degradation |
| 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 |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UNICEF | United Nations Children’s Fund |
| USAID | United States Agency for International Development |
| USD | United States Dollars |
| UTZ Certified | Utz Kapeh |
| VCA4D | Value Chain Analysis for Development |
| XAF | Central African Franc, currency of six independent states in Central Africa |

List of figures

| | |
|---|----|
| Figure 1. Scope of the study on the distribution of value in European chocolate chains. Source: BASIC | 4 |
| Figure 2. Main stages of cocoa/chocolate value chains investigated in the study. Source: BASIC..... | 5 |
| Figure 3. Distribution of value, costs and margins of plain dark chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC..... | 6 |
| Figure 4. Distribution of value, costs and margins of plain milk chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC..... | 7 |
| Figure 5. Breakdown of Free on Board value in Côte d'Ivoire, Ghana, Cameroon and Ecuador in 2018 (cocoa harvest 2017/18). Source: BASIC | 9 |
| Figure 6. Evolution of the prices of the 'averaged' dark chocolate tablet at different stages 2014-2018. Source: BASIC | 10 |
| Figure 7. Distribution of value, for certified 'Premium' plain dark chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC..... | 11 |
| Figure 8. Cocoa production and processing and chocolate manufacturing stages. Source: Napa Valley Chocolate Company | 28 |
| Figure 9. Sketch of the geographical scope of the study. Source: BASIC | 32 |
| Figure 10. Summary of 4-steps methodology developed in order to build and analyse estimates of prices, costs and margins along the cocoa/chocolate chains analysed. Source: BASIC..... | 34 |
| Figure 11. Summary of the value cocoa/chocolate value chains investigated in the scope of the study. Source: BASIC | 36 |
| Figure 12. Main stages of cocoa/chocolate value chains and key contextual data investigated in the study. Source: BASIC..... | 37 |
| Figure 13. Main stages of cocoa/chocolate value chains and key contextual data investigated in the study. Source: BASIC..... | 39 |
| Figure 14. World cocoa production & consumption since 1900. Source: LMC International Ltd., World Cocoa Outlook, 2010 | 44 |
| Figure 15. World map of cocoa production & consumption. Source: BASIC, based on ICCO and ICA data..... | 45 |
| Figure 16. Main world cocoa consuming & exporting countries. Source: BASIC, based on WCC data (2015) & ICCO data (2017) | 46 |
| Figure 17. Historical structure of the cocoa chains. Source: BASIC..... | 47 |
| Figure 18. Current global structure of the cocoa value chain. Source: BASIC..... | 49 |
| Figure 19. Market shares of retailers in the European Union. Source: BASIC based on Planet Retail, 2014..... | 51 |
| Figure 20. Chocolate/confectionery market shares of global brand owners. Source: BASIC based on Candy Industry, 2019..... | 51 |
| Figure 21. Top 10 Companies, by Net Confectionery Sales Value in 2018. Source: ICCO based on Candy Industry data, 2019 | 52 |
| Figure 22. Main actors of the chocolate manufacturing worldwide (shares in % of the global open market for chocolate manufacturing). Source: estimates from Barry Callebaut 2011 and Candy Industry 2014..... | 54 |
| Figure 23. Market shares of main actors of cocoa grinding worldwide. Source: BASIC, based on UNCTAD, 2015 | 55 |

| | |
|---|----|
| Figure 24. World map of cocoa production & consumption. Source: BASIC, based on ICCO and ICA data..... | 56 |
| Figure 25. Main world cocoa consuming and exporting countries. Source: BASIC, based on ICCO data, 2020..... | 57 |
| Figure 26. Cocoa: Production area by standard, 2008–2016. Source: ITC, UNCTAD, GATT and al..... | 61 |
| Figure 27. Cocoa: Production volume by standard, 2008–2016. Source: ITC, UNCTAD, GATT and al. | 61 |
| Figure 28. Cultivated area by country for the 4 certification schemes. Source: ITC, UNCTAD, GATT and al. | 62 |
| Figure 29. Overall sales of chocolate products in France in 2018. Source: IRI in Syndicat du chocolat, 2019..... | 65 |
| Figure 30. Market shares of grocery sales by modern retailers in France. | 66 |
| Figure 31. Consumption price index of chocolate Vs other products in France since 1990. Source: BASIC, based on INSEE..... | 67 |
| Figure 32. Market shares of main chocolate brands in France (Value terms). Source: BASIC, based on Xerfi data (2015)..... | 67 |
| Figure 33. Main cocoa & chocolate producing sites in France. Source: Syndicat du Chocolat..... | 69 |
| Figure 34. Main actors of the chocolate manufacturing in France (shares in % of the total chocolate manufacturing). Source: BASIC, based on Xerfi data 2018 | 70 |
| Figure 35. Share of French exports by products (in % of total exports in value). Source: BASIC, based on Comtrade data..... | 71 |
| Figure 36. Main cocoa beans imports in France (in tonnes). Source: BASIC, based on Comtrade data | 71 |
| Figure 37. Main cocoa mass imports in France (in tonnes). Source: BASIC, based on Comtrade data | 72 |
| Figure 38. Main cocoa butter imports in France (in tonnes). Source: BASIC, based on Comtrade data | 72 |
| Figure 39. Main cocoa powder imports in France (in tonnes). Source: BASIC, based on Comtrade data | 73 |
| Figure 40. Main chocolate finished goods imports in France (in tonnes). Source: BASIC, based on Comtrade data..... | 73 |
| Figure 41. Overall sales of chocolate companies in France in 2018. Source: IRI in Syndicat du chocolat, 2019..... | 75 |
| Figure 42. Overall sales of chocolate products in France in 2018. Source: BASIC, based on IRI data, 2019..... | 76 |
| Figure 43. Evolution of total volumes sold and total market value of the 4 product categories in France (2014-2018). Source: BASIC, based on IRI data, 2019 | 76 |
| Figure 44. Overall framework used to estimate the value distribution along cocoa chains. Source: BASIC | 77 |
| Figure 45. Mapping of the dark chocolate tablets category on the French retail market. Source: BASIC | 79 |
| Figure 46. Distribution of value, costs & margins of ‘averaged’ plain dark chocolate tablets. Source: BASIC | 80 |
| Figure 47. Main respective characteristics of national brands and private labels. Source: BASIC | 82 |
| Figure 48. Distribution of value for ‘National brands’ Vs ‘Private Label’ for dark chocolate tablets. Source: BASIC | 83 |

| | |
|---|-----|
| Figure 49. Distribution of value for ‘National brands’ Vs ‘Private Label’ for dark chocolate tablets. Source: BASIC | 84 |
| Figure 50. Detailed costs & margins for ‘National brands’ Vs ‘Private Label’ manufacturer in the case of ‘premium’ dark chocolate tablets in France in 2018. Source: BASIC | 86 |
| Figure 51. Main respective characteristics of marketing segments for plain dark chocolate. Source: BASIC | 87 |
| Figure 52. Distribution of value for ‘basic’, ‘cooking’ & ‘premium’ dark chocolate tablets of National Brands. Source: BASIC | 88 |
| Figure 53. Costs & margins for ‘basic’, ‘cooking’ & ‘premium’ dark chocolate tablets of National Brands. Source: BASIC | 89 |
| Figure 54. Detailed costs & margins for ‘National brands’ for ‘basic’ and ‘premium’ dark chocolate tablets. Source: BASIC | 90 |
| Figure 55. Distribution of value for ‘basic’, ‘cooking’ and ‘premium’ dark chocolate tablets of Private Labels. Source: BASIC | 91 |
| Figure 56. Costs & margins for ‘basic’, ‘cooking’ and ‘premium’ dark chocolate tablets of Private Labels. Source: BASIC | 91 |
| Figure 57. Main respective characteristics of national brands and private labels. Source: BASIC | 92 |
| Figure 58. Distribution of value, costs & margins of ‘best-seller’ Vs other ‘basic’ dark chocolate tablets. Source: BASIC | 93 |
| Figure 59. Distribution of value, costs & margins of ‘best-seller’ Vs other ‘Cooking’ dark chocolate tablets. Source: BASIC | 94 |
| Figure 60. Distribution of value, costs & margins of ‘best-seller’ Vs other ‘Premium’ dark chocolate tablets. Source: BASIC | 95 |
| Figure 61. Distribution of value, costs & margins of 2 cases of ‘premium’ plain dark chocolate tablets of ‘National brands’: Left corresponds to 70% cocoa content, and right, to 90% cocoa content. Source: BASIC | 96 |
| Figure 62. Distribution of value, costs & margins of 2 cases of ‘premium’ dark chocolate tablets of ‘National brands’: Left corresponds to ‘single’ origin from Côte d’Ivoire, and right, to ‘single origin’ from Ecuador. Source: BASIC..... | 97 |
| Figure 63. Distribution of value, costs & margins of ‘Private label’ tablets with 1 st processing in Europe and Côte d’Ivoire. Source: BASIC..... | 98 |
| Figure 64. Evolution of the prices of the ‘averaged’ plain dark chocolate tablet at different stages. Source: BASIC | 99 |
| Figure 65. Mapping of the dark chocolate tablets category on the French retail market. Source: BASIC | 102 |
| Figure 66. Distribution of value, costs & margins of ‘averaged’ plain milk chocolate tablets. Source: BASIC | 103 |
| Figure 67. Distribution of value, costs & margins of ‘National brands’ Vs ‘Private Label’ plain milk chocolate tablets. Source: BASIC..... | 105 |
| Figure 68. Detailed costs & margins for ‘National brands’ Vs ‘Private Label’ manufacturer in the case of ‘premium’ milk chocolate tablets. Source: BASIC..... | 107 |
| Figure 69. Distribution of value for ‘basic’, ‘cooking’ & ‘premium’ milk chocolate tablets of National Brands. Source: BASIC | 108 |
| Figure 70. Costs & margins for ‘basic’, ‘cooking’ & ‘premium’ milk chocolate tablets of National Brands. Source: BASIC | 109 |

| | |
|--|-----|
| Figure 71. Detailed costs & margins for ‘National brands’ for ‘basic’ and ‘premium’ dark chocolate tablets. Source: BASIC | 110 |
| Figure 72. Distribution of value for ‘basic’ and ‘premium’ milk chocolate tablets of Private Labels. Source: BASIC | 111 |
| Figure 73. Costs & margins for ‘basic’ and ‘premium’ milk chocolate tablets of Private Labels. Source: BASIC | 111 |
| Figure 74. Distribution of value, costs & margins of ‘best-seller’ Vs other ‘basic’ plain milk chocolate tablets. Source: BASIC | 112 |
| Figure 75. Distribution of value, costs & margins of ‘best-seller’ Vs other ‘Premium’ milk chocolate tablets. Source: BASIC | 113 |
| Figure 76. Distribution of value, costs & margins of a ‘Best-seller’ confectionery bar. Source: BASIC | 116 |
| Figure 77. Distribution of value, costs & margins of a ‘Basic’ ‘Best-seller’ breakfast powder. Source: BASIC | 118 |
| Figure 78. Distribution of value, costs & margins of a ‘Premium ‘non Best-seller’ breakfast cocoa powder. Source: BASIC..... | 119 |
| Figure 79. Developments in sales of fair trade products between 2004 and 2017. Source: CEF (2017) | 122 |
| Figure 80. Breakdown by food product, of sales of products from international fair trade sectors. | 122 |
| Figure 81. Distribution of value, for certified ‘Premium’ ‘National Brand’ plain dark chocolate tablets. Source: BASIC | 124 |
| Figure 82. Distribution of costs & margin, for certified Premium National Brand plain dark chocolate tablets. Source: BASIC | 127 |
| Figure 83. Distribution of value, for certified ‘Cooking’ ‘National Brand’ plain dark chocolate tablets. Source: BASIC | 128 |
| Figure 84. Distribution of costs & margin, for certified ‘Cooking’ National Brand plain dark chocolate tablets. Source: BASIC | 129 |
| Figure 85. Distribution of value, for certified ‘Premium’ ‘Private Label’ plain dark chocolate tablets. Source: BASIC | 130 |
| Figure 86. Distribution of costs & margin, for certified ‘Premium’ ‘Private Label’ plain dark chocolate tablets. Source: BASIC | 132 |
| Figure 87. Distribution of value, for certified ‘Premium’ ‘National Brand’ plain milk chocolate tablets. Source: BASIC | 133 |
| Figure 88. Distribution of costs & margin, for certified Premium National Brand plain milk chocolate tablets. Source: BASIC | 134 |
| Figure 89. Distribution of value, for certified ‘Premium’ ‘Private Label’ plain milk chocolate tablets. Source: BASIC | 135 |
| Figure 90. Distribution of costs & margins, for certified ‘Premium’ Private Label plain milk chocolate tablets. Source: BASIC | 135 |
| Figure 91. Comparison of gross and net margins of French retailers for different product categories in 2018. Source: BASIC | 139 |
| Figure 92. Global breakdown of the French market of plain dark and milk chocolate tablets in 2018. Source: BASIC | 139 |
| Figure 93. Total share of value of French retailers broken down by category of plain dark & milk chocolate tablets in 2018. Source: BASIC..... | 140 |

| | |
|--|-----|
| Figure 94. Total share of value of French retailers broken down by category of dark & milk chocolate tablets in 2018. Source: BASIC | 141 |
| Figure 95. Breakdown of costs and margins of French retailers (on Basic National Brand non-Best-seller plain dark chocolate tablets) in 2018. Source: BASIC..... | 142 |
| Figure 96. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC..... | 144 |
| Figure 97. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC..... | 144 |
| Figure 98. Breakdown of costs and margins of International Brands (Premium Best-seller and non-Best-seller plain dark chocolate tablet) in 2018. Source: BASIC | 146 |
| Figure 99. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC..... | 147 |
| Figure 100. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC..... | 147 |
| Figure 101. Breakdown of costs and margins of Private Label Manufacturer (Premium dark tablet) in 2018. Source: BASIC | 148 |
| Figure 102. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC..... | 149 |
| Figure 103. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC..... | 149 |
| Figure 104. Breakdown of costs and margins of small independent brands (certified Premium dark tablet) in 2018. Source: BASIC..... | 149 |
| Figure 105. Breakdown of costs and margins of cocoa grinding, pressing and chocolate manufacturing (Basic dark tablet). Source: BASIC | 150 |
| Figure 106. Breakdown of costs and margins of cocoa transport, warehousing and trading (Basic dark tablet). Source: BASIC..... | 151 |
| Figure 107. Breakdown of Free on Board value in Côte d'Ivoire, Ghana, Cameroon and Ecuador in 2018 (cocoa harvest 2017/18). Source: BASIC | 152 |
| Figure 108. Geographical areas of Ivorian cocoa exports (beans and semi-processed products), as shares of total exports between 2012:2017(e) expressed in %. Source: Conseil Café Cacao 2017 . | 157 |
| Figure 109. Shares of cocoa beans buyers in Côte d'Ivoire (in % of the total national production in 2012/2013). Source: Ecobank 2014 | 157 |
| Figure 110. Cocoa grinders in Côte d'Ivoire (share of grinded cocoa in %, 2013). Source: Ecobank and Jeune Afrique, 2014..... | 158 |
| Figure 111. Ivorian cocoa supply chain, from production to exports of cocoa beans. Source: BASIC | 160 |
| Figure 112. Ivorian cocoa supply chain, from production to exports of semi-finished products (cocoa mass, butter and cake). Source: BASIC..... | 160 |
| Figure 113. Evolution of cocoa producers' price (FCFA/kg). Source: Conseil Café Cacao, 2017..... | 163 |
| Figure 114. Evolution of the farmgate and FOB export price in Côte d'Ivoire between 2014 & 2018. Source: BASIC | 164 |
| Figure 115. Distribution of value, costs & margins in Côte d'Ivoire (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC | 165 |
| Figure 116. Estimated expenditures for essential services in Ivorian cocoa communities. Source : BASIC, based on IMF & Republic of Côte d'Ivoire | 166 |

| | |
|---|-----|
| Figure 117. Breakdown of costs of cocoa cultivation in Côte d’Ivoire in 2018 (cocoa harvest 2017/18). Source: BASIC | 167 |
| Figure 118. Estimated cocoa area by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al | 169 |
| Figure 119. Estimated cocoa production by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al | 169 |
| Figure 120. Estimated cocoa sales by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al | 170 |
| Figure 121. Estimated number of cocoa farmers by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al..... | 170 |
| Figure 122. Distribution of value in Côte d’Ivoire (from farmers to export) for certified value chains in 2018 (cocoa harvest 2017/18). Source: BASIC | 171 |
| Figure 123. Incomes’ estimates for conventional and certified (sustainable and fair trade) producers | 173 |
| Figure 124. Impact of UTZ certification on cocoa farmers in 2017 in Côte d’Ivoire Source: Wageningen (2018) | 173 |
| Figure 125 : Largest Licensed Buying Companies (Source: Cocobod, 2019) | 179 |
| Figure 126 : Ghanaian cocoa farmgate prices as a share of FOB prices (Source: KIT, 2018) | 180 |
| Figure 127. Geographical areas of Ghanaian cocoa exports as shares of total exports, 2014 | 181 |
| Figure 128 : export of processed cocoa products, 2015-16 (Source: Cocobod, 2019) | 182 |
| Figure 129 : Cocoa beans processed by factories, 2015-16 (Source: Cocobod, 2019) | 183 |
| Figure 130 : Ghanaian supply chain, from production to exports of cocoa beans. (Source: BASIC).185 | |
| Figure 131: Ghanaian supply chain, from production to exports of cocoa inferior quality beans and by-products (Source: BASIC)..... | 185 |
| Figure 132 : Ghanaian supply chain, from production to exports of cocoa processed products (Source: BASIC) | 186 |
| Figure 133. Evolution of the farmgate and FOB export price in Ghana between 2014 & 2018. Source: BASIC | 188 |
| Figure 134. Distribution of value, costs & margins in Ghana (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC..... | 188 |
| Figure 135. Distribution of costs & margins for collection, transport, warehousing and export in Ghana in 2018 (cocoa harvest 2017/18). Source: BASIC | 189 |
| Figure 136. Breakdown of costs of cocoa cultivation in Ghana in 2018 (cocoa harvest 2017/18). Source: BASIC | 190 |
| Figure 137. Estimated cocoa area by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al | 192 |
| Figure 138. Estimated cocoa production by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al | 192 |
| Figure 139. Estimated cocoa sales by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al | 193 |
| Figure 140. Estimated number of cocoa farmers by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al..... | 193 |
| Figure 141. Distribution of value in Ghana (from farmers to export) for certified value chains in 2018 (cocoa harvest 2017/18). Source: BASIC | 194 |
| Figure 142. Categories of cocoa production models in Ecuador. Source: BASIC, based on MAG-IICA 2006 and Vallasso 2015..... | 198 |

Figure 143. Compared averages prices on world market for conventional cocoa and FFC between Ecuador, Colombia, the Dominican Republic and Peru (in USD/Mt, 2012-2016). Source: Swisscontact 2017 based on data from Anecacao, MAGAP Peru and Dominican Republic, CONACADO and PROCOLOMBIA199

Figure 144. Exporters of raw cocoa beans from Ecuador (shares in % of total exports of raw cocoa beans). Source; Anecacao 2011200

Figure 145. Exports of Ecuadorian cocoa (expressed by country of destination, shares in % of total national exports in million USD FOB, from 2013 to 2017). Source: Central Bank of Ecuador 2018 .201

Figure 146. Main cocoa supply chain in Ecuador. Source: BASIC based on Swisscontact 2017202

Figure 147. Evolution of the farmgate and FOB export price in Ecuador between 2014 & 2018. Source: BASIC204

Figure 148. Distribution of value in Ecuador (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC205

Figure 149. Distribution of costs and margins in Ecuador (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC.....205

Figure 150. Estimated cocoa area by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al207

Figure 151. Estimated cocoa production by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al208

Figure 152. Estimated cocoa sales by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al208

Figure 153. Estimated number of cocoa farmers by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al.....209

Figure 154. Distribution of value in Ecuador (from farmers to export) for certified value chains in 2018 (cocoa harvest 2017/18). Source: BASIC209

Figure 155 : Typologies of cocoa farmers in Cameroon.....215

Figure 156. Distribution of value, costs & margins in Cameroon (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC220

Figure 157. Distribution of costs & margins of collection, transport, warehousing and exports in Cameroon in 2018 (cocoa harvest 2017/18). Source: BASIC221

Figure 158. Comparison of price received by farmers across 5 different food products sold in French retailers. Source: BASIC223

Figure 159. Main results of value chain studies on cocoa – evolution of prices along the chain since 2014. Source: BASIC224

Figure 160. Main results of value chain studies on coffee – evolution of prices along the chain since 1994. Source: BASIC225

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 standardization 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.

(based on the US Commodity Futures Trading Commission)

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)

'Fair Trade' 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). In France, fair trade certifications comply with the Charter of Principles issued by the French Fair Trade Platform.

(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.

'Sustainable' certification

Formal assessment (attested in writing by issuing a certificate) given by a third party that a product, service or system meets the environmental requirements of improved agricultural practices, banned hazardous chemical inputs, biodiversity protection and respect of the fundamental conventions of the International Labour Organization.

Technical overview of the cocoa chain

Between the production of cocoa by farmers and the consumption of the chocolate products by final consumers, the main stages of the value chains can be sketch as follows:

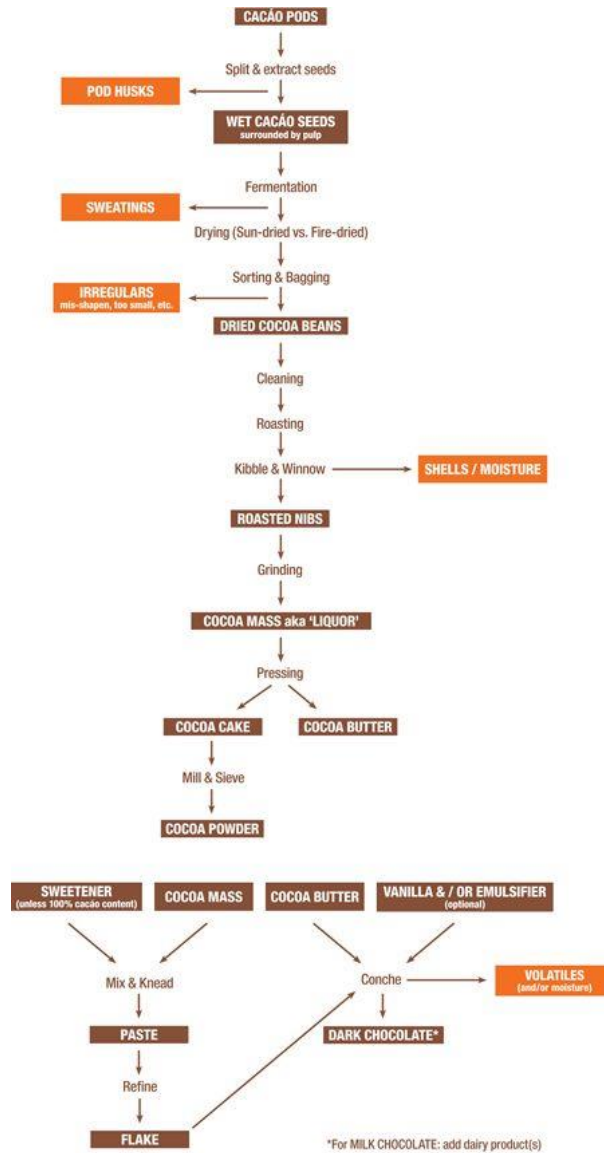


Figure 8. Cocoa production and processing and chocolate manufacturing stages. Source: Napa Valley Chocolate Company

Introduction

In recent years, the chocolate and confectionery sector has attracted the growing attention of several actors - institutional, public, and private - regarding sustainability issues. Whereas child labour and deforestation problems in the sector have been regularly brought up by various NGOs since the beginning of the 2000s, the fall of world cocoa prices in September 2016 and the subsequent crisis in Côte d'Ivoire have been reminders of the critical importance of economic factors, especially in West Africa, and have more broadly raised the question of value distribution within cocoa/chocolate chains.

However, this latter issue has been much less documented through independent studies so far, making it difficult to analyse and discuss it objectively. In addition, existing information focuses mainly on cocoa cultivated in West Africa and lacks comparisons with other producing regions, especially South America. To be meaningful, such comparisons would require further investigation of the local contexts, as well as the business dynamics and structural differences between value chains so as to provide a relevant analysis of the results obtained.

In this context, BASIC has proposed in January 2019 to the European Commission's Directorate-General for International Cooperation and Development (DG DEVCO), the Investment Centre of the Food and Agriculture Organization (FAO) and the European Cocoa Association (ECA) to conduct a study on the creation and distribution of value, costs and margins for chocolate products marketed on the French market, considered as a first step towards a better understanding of these issues at the European level.

The added value of this study is threefold:

1. Whereas most available value chain studies in the cocoa sector mainly focus on the upstream part, from agricultural production to the export stage (hence leaving in the shadows the rest of the chain in consumer countries), the current study aims at quantifying and analysing the full valorisation of cocoa down to the consumer stage for specific and concrete chocolate products (plain dark and milk chocolate tablets, confectionery bars, breakfast cocoa powder). Based on publicly available information, the current study also aims to estimate the costs and margins all along the chain, including for the warehousing, processing, manufacturing, and distribution stages in consumer countries.
2. Going beyond the existing literature, the current study also provides a comparative analysis between value chains originating from 4 different producing countries (Côte d'Ivoire, Ghana, Cameroon and Ecuador) and between conventional and certified cocoa value chains (investigating the specific impact of Fairtrade, Rainforest/UTZ and organic labels on costs - including certification expenses - and value distribution).
3. By conducting such a comprehensive evaluation and comparative analysis of the full value distribution from farmers to consumers, the current study can lay the foundation for a permanent observatory on prices, costs, and margins in the cocoa/chocolate sector. In other words, the study serves as a proof of concept for developing a simple, appropriate, and user-friendly information tool (called "observatory") which could be expanded to include more consumer countries and final products. For cocoa producing countries, such an observatory

could constitute a valuable business intelligence tool and enable them to develop more impactful strategies to improve the valorisation of the cocoa they produce and increase the revenue of farmers, thanks to a better understanding of the business rationale and dynamics in consumer countries. In the mid-term, it could also help cocoa producing countries define strategies targeting emerging consumer markets and inform their investment decisions, in order to develop chocolate manufacturing capacities and produce final chocolate products for their domestic consumers (in connection with the World Bank and the AfDB).

Developing and publicising objectivised and sufficiently detailed information on the distribution of value, costs, and profits along the cocoa/chocolate chain is all the more needed in the context of the recent announcement by the Ivorian and Ghanaian governments.

Indeed, the two West African countries, which make up more than 60% of annual world cocoa production, have decided, in consultation with the industry, to set a fixed "living income differential" (LID) of 400 USD per tonne on all cocoa contracts sold by either country for the 2020/21 season; funds raised through this LID will be used to help increase payments to farmers, and to enhance the sustainability of the sector in the two countries.⁵

In this context, there is a need to support upcoming discussions among the different stakeholders of the sector on the potential consequences of this decision on prices and costs at different levels - up to the final consumer - and eventually on the evolution of demand and on business models of economic actors along the chain.

⁵ Reuters. "Côte d'Ivoire, Ghana add 'living income' cocoa premium to fight poverty". Reuters, 2019. <https://mobile.reuters.com/article/amp/idUSL8N24B55M> visited on May 11th, 2020

Objectives, scope, and methodology of the study

Key objectives of the study

The main objectives of the study are:

1. To estimate the **detailed distribution of value, costs, and profits for different chocolate products** – and its evolution in recent years - from cocoa farmers in West Africa (Côte d'Ivoire, Ghana and Cameroon) and Latin America (Ecuador) down to consumers in France.

Based on these estimates, the study has investigated:

- the influence of the origin and national context of cocoa production (agronomic, economic, social, political...) on value creation and costs distribution from farmers to consumers (including public authorities)
 - the influence of the structure of the chain and the dynamics of the end-consumer market on value creation and costs distribution from farmers to consumers (including public authorities)
2. To estimate the **percentage (%) of value accruing to farmers for the different chocolate products** and producer countries analysed and compare this percentage with other key mass-consumed food products sold in France.

Scope

The scope of the study consists in 2 parts which - once assembled - make up the full scope of the research to be conducted:

- A core scope which has focused on:
 - o **Plain dark chocolate tablets (mixed & single origins) and plain milk chocolate tablets (mixed origins) sold in France and made with Ivorian & Ecuadorian cocoa.**
 - o Differences between the farmers' share of value in the chocolate products analysed and in other mass-consumed food products (for instance liquid milk, yogurt, pasta).
- An extended scope which has further investigated:
 - o Additional cocoa producing countries (**Ghana & Cameroon**), a few case studies of other mass-consumed chocolate products (**confectionery & breakfast cocoa powder**), and major sustainable labels (**Fairtrade, RFA/UTZ & organic**).
 - o The main drivers that can explain the evolution of value (and costs) distribution along all the cocoa value chains analysed.
 - o Differences between the farmers' share of value in the cocoa value chains analysed and in another key tropical commodity which shares several similarities with cocoa, i.e. coffee.

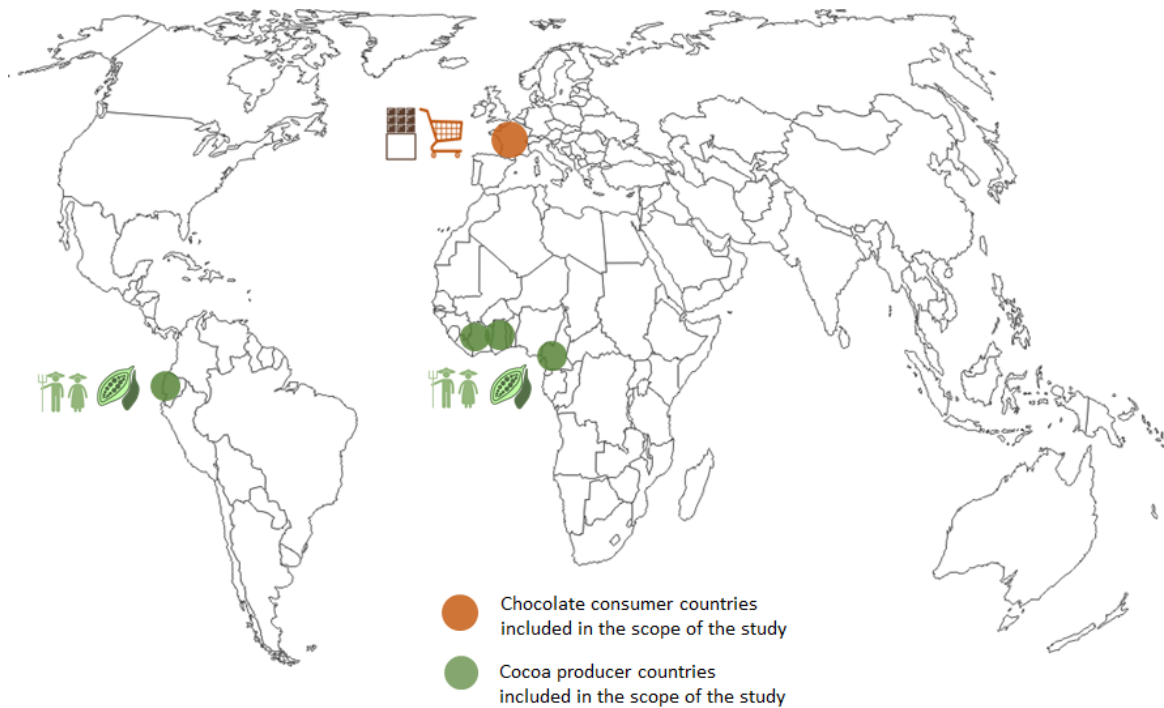


Figure 9. Sketch of the geographical scope of the study. Source: BASIC

France has been chosen as the end market for the study as it is the 2nd biggest chocolate market in Europe. Beyond its size, the French market provides a wider scope of investigation as it features one of the largest ranges of chocolate products consumed in significant quantities each year, from mass-market chocolate confectionery and breakfast cocoa powder to pure-origin and fine-flavour dark chocolate tablets. Although this market is more oriented towards chocolate tablets and dark chocolate, the business dynamics of the sector, in particular regarding the influence of retailers, are quite comparable to the other major markets in Europe.

Côte d'Ivoire and Ecuador have been chosen as they are the 2 leading cocoa producing countries in their geographical region, West Africa and Latin America. Ghana, the second largest world cocoa producing country, has been included to increase the representativeness of the results of the study, and to bring valuable insights for the analysis and recommendations. Finally, Cameroon has been chosen as it is an emerging origin on the world cocoa market and because it has a lesser degree of public regulation of the sector, thereby enabling to provide other valuable insights for the comparative analysis.

As a result of the above core & extended scopes, **the full study has investigated the following categories of “conventional” value chains:**

- **Single-origin and mixed-origins plain dark chocolate tablets** (mass-consumed tablets) made with **Ivorian** and **Ecuadorian** cocoa, as well as potentially **Ghanaian** and/or **Cameroonian** cocoa.
- **Mixed-origins plain milk chocolate tablet** (mass-consumed tablets) made with **Ivorian** and **Ecuadorian** cocoa, as well as potentially also **Ghanaian** and/or **Cameroonian** cocoa.
- **Mixed-origins mass-consumed chocolate confectionery** (of the KitKat or Mars type) made with **Ivorian & Ecuadorian** as well as potentially **Ghanaian** and/or **Cameroonian** cocoa.

- **Mixed-origins mass-consumed breakfast cocoa powder** (with or without sugar) made with **Ivorian** and **Ecuadorian** cocoa, as well as potentially **Ghanaian** and/or **Cameroonian** cocoa.

In addition, the study has investigated the influence of 3 certification schemes (Fairtrade, RFA/UTZ & organic) on the following value chains:

- RFA/UTZ:
 - o **Mixed-origins plain dark chocolate tablets** made with Ivorian and Ghanaian cocoa, sold by (inter)national brands
- Fairtrade:
 - o **Mixed-origins plain dark chocolate tablets** made with Ivorian and Ghanaian cocoa, sold under French retailers' brands (private labels)
- Organic:
 - o **Single and mixed-origins plain dark chocolate tablets** made with Ecuadorian cocoa, sold by (inter)national brands and under French retailers' brands (private labels)
- Combination of Fairtrade & Organic:
 - o **Single and mixed-origins plain dark chocolate tablets** made with Ecuadorian cocoa, sold by national brands

Global description of the methodology

Conceptual framework

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

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"⁶. 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 economy⁷. In 2005, Gereffi, Humphrey and Sturgeon consolidated the global commodity approach with the theory of Global Value Chains (GVC)⁸.

More recently, the related conceptual framework of Global Production Networks (GPN) has been developed by the Manchester School of Geography, as a multi-dimensional approach to understand the structuring of value chains with a particular focus on "value generation/capture", "power" (corporate, collective and institutional) and "embeddedness" (territorial and network).

⁶ Hopkins and Wallerstein (1986: 159)

⁷ Gereffi and Korzeniewicz, *Commodity Chains and Global Capitalism*, 1994

⁸ 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

In comparison with other approaches, the theories of Global Value Chains and Global Production Networks provide a radically new view on international trade⁹:

- 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, territories, governance and institutions....) and their economic determinants (supply and demand, value and cost breakdown, price dynamics, income distribution...).
- 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 and Global Production Network analysis have been flourishing approaches used for studying the dynamics of globalisation and economic governance. Widely adopted by sociologists and geographers, it has also attracted growing interest from economists, anthropologists, and historians to analyse the international organisation of industries such as food, clothing and electronics¹⁰. More recently, several international agencies such as the World Bank, the OECD and the ILO have also started to use Global Value Chain analysis to investigate industrial upgrading and poverty alleviation.

Operational framework

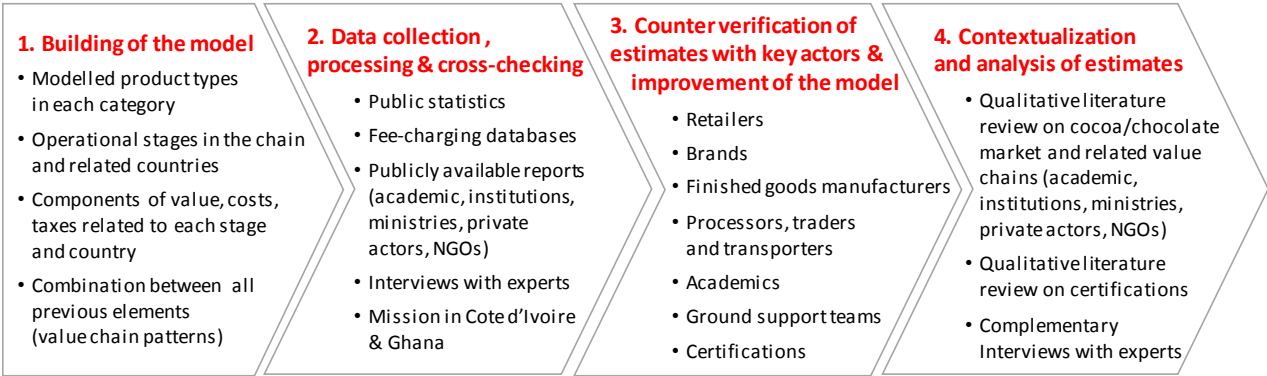


Figure 10. Summary of 4-steps methodology developed in order to build and analyse estimates of prices, costs and margins along the cocoa/chocolate chains analysed. Source: BASIC

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

10 The Global Value Chains approach initiated a wave of interdisciplinary literature which investigated the ways in which organisationally fragmented and geographically dispersed processes of production have been a critical feature of economic globalization: fresh fruit and vegetables (Raynolds; Dolan et al.), tropical commodities such as coffee, cocoa, cotton, sugar, rubber, tobacco, etc. (Ponte, Raynolds, Fold, Gibbon, Daviron, Gwynne, Barrientos), exports of apparel from East Asia, Mexico and the Caribbean (Gereffi, Palpacuer), electronics (Kenney and Florida), automobile industry (Hill; Doner; Barnes, Kaplinsky and Morris), semi-conductors (Henderson), tourism (Clancy), services (Rabach & Kim)...

Based on the conceptual framework detailed previously, we have developed for this study a specific methodological approach based on 4-steps:

- 1) We started by **building a comprehensive model** which identifies and defines:
 - a) **the types of modelled products in each category** – plain dark chocolate tablets, plain milk chocolate tablets and cocoa breakfast powder - based on 4 attributes: the type of brand¹¹, the market segmentation¹², the sales performance of the products¹³ and the potential type of certification¹⁴ (see detailed definitions in section 2.3.2.3. and 2.4.2.); the analysis of confectionery bars or countlines, due to the complexity and diversity of products, has been limited to building estimates for a best-seller product,
 - b) **the key operational stages in the chain, from cocoa farmers down to end consumers, and related countries included in our scope of research¹⁵,**
 - c) **the components of value, costs and taxes associated with each stage and country previously determined,** from cocoa farmers down to end consumers, and the related modes of calculation for each of them (prices of input and prices of output¹⁶, cost and tax components, net margins),
 - d) **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 margins). These patterns enabled us to map out and model the different value chains attached to each product analysed.
- 2) **In order to input data into our modelling, we then collected, processed and cross-checked statistics available from public and private databases, as well as data stemming from publicly available reports,** either published by universities & academic researchers, national & international institutions, ministries of agriculture or economy, private actors of the sector or NGOs. These have been complemented with a round of 24 interviews with experts from the sector (academics, private actors, institutions) and a mission in Côte d'Ivoire and Ghana.
- 3) **We then conducted a series of 16 anonymised interviews** with key experts and actors from all stages of the chain and countries included in our scope of research¹⁷, in order to **counter-verify our estimates, amend and improve our model** and its results.
- 4) Finally, we have **contextualised and analysed these estimates** through an extensive literature review of qualitative analyses and complementary interviews of experts on the cocoa/chocolate market and related value chains, the business dynamics, the cocoa production and the impact of certifications .

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

12 Basic, Premium (Premium in French) or Cooking (Pâtissier in French)

13 Best-sellers or non Best-sellers

14 Fair Trade, UTZ-Rainforest or organic, as defined in the Terms of References

15 As illustrated in the diagram on the previous page

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

17 Retailers, brands, finished goods manufacturers and certification schemes in France; processors, traders and transporters in Europe and countries of production; academics and people working in extension teams on the ground in producing countries

The details of each step of our methodology are further provided below.

- **Building of the overarching model**

| | | | |
|---|---|---|--|
| Distribution and consumption in France (supermarkets' chains) | | | |
| Processing of cocoa & manufacturing of chocolate in France (cross-checked with average situation in EU) | | | |
| Warehousing and transport from the docks in France (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 Côte d'Ivoire | Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in Ecuador | Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in Ghana | Production of cocoa 1 st processing of cocoa (paste/butter & power) Warehousing and transport Trading costs in Cameroon |

Figure 11. Summary of the value cocoa/chocolate value chains investigated in the scope of the study. Source: BASIC

The first step of our research work was to **develop a comprehensive model** of estimates, conducting a first-level investigation of the following 3 key parts of cocoa/chocolate value chains:

- 1) **A 'consumer' part**, based on a first-level analysis of French market dynamics of chocolate consumption 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 (details are provided in chapter 2)
- 2) **A 'downstream' part** based on a first-level analysis of the cocoa chain in France (for brands and finished goods manufacturers) and Europe (for processing, transport, and trading). In order to build our model, we have investigated the organisation of the sector as a whole and more specifically the influence of each set of cocoa industry actors (traders, transporters, logistics & warehouses, processors, brands, retailers).
- 3) **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).

This research has been conducted through a literature review and a round of 40 interviews with key experts of the sector (academics as well as professionals working for economic actors).

- **Data collection, processing, and cross-checking**

Based on this model, we have then looked for publicly available data (both free of charge and fee-charging) for all main actors and operations in the chocolate chains, ranging from agricultural production to consumer purchases.

ESTIMATION OF PRICES, COSTS & MARGINS

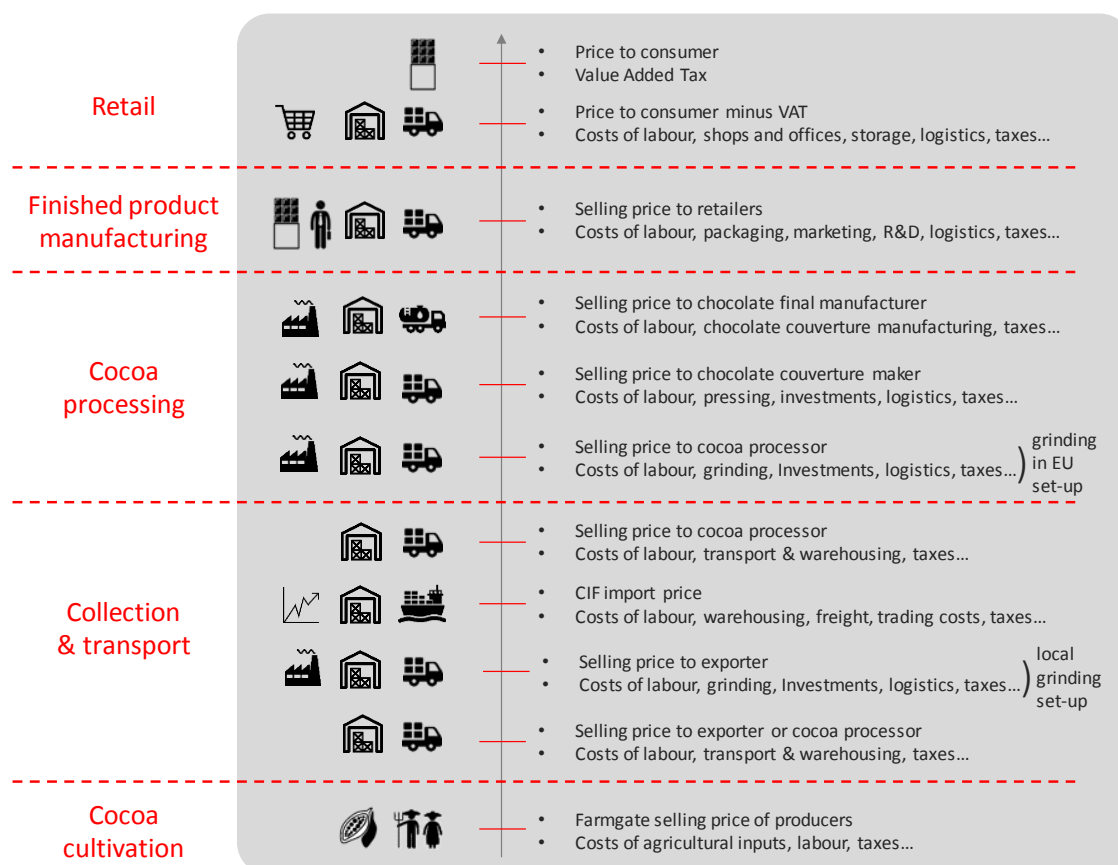


Figure 12. Main stages of cocoa/chocolate value chains and key contextual data investigated in the study. Source: BASIC

We have thereby **collected and processed data on prices and costs 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 - including potentially local grinding and/or pressing of cocoa - up to the import stage in Europe,
- cocoa cultivation by farmers, exploring potential differences depending on most common producer set-ups.

Our **collection of costs differentiated between:**

- internal costs of economic actors,
- 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, Ecuador) and consumer countries (France),
- certification costs.

In addition to cocoa, estimates for the share of costs associated with **sugar and milk powder** - the two other main ingredients of chocolate – have been developed in order to build comprehensive estimates. Other potential ingredients of chocolate (in particular soy lecithin) have not been taken into account for the calculations of costs and value distribution.

In order to build estimates for the case study of confectionery bar (countlines), we have also modelled the costs of wheat flour and palm oil used for its manufacturing.

A specific attention was 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 was 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, we chose the most relevant data point to use for our estimates.

Transparency on the sources we used, the assumptions we have made and the calculation formulae we developed are provided in the “Cocoa Value Chain Calculation” tool which has been set-up as a complementary deliverable to this study.

The main resources we used are:

- literature review (FAO, BCEAO, ICCO, CIRAD, CERDI, ECA...),
- identification, collection, and analysis of quantitative data through available public databases (both free of charge and fee-charging):
 - o IRI for consumption data, Comtrade for imports-exports, CRA for semi-processed cocoa products, ICCO for cocoa production prices,
 - o on the production side, data on farmers and cooperatives have been collected from most recent studies & investigation (e.g. research conducted in Côte d'Ivoire & Ghana by F. Ruf on behalf of CIRAD and GIZ, by Bymolt, Laven et al. on behalf of KIT Tropical Institute in collaboration with CIRAD, in Cameroon by VCA4D on behalf of the DG DEVCO...),
- interviews with experts from the sector (producing countries, logistics & transporters, traders, processors, finished goods manufacturers, retailers...).

- **Counter-verification of estimates**

The results we obtained for the distribution of value, costs, taxes, and net margins **were then confronted with key actors of the sector** in order **to test the relevance and reliability** of our model and the orders of magnitude of our estimates.

In total, 12 anonymised interviews were conducted in order, for each stage of the cocoa/chocolate chain and each country included in our scope of the research.

These interviews confirmed the robustness of the model we developed and enabled us to improve the accuracy of certain data points.

- Contextualisation and analysis of drivers of value (and costs) distribution

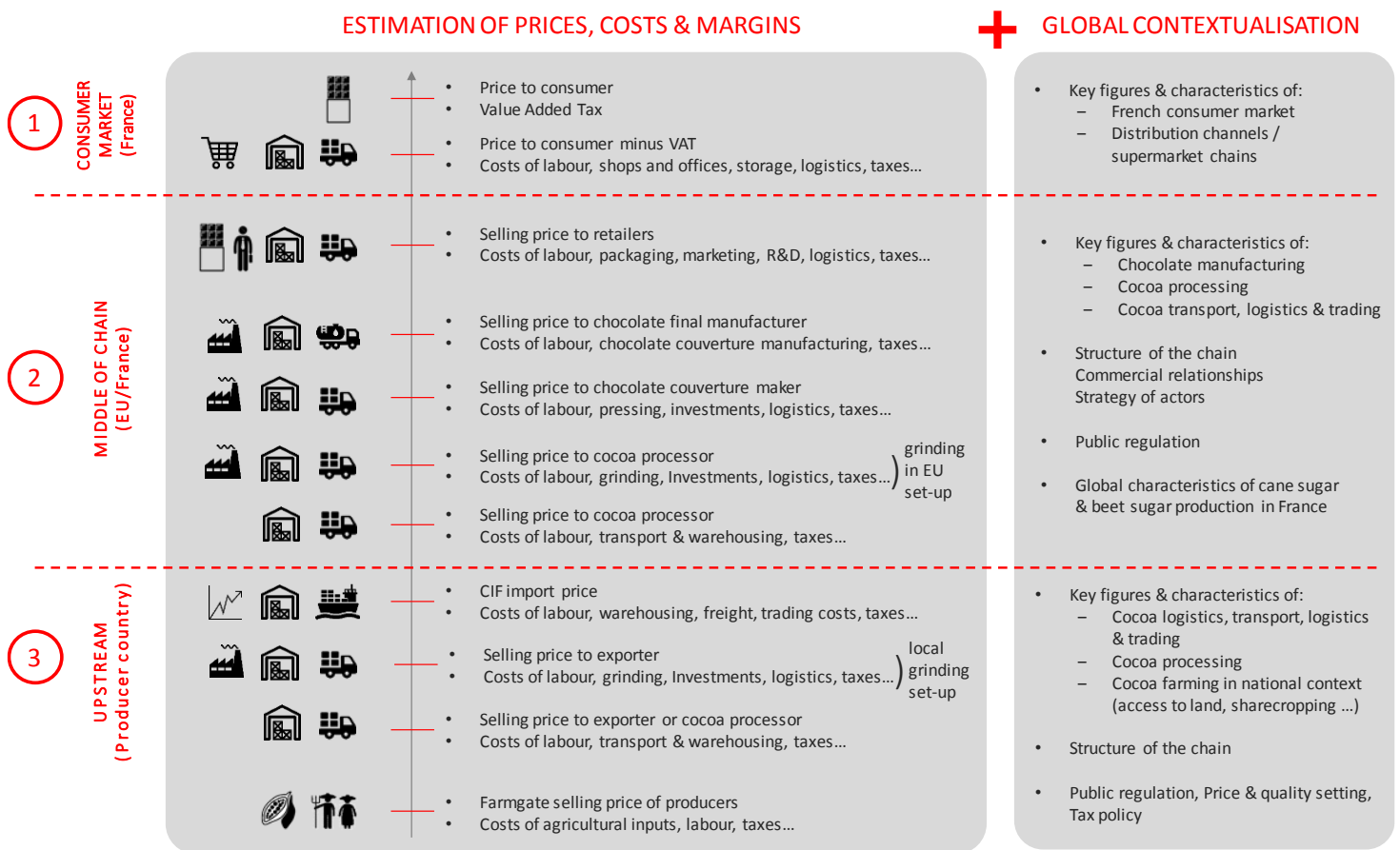


Figure 13. Main stages of cocoa/chocolate value chains and key contextual data investigated in the study. Source: BASIC

In order to contextualise and analyse the results of our estimates, we have conducted a **complementary qualitative research on each of the 3 key parts of the cocoa/chocolate chains:**

- On the 'consumer' part** so as to better understand the evolving trends of consumers at the global level as well as in France, and to collect key facts and figures on the chocolate consumer market (conventional as well as certified).
- On the 'downstream' part** in order to better understand the structural organisation of each set of key actors (retailers, brands, processors, traders, transporters, logistics & warehouses) at the global, European and French level. As for the previous part, key facts and figures were collected for each stage of the chain regarding turnover, volumes, market shares and strategies of key actors. A specific emphasis was put on the analysis of their global business model (regarding chocolate products and beyond). Finally, we also looked at the influence of European & French public regulations (including fiscal policies) on the distribution of value, costs, and margins.
- On the 'upstream' part in each producer country included in the scope of the research,** from cocoa farmers up to exports. The objectives of this last part of research was to collect key additional facts and figures on countries of production, and better understand national and regional specificities (economic, social, political, fiscal) and to investigate more specifically the influences of both public regulations and the organisation of the sector on the distribution of value and costs along the cocoa chain.

The resulting background information and analysis is described in chapters 1, 2 and 3 of this report.

The main resources used were driven from:

- literature review (FAO, UNCTAD, World Bank, ECA, CIRAD, CERDI, Oxford University...),
- identification, collection and analysis of quantitative data through available public databases (in particular: Eurostat and INSEE for consumption data, ICCO for cocoa production...),
- interviews with experts from the sector (producing countries, logistics & transporters, traders, processors, finished goods manufacturers, retailers...).

Transversal analysis

- **Analysis of the main commonalities and differences between cocoa value chains**

On the basis of the results of the previous stages, we have investigated in a second phase the main commonalities and differences between the value chains analysed in terms of value distribution and income to cocoa farmers, putting the results in the context of local specificities, legal framework, business dynamics...

We have researched more specifically the potential drivers that may explain the evolution of value (and costs) distribution along the chain, especially the drivers of cocoa farmers' income, differentiating between:

- trends in end-consumer markets: consumer demand & behaviour...,
- structure of the value chain: market concentration, unbalances of negotiation power, strategies of the different actors...,
- characteristics of cocoa cultivation in producer countries: access to land and sharecropping arrangements, access to inputs, public regulation systems, social groups (e.g. natives and non-natives...), types of farmers' organisations...,
- public regulations and fiscal policies, especially in cocoa producer countries.

Regarding the tax paid to public authorities, the analysis in producing countries includes estimates of public expenditure on essential public services in the communities that depend on cocoa production for their livelihood, so as to put the results in context. These estimates have been built on the basis of available public data from governments, FAO, IMF... They enable to confront the public revenues and spending related to the cocoa sector in each country analysed.

- **Comparing the value distribution in cocoa chains with other agricultural commodities**

In order to put these results in a wider context, we compared the results obtained for cocoa farmers' share of value and income in Côte d'Ivoire, Ecuador, Ghana and Cameroon, with equivalent estimates for other food products.

Firstly, comparisons have been made from a "consumer perspective". In order to obtain meaningful results, we selected mass-consumed food products sold in French supermarkets which are substantially processed by major industry actors and branded (as it is the case for chocolate

products), and for which value breakdown estimates are already calculated each year by the “French Observatory on Prices and Margins of Food Products”.

The results obtained for cocoa farmers have been compared with:

- the income of dairy farmers in France (in comparison with average national income) and their share of value of mass-consumed liquid milk sold in France
- the income of dairy farmers in France (in comparison with average national income) and their share of value of mass-consumed yogurt sold in France
- the income of durum wheat farmers in France (in comparison with average national income) and their share of value of mass-consumed pasta sold in France

Secondly, we have compared in more details our analysis of the distribution of value in cocoa chains with a similar work conducted and published by BASIC in 2018 on coffee value chains¹⁸, building on the (close) similarities but also the differences between the two sectors in order to deepen our transversal analysis of results.

- **Building prospective simulations of the potential consequences of the minimum price decision of Côte d’Ivoire and Ghana**

Finally, we have used these estimates to conduct a transversal analysis and set up prospective simulations of the potential consequences of the minimum price decision of Côte d’Ivoire and Ghana.

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, INSEE, 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...) 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 interviews with experts from the sector, in particular professionals working for companies of all stages of cocoa/chocolate chains as well as academics.

As stated above, a crucial 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.

¹⁸ BASIC, Coffee: Behind the Success Story, 2018

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:

- Private labels Vs international and national brands.
- Basic, cooking, and premium segments of chocolate tablets (tablets).
- Best seller products and other products.

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 a first comprehensive evaluation and a sound basis for discussion among actors and stakeholders of the cocoa/chocolate sector.

The modelled value chains only provide quantitative estimates/orders of magnitude for the most common set of operations from agricultural cultivation by small-holder farmers, up to the consumer purchases in retail stores.

The specific organisation of operators has not been taken into account, in particular the degree of vertical integration from cocoa beans trading to final product manufacturing which varies not only from one company to another, but among different product lines of the same actor. A high degree of vertical integration can result in a certain level of economic efficiency which is not accounted for, but which we can consider to be not significant. As a result, based on our counter-verification of estimates with experts of the sector, we consider that our orders of magnitude can provide meaningful estimates for vertically integrated chains, by combining the relevant stages to be accounted for.

1. Chapter 1: The global context of the cocoa-chocolate value chains

1.1. Brief historical insights on cocoa production & chocolate consumption

Three main types of cocoa, each encompassing different varieties, dominate today's cocoa production and trade¹⁹:

- Forastero, which is estimated to represent 90 % of global volumes and considered as “standard cocoa”, mostly valued for its supposed greater resistance to diseases and higher yields.
- Criollo, which is estimated to represent less than 1 % of the cocoa produced worldwide, generally deemed to be the highest quality of all varieties, and therefore the most expensive.
- Trinitario, which is a hybrid between the two and it is said to take the best traits from both.

Probably discovered 3000 years ago by the pre-Olmec in Central America, cocoa cultivation requires specific climate conditions²⁰: most of it is performed within the “cocoa belt”, a narrow stretch situated 10 degrees either side of the equator.

The consumption of cocoa first expanded when Spanish settlers arrived in Central America and progressively introduced it in colonial cuisine, adapting it to European taste²¹ (it was previously consumed by Mayas and Aztecs as a bitter cold beverage mixed with various spices²²).

During the 19th century, European commercial powers started to move cocoa production from the newly independent Latin American countries to their African colonies which quickly became the world's leading producing region for cocoa, first in Ghana, then Côte d'Ivoire and Nigeria.

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 1830²³, production rose to 250 000 tonnes per year at the end of the 19th century, 500 000 tonnes in 1920, and more than 2.5 million tonnes in the 1980s²⁴.

19 That being said, cocoa specialists often disagree with the supposed characteristics of the three main types, as for instance Criollo is not the only fine cocoa and all Forastero pods are not disease resistant (Steve Bergin interviewed by Sharon Terenzi, “The biggest misconceptions on cacao varieties demystified”, May 14, 2017)

20 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*, 3rd edition, Thames & Hudson, 2013

21 Still a beverage but drunk at room temperature and sweetened with cinnamon and anise (S. D. Coe & M. D. Coe, *The True History...* op. cit.)

22 S. D. Coe & M. D. Coe, *The True History...* op. cit.

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

24 LMC International Ltd., *The World Cocoa Market Outlook*, 2000

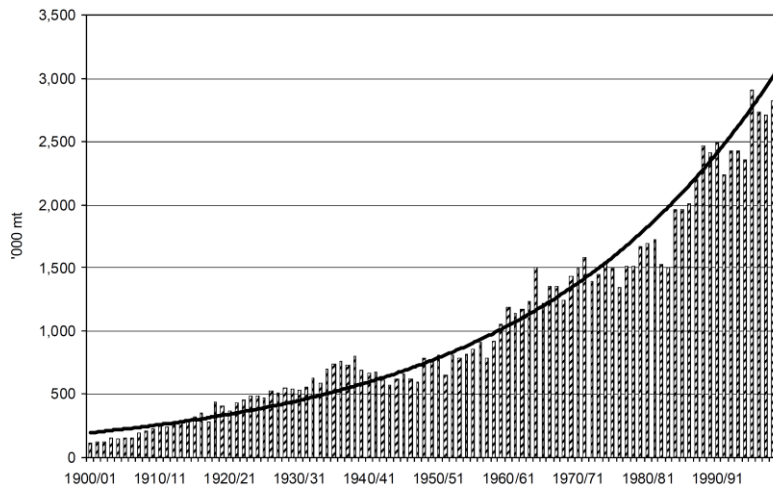


Figure 14. World cocoa production & consumption since 1900. Source: LMC International Ltd., World Cocoa Outlook, 2010

The industrialisation of chocolate manufacturing started early, at the beginning of the 19th century, when the first “chocolate factories” were set up in Europe (by François-Louis Cailler²⁵ and Philippe Suchard²⁶ in Switzerland, Jean-Antoine Meunier²⁷ in France)²⁸, which enabled a tremendous scale-up in the roasting and grinding processes.

The turning point took place in the Netherlands in 1828 when Casparus Van Houten²⁹ 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 throughout the 19th century, their inventors still being widely known today in the chocolate industry, such as Henri Nestlé and Rudolph Lindt³⁰.

At the beginning of the 20th century, Swiss then British and American manufacturers created and 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 (tablet) from Nestlé (first launched in 1875), Dairy Milk bar of Cadbury (first marketed in 1905), Toblerone (launched in 1905 by Tobler), Milky Way and Mars bars (respectively launched in 1923 and 1932), Kit Kat bar and Smarties (first marketed by Rowntree in 1935 and 1937)³¹.

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

26 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.

27 First bought by Rowntree Mackintosh (inventor of Smarties and Lion bar) in 1971, Menier is now a brand owned by Nestlé since 1988.

28 N. Harwish, Histoire du chocolat, 2008

29 Van Houten is still one of the most renowned chocolate powder, owned since 2000 by the one of the biggest cocoa grinders and chocolate manufacturer, Barry-Callebaut.

30 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.

31 N. Harwish, Histoire..., op. cit.

1.2. Chocolate consumption

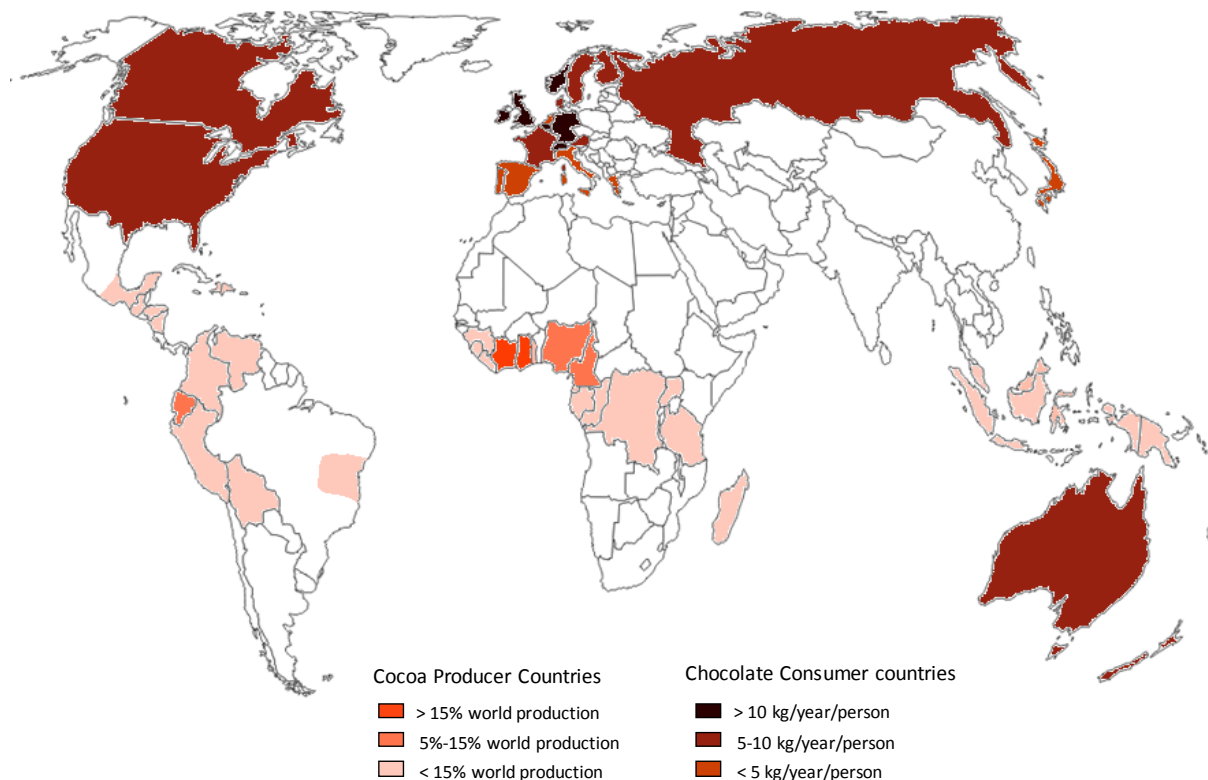


Figure 15. World map of cocoa production & consumption. Source: BASIC, based on ICCO and ICA data

Chocolate has become a common food item throughout the world, available in a wide variety of forms: spreads, sweets, chocolate tablets, truffles, cocoa powder, etc.

Chocolate consumption has been multiplied by 16 since the beginning of the 20th century. Some describe it as a “boom” of international cocoa demand: today, 4.8 million tons of cocoa have been consumed in 2018/2019 all over the world, an increase of 33% since 2008/09³². Global sales of chocolate-based confectionery products have been estimated at 110 billion USD in 2019³³.

According to ICCO’s estimates, overall chocolate consumption should continue to regularly increase in the coming years - albeit at a reduced pace - achieving an average growth of 2.5% per annum until 2024 and reaching a forecast 5.4 million tons of cocoa consumed in 2023/2024³⁴.

Behind these global numbers, important shifts in demand are happening, both in terms of geography and in terms of consumers’ tastes and expectations.

32 ICCO, The World Cocoa Economy, 2014

33 <https://www.prnewswire.com/news-releases/139-94-billion-chocolate-market---global-growth-trends-and-forecast-2019-2024--300876212.html> accessed on 30th March 2020

34 ICCO in World Bank, Le cacao en Côte d’Ivoire, 2019

Estimated cocoa consumption by region

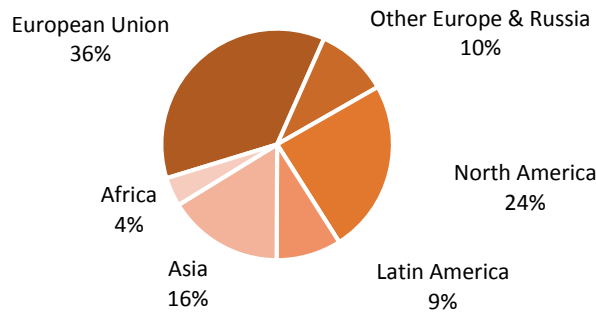


Figure 16. Main world cocoa consuming & exporting countries. Source: BASIC, based on WCC data (2015) & ICCO data (2017)

Consumption in traditional markets in Europe and North America, higher income regions where chocolate consumption historically expanded as a pleasure-product³⁵, tend to stagnate and even decline³⁶ even though yearly consumption remains higher than in other geographical regions³⁷.

Yearly consumption per capita varies a lot within these countries, especially in Europe: whereas Germans consume 11kg of chocolate a year, the Swiss consume 9,7kg and Portuguese or Italians as little as 3kg³⁸. The French are in the middle of the range, from 6,69 kg per person in 2014³⁹ to 7,3kg in 2018⁴⁰.

These markets are qualified as “mature” and are characterised by these three distinctive features⁴¹:

- A high demand for sugary confectionery products in which chocolate is only one ingredient amongst others;
- A significant demand but still in minority for higher quality chocolate at an affordable price;
- A niche market for high quality chocolate.

In these markets, segmentation is key, and the brand is one of the most important criteria for consumers’ choice.

In recent years, health issues have gained increasing importance in these markets: the global demand for organic chocolate is forecast to grow 3% per year between 2020-2024⁴²; consumers are increasingly shifting towards higher quality chocolate with more cocoa and less sugar (+7% per year for the high-end chocolate according to World Bank’s estimates⁴³); and vegan chocolate is starting to rise⁴⁴.

35 S. Barrientos, « Beyond Fair Trade: Why are Mainstream Chocolate Companies Pursuing Social and Economic Sustainability in Cocoa Sourcing? », Institute for Development Policy and Management, Manchester University

36 KPMG, The chocolate of tomorrow, June 2012.

37 1,2kg/year/capita in Japan and only 0,1kg in China (Starista in Syndicat du chocolat, « Les chiffres clés 2018 des industries de la chocolaterie », 2019

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

39 Syndicat du chocolat, Communiqué de presse, October 2015

40 Caobisco in Syndicat du chocolat, 2018, op. cit.

41 S. Barrientos, « Beyond Fair Trade... », op. cit.

42 <https://www.businesswire.com/news/home/20200304005323/en/Organic-Chocolate-Market-2020-2024-Health-Benefits-Organic> retrieved on 30th March 2020

43 World Bank, Le cacao en Côte d’Ivoire, 2019

44 <https://www.barry-callebaut.com/en/manufacturers/trends-insights/organic-key-claim-chocolate-confectionery> retrieved on 30th March 2020

Another growing trend in these regions is the consumer demand for specialty chocolate based on “fine flavour” cocoa in which an origin, a product or a recognised *savoir-faire* are valued, and consumers are willing to pay more for them⁴⁵.

Meanwhile, demand in emerging countries, and especially in Asian markets such as China and India, has been accelerating in the past few years. The emergence of the middle class and the evolution of consumers’ taste has driven up chocolate consumption: Indian yearly chocolate consumption per capita grew by 18% to 20% during the 2000s⁴⁶, while global chocolate consumption in China grew by 10% to 15% per year between 2004 and 2010, five times the worldwide growth rate (2% to 3% per year during the 2000s)⁴⁷. The region has a potential of 2.5 billion consumers who still consume little chocolate (60g/year/capita in China and 35g/year/capita in India⁴⁸).

In these markets, around 80% of the chocolate is sold by foreign companies⁴⁹: even more than in Europe and the USA, Chinese consumers give high importance to brands, and value international over domestic ones, the former being associated with an image of authenticity, quality, or even social and symbolic value important to new middle-class consumers⁵⁰. This shift in demand is foreseen to have an impact on the industrial structures and merchandises’ flows set to draw nearer to the most dynamic end-consuming markets⁵¹.

1.3. From chocolate products down to cocoa beans

1.3.1. Structural evolutions at global level

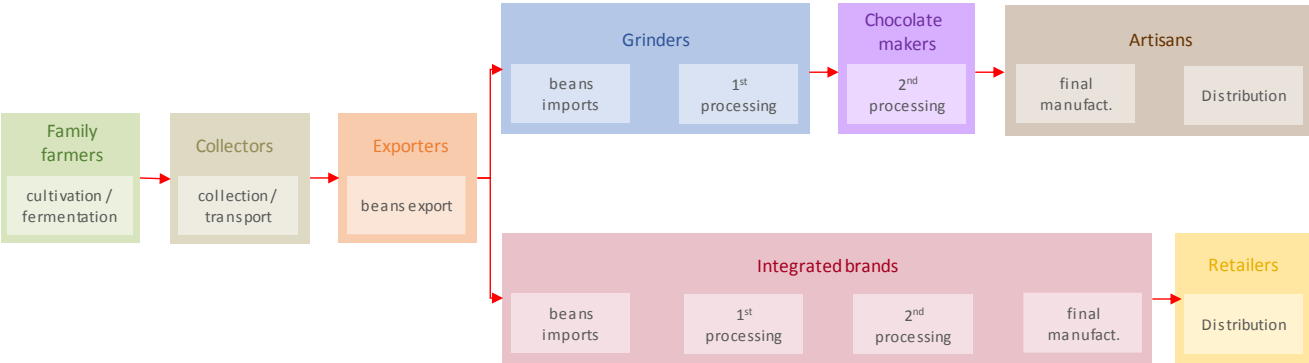


Figure 17. Historical structure of the cocoa chains. Source: BASIC

45 Ibid.
and <https://www.reuters.com/article/us-cocoa-demand-innovation/chocolate-makers-innovate-to-entice-health-conscious-consumers-idUSKBN1ED1PZ> retrieved on 30th March 2020
46 Mohd Shavez Beg & al., « Status, supply chain and processing of cocoa – A review”, Trends in Food Science and Technology, August 2017
47 Fan Li, Di Mo, “The Burgeoning Chocolate Market in China”, in Mara P. Squicciarini, Johan Swinnen, The Economics of chocolate, 2016
48 World Bank, 2019, op. cit.
49 Di Mo, Scott Rozelle, Linxiu Zhang, “Chocolate Brand and Preferences of Chinese Consumers”, in Mara P. Squicciarini, Johan Swinnen, The Economics of chocolate, 2016
50 Ibid.
51 World Bank, 2019, op. cit.

Globally speaking, there have been two main historical cocoa chain patterns for the processing of cocoa and marketing of chocolate products to consumers⁵²:

- On the first hand, major international and national brands (Nestlé, Lindt & Sprüngli, Cadbury, Suchard...) originally organised their operations vertically from cocoa bean grinding up to the manufacturing of chocolate, marketing their final products through increasingly mass-distribution channels which have been progressively dominated by supermarkets.
- On the second hand, artisans and chocolatiers used to make personalised products, buying chocolate from intermediate independent manufacturers which themselves sourced cocoa paste and butter from a network of independent grinders and pressers.

Between these downstream actors and cocoa farmers & exporters situated upstream, fluctuations of supply and demand on the physical market have triggered the creation of cocoa exchange markets. The first of them was set-up in New York in 1925 in the wake of a boom and crash of cocoa prices, followed by the London cocoa exchange in 1928⁵³.

In order to function, these exchange markets fostered the standardisation of the cocoa bean, via the establishment of a series of technical norms in order to facilitate its purchase and resale on an international scale and guarantee a supply of cocoa beans of homogeneous quality, no matter the geographical specificities and cocoa varieties⁵⁴. These standards have enabled to reduce transaction costs to a minimum⁵⁵ 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 the patronage of the United Nations. It allowed producer countries to set quotas and establish buffer stocks to smooth out price variations and created the International Cocoa Organisation (ICCO) to carry out the negotiated clauses.

Faced with the failure of its implementation, this agreement was suspended as of 1988⁵⁶, 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 managed to maintain its cocoa stabilisation board, through the quasi-monopoly of export, and granting licenses to private brokers⁵⁷.

52 C. Araujo Bonjean & J. F. Brun, « Concentration and Price Transmission in the Cocoa-Chocolate Chain », in M.P. Squicciarini & J. Swinnen, *The Economics...* op. cit.

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

54 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

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

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

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

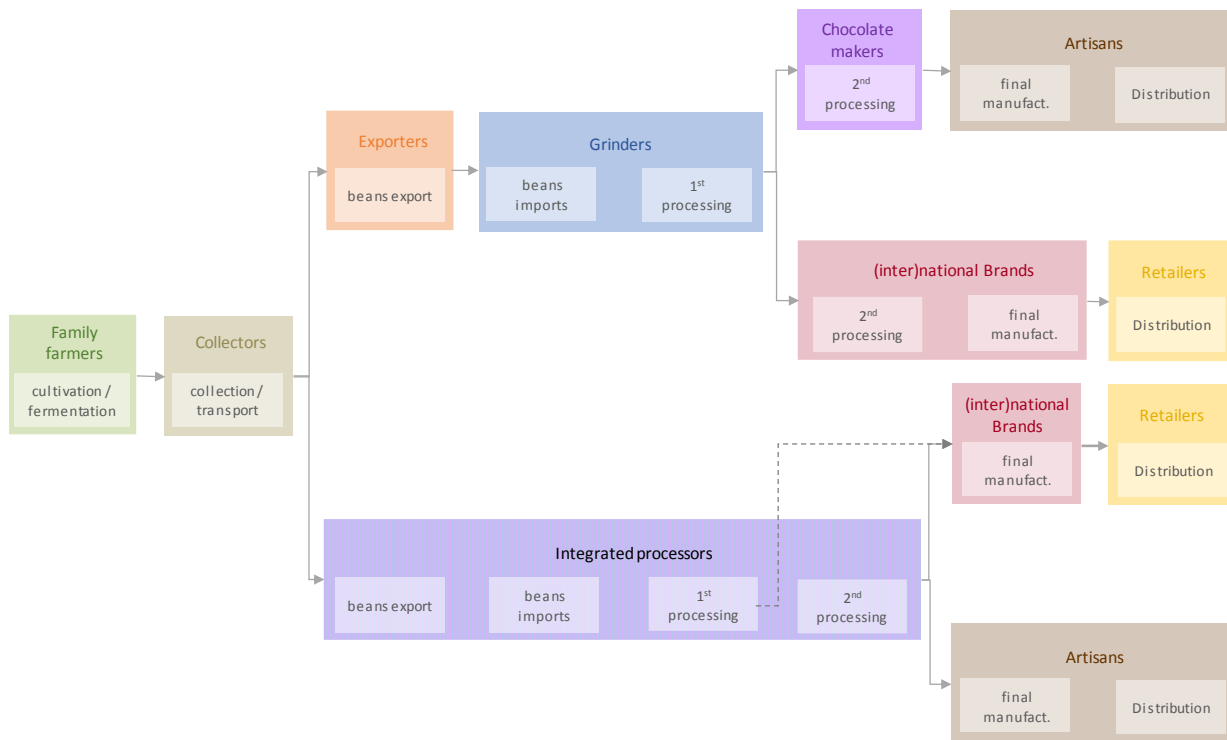


Figure 18. Current global structure of the cocoa value chain. Source: BASIC

In the 1990s, leading actors in the grain trade invested significantly to enter not only in cocoa trading, but also in cocoa grinding factories⁵⁸. Bulk transport and flat storage instead of bags⁵⁹, inspired by logistics of wheat, was applied to cocoa beans and led to industry-management of increasing cocoa bean volumes⁶⁰. The introduction of more advanced technologies in processing generated higher economies of scale thanks to automation and research & development⁶¹.

This in turn fostered a dynamic of merger and acquisition among existing cocoa processors so as to remain competitive on the market⁶². These successive evolutions have side-lined the smallest industry players, in particular pure brokers⁶³, and 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 chocolate couverture. These processors supply “industrial chocolate” not only to international brands and retailers for their private labels, but also to most independent artisans and chocolatiers who mould it and mix it with other ingredients.

Since the turn of 2000, the concentration movement between major brands and processors continued⁶⁴, resulting in new patterns of chocolate chains which are now quite widespread.

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

59 Storage techniques in large piles of 10 to 12 meters.

60 N. Fold, « Lead Firms and Competition... » op. cit.

61 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

62 The most noticeable being the merger between Cacao Barry and Callebaut in 1996 which led to the creation of Barry Callebaut, cf. C. Araujo Bonjean & J. F. Brun, « Concentration and Price... » op. cit.

63 N. Fold, « Lead Firms and Competition... » op. cit.

64 Kraft Foods acquired Jacob Suchard in the 1990s and bought the Cadbury group in 2009, the new entity being renamed Mondelez international in 2012. Upstream, Barry Callebaut purchased the Petra Foods cocoa grinding operations in 2013.

The first pattern corresponds to brands which have decided, for part of their product lines, to outsource cocoa processing and chocolate couverture manufacturing to external suppliers, refocusing on research & development, marketing and advertising in order to be as reactive as possible to market innovations⁶⁵. Since their product range is very broad, their potential dependence on outsourced processors is somehow limited.

The second pattern relates to brands which have maintained an internal capacity to manufacture chocolate couverture, and for some of them to process cocoa paste and butter, so as to limit their dependency on outsourced providers for all or part of their product portfolio. Almost half of world chocolate production is estimated to be made under this second setting⁶⁶.

1.3.2. Main actors of cocoa-chocolate chains at global level

1.3.2.1. Retailers

The modern retailing sector – which covers hypermarkets, supermarkets and discount stores⁶⁷ – plays a central role in world food chains, providing farmers, processors and brands with critical access to millions of consumers, and allowing consumers to access all types of food and drink goods⁶⁸. In the European Union, one of the three biggest retail markets with the United States and China⁶⁹, modern retail sales today account for 54% of total food sales⁷⁰.

In the chocolate confectionery sector, modern retail is by far the leading distribution channel at global level, representing almost 70% of its total sales in Western Europe and North America (the rest being sold in convenience stores, independent small grocers and petrol station shops)⁷¹.

Olam International, a Singapore-based commodities business, bought Chicago-based Archer Daniels Midland's global cocoa business for \$1.2 billion in 2015. Most recently, the Blommer Chocolate Company has been acquired by Fuji Oil Holding, Inc., a global leader in oil and fat ingredients for the food industry.

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

65 N. Fold, « Lead Firms and Competition... » op. cit.

66 N. Fold, « Lead Firms and Competition... » op. cit.

67 hypermarkets are defined as stores that have a sales area above 2,500 m² and supermarkets have a sales area between 400 m² and 2,500 m², both selling a broad range of items; by comparison, discounters focus on everyday low price and private label products; their stores are of all sizes (often between 800 m² and 1,500 m²).

68 European Commission, *The economic impact of modern retail on choice and innovation in the EU food sector*, September 2014

69 The European Union, the USA and China each generate almost 18% of global retail sales (food and non-food), cf. Federation of Direct Selling Associations (WFDSA), *Global Direct Selling - 2014 Retail Sales*, May 2015

70 Planet Retail, *European Grocery Retailing*, May 2014

71 <https://www.confectionerynews.com/Article/2016/03/02/How-chocolate-firms-should-react-to-candy-checkout-bans-Euromonitor> retrieved on 30th March 2020.

Share of grocery market by retailer in the European Union (by value)

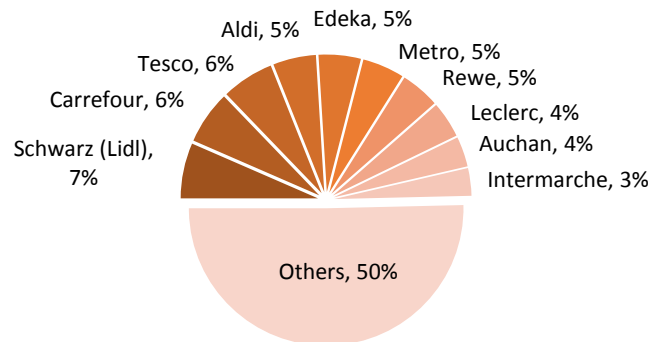


Figure 19. Market shares of retailers in the European Union. Source: BASIC based on Planet Retail, 2014

The modern retail sector is quite concentrated at global level. Wal-Mart, the world largest retailer, alone accounts for 6.1% of global retail sales⁷².

At a pan-European level, the ten biggest retailers (five German, four French, and one British⁷³) represent almost 50% of modern food retail sales⁷⁴.

At a national level, the share is even higher, the five largest retailers reaching 83% market share on average in EU member states⁷⁵. Discounters have the strongest rate of expansion, driven by the growth of private label products focused on every-day-low-price: in 2014, the Schwarz group - better known for its discounter chain Lidl - became the largest European retailer, while Aldi was the 4th largest⁷⁶.

1.3.2.2. Chocolate brands

Global market shares of main confectionery brand owners (2019)

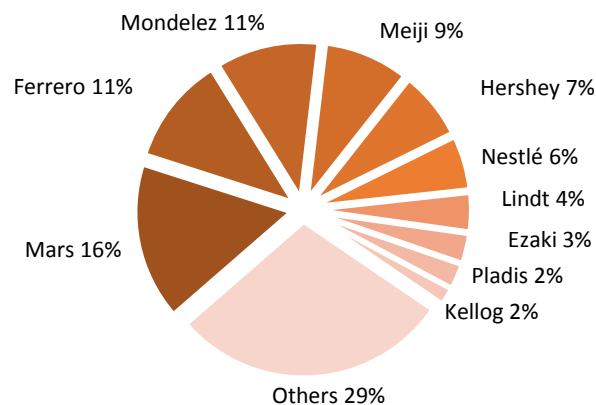


Figure 20. Chocolate/confectionery market shares of global brand owners. Source: BASIC based on Candy Industry, 2019

72 Olivier de Schutter, Addressing concentration in Food Supply Chains, Briefing Note December 2010

73 These 10 companies are among the 30 largest world retailers, cf. Planet Retail, European Grocery Retailing, May 2014

74 Deloitte, Global Powers of Retailing, 2015

75 European Commission, The economic impact of modern retail in the EU food sector, 2014 op. cit.

76 Planet Retail, European Grocery Retailing, May 2014 op. cit.

Whereas consumers are familiar with a large number of chocolate brand names, both national and international, the major ones are owned by 6 global companies – Mars, Mondelez, Nestlé, Ferrero, Hershey and Lindt & Sprüngli – which together make up a concentrated and competitive market.

| | Top Ten Global Confectionery Companies, by Net Confectionery Sales Value in 2018 (in millions of USD) |
|---|---|
| Mars Wrigley Confectionery (division of Mars Inc - USA) | 18,000 |
| Ferrero Group (Italy & Luxembourg) | 12,390 |
| Mondelez International (USA) | 11,792 |
| Meiji Co Ltd (Japan) | 9,662 |
| Hershey Co (USA) | 7,779 |
| Nestlé SA (Switzerland) | 6,135 |
| Chocoladenfabriken Lindt & Sprüngli AG (Switzerland) | 4,374 |
| Ezaki Glico Co Ltd (Japan) | 3,327 |
| Pladis (UK) | 2,816 |
| Kellogg Co (USA) | 1,890 |

Figure 21. Top 10 Companies, by Net Confectionery Sales Value in 2018. Source: ICCO based on Candy Industry data, 2019

A 1st set of companies stand out by their diversified product portfolio that goes much beyond chocolate:

- **Mars is a leader in the agri-food business**, with a very diversified portfolio that ranges from feedstuff to chocolate or common consumption product such as rice. Its chocolate portfolio includes very famous chocolate confectionery brands well-recognised worldwide such as Balisto, Bounty, M&M's, Maltesers, Mars, Milky Way, Snickers, Twix etc. The Group controls over 400 factories in 80 countries all around the World and benefits from a strong commercial presence and marketing position in over 120 countries⁷⁷.
- **Mondelez International is the leading packaged snacks company**, with number-one or number-two world brands in chocolate, biscuits, candy, and gum. Its most well-known brand names are Milka, Cadbury and Oreo, each achieving high awareness and household penetration worldwide (e.g. 88% for Cadbury in the UK and 53% for Milka in Germany)⁷⁸. Its commercial strategy is based on a 'local-first' model, cross-category co-branding and strong investments in emerging markets⁷⁹.
- **As Mars, Nestlé is very diversified and can claim to be one of the global leaders of the agri-food sector**: beyond chocolate and confectionery, the Group is also one of the world's leaders in nutrition and health, coffee, mineral water and ready-made meals. It owns over 2,000 brands produced in over 440 factories located in 86 countries. In confectionery, the company owns the number-one countlines bar KitKat, as well as a diversified portfolio of brands (Crunch, Nestlé, Nestlé Dessert, Milky Bar...).

77 Xerfi, 2018, op. cit.

78 <https://www.foodnavigator.com/Article/2019/05/06/Mondelez-transitioning-to-growth-mode-by-focusing-on-purpose> accessed on 30th March 2020

79 <https://www.confectionerynews.com/Article/2019/02/20/Mondelez-CEO-dishes-on-innovation-local-brands-and-consumer-focus-at-CAGNY-Conference> accessed on 30th March 2020

In addition to these, another set of companies are almost exclusively specialised in the manufacturing and sale of chocolate-based products:

- **Ferrero is one of the leading actors in the chocolate confectionery sector.** It has recently widened its portfolio by acquiring in 2018 Nestlé's confectionery activities in the USA for an estimated 2,5Md€⁸⁰. The group business model is centred around core brands recognised the world over: Nutella, Kinder, Ferrero Rocher, Mon Chéri, Raffaello and Duplo. To maintain its leading position in the chocolate confectionery industry, the Group relies on a solid network of raw materials supplies (cocoa and palm oil for instance) and even integrates part of the raw materials sourcing and processing – the buyout of the Turkish company Oltan being a bright example of its strategy⁸¹. More recently, the group decided to invest in Asian markets as demonstrated by the opening of its latest Innovation Center in Singapore in 2017⁸².
- **Lindt & Sprüngli, which is only dedicated to chocolate products like Ferrero, is the undisputed world leader of premium ('Premium') chocolate tablets.** The Group owns 12 factories - one half in the USA, the other half in Europe – and sells its products in over 100 countries. The Group mostly emphasises on high-end and premium chocolate products which can be sold in retail stores but also through its own network of shops⁸³. Lindt & Sprüngli manufactures and sells tablets (Lindt, Excellence) and confectionery (Lindor) as well as season products (as for instance its Lindt Gold Bunny for Easter). The Group strategically focuses on the upper segment of the mass consumption of chocolate and revendicates to lead it⁸⁴. European countries remain its main market (an estimated 47% of its sales revenues in 2017), but Lindt ambitions to reduce its dependence to Europe as demonstrated by the acquisition of the US company Russell Stover Candies in 2014⁸⁵.

1.3.2.3. *Chocolate manufacturers*

Chocolate manufacturing is evenly split between an open market and an integrated market⁸⁶. The latter is estimated to represent 51% of the chocolate manufacturing with four main chocolate brands sharing 80% of that market: Mondelez, Mars, Nestlé and Hershey's⁸⁷.

The remaining 49% represent the open market on which Barry Callebaut is estimated to represent 40% against its main competitors Cargill, Cémoi, Olam and Fuji Oil Holding⁸⁸.

80 Ibid

81 Ibid

82 Food Ingredients First, "Ferrero strengthens position in Asia", June 15, 2017

83 "Un bar chocolat Lindt chez McArthurGlen », July 30, 2018

84 Xerfi 2018, op. cit.

85 Ibid ; Confectionery news, « Lindt bts on realignment of Russell Stover Candies for long-term growth », July 31, 2017

86 On the open market, chocolate brands rely on external chocolate manufacturing for their products whereas on the integrated market, chocolate brands rely on their own chocolate manufacturing facilities (Barry Callebaut, 9-month key sales figures 2010/2011, July 2011

87 No further details are provided on the respective shares of each chocolate brand. Barry Callebaut, 2011, op. cit.

88 Barry Callebaut 2011 and Candy Industry 2014

Main actors of the chocolate manufacturing worldwide
(shares in % of the global open market for chocolate manufacturing)

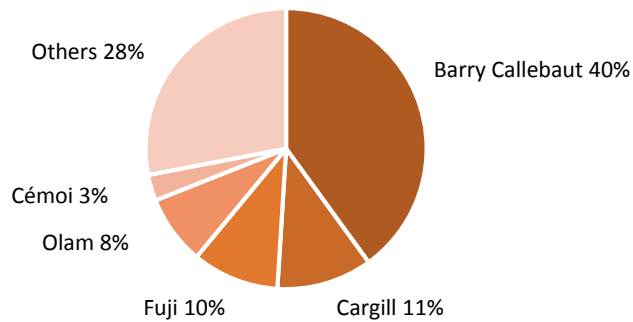


Figure 22. Main actors of the chocolate manufacturing worldwide (shares in % of the global open market for chocolate manufacturing). Source: estimates from Barry Callebaut 2011 and Candy Industry 2014

The world leading chocolate manufacturer is Barry Callebaut, a company born from the merger of Cacao Barry and Callebaut in 1996⁸⁹ partly to face the entry of new competitors. The core activity of Barry Callebaut⁹⁰ develops from grinding raw cocoa beans to supply food manufacturers, chocolatiers, bakeries and vending distributors with powder mixes, compound and fillings, and chocolate couverture (also known as industrial chocolate)⁹¹.

In 2016/2017, its sales of industrial chocolate couverture to agri-food industrials made up an estimated 65% of its total revenue, while an additional 23% were sold under its brands' names (Barry Callebaut, Bensdorp, Van Houten, Chadler, Delfi, Caprimo, Le Royal et Ögonblink etc.) and the remaining 12% were generated by semi-transformed products sales to professionals and artisans⁹².

The second biggest chocolate manufacturer is Cargill, a major US agri-food company which entered the cocoa sector in 1987⁹³. Coming from other commodities markets, Cargill – along with ADM at that time - progressively introduced new, more advanced technologies in the cocoa industry. Their economies of scale and their investments in research and development in other commodities allowed them to reach some of the highest levels of automation⁹⁴ and to apply bulk transport to cocoa beans⁹⁵. Until today, the business model developed by Cargill is based on low output margins but massive output volumes which all come together through economies of scale. Over time, Cargill invested not only in trading, but also in bean-grinding factories⁹⁶ and chocolate manufacturing, and developed specific industrial processes to manufacture a range of cocoa powders under the leading brand name Gerkens which it acquired in 1987 (one of their main product marketed for professional, along with cocoa butter and liquor).

Alongside these two multinational actors, Cémoi, a mid-sized manufacturer, is the leading chocolate manufacturer in France. Its business model targets in particular, but not exclusively, retailers as

89 C. Araujo Bonjean & J. F. Brun, « Concentration and Price... » op. cit.

90 Barry Callebaut employs an estimated 9,000 people in 53 factories across the Earth, selling per year an estimated 1.8 million tonnes of cocoa or chocolate to clients in over 130 countries (Paris Normandie, "Implanté à Louviers, le leader mondial du cacao, Barry Callebaut, fête ses 20 ans", 6 juillet 2016

91 Barry Callebaut, 9-month key sales figures 2010/2011, July 2011

92 Xerfi, 2018, op. cit.

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

94 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

95 N. Fold, « Lead Firms and Competition... » op. cit.

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

Cémoi is the leading manufacturer of French retailers, providing them with a wide range of chocolate products to be sold under their private labels. Its sales have been recently boosted by 30% when it entered the US market⁹⁷.

The geographical proximity of the factories manufacturing chocolate couverture with the ones processing cocoa beans into liquor, butter and powder allows the former to be partly supplied with liquid-based cocoa butter and cocoa paste⁹⁸, thereby eliminating the intermediate stage of melting for chocolate-makers.

1.3.2.4. Cocoa grinders

Main actors of the cocoa grinding worldwide

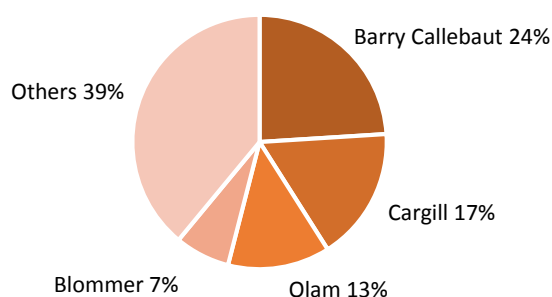


Figure 23. Market shares of main actors of cocoa grinding worldwide. Source: BASIC, based on UNCTAD, 2015

Upstream, the names of the major processors of cocoa beans are less known; as for the downstream stages of the cocoa chain detailed earlier, they operate in a concentrated market: estimations show that the 6 main grinders would make up more than 60% of the global cocoa first processing⁹⁹.

This trend can be explained by the nature of the cocoa processing sector, which sells a narrow range of products - mainly butter, paste and powder - which contrasts with the extreme diversity of products offered by chocolate brands to the final consumer market. This results with a sustained dynamic of technological innovation and the pursuit of economies of scale which has out-competed the smaller players off the market as volumes grew.

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.

As opposed to chocolate manufacturing facilities that need to be close to end-consuming markets, grinding facilities can be located in cocoa producing countries as cocoa butter, mass or cake can be transported on long distances.

97 Les Echos, « Le chocolatier Cémoi mise sur les MDD pour une croissance mondiale », April 13, 2012 ; Candy Industry, « Cémoi continues to make strides after opening first US sales office 1 year ago », July 30, 2014

98 C. Araujo Bonjean & J. F. Brun, « Concentration and Price... » op. cit.

99 Voice, Cacao Barometer, 2015

The Netherlands used to be the leading country when it came to grinding facilities: its numerous maritime ports along its warehouses made it an important importing country of cocoa raw beans and semi-finished products. Cargill's biggest grinding factories are for examples located along the river Zaan in Amsterdam. But grinders are now also developing grinding facilities in the cocoa producing countries and Côte d'Ivoire has become the number one country for cocoa grinding worldwide.

1.3.2.5. Cocoa traders and transporters

The number of pure brokers is decreasing in an inversely relation to the increasing volumes of trade and processing. These have reached such massive volumes that only the most capable and steady processors can take the risk to buy commodities on this scale¹⁰⁰. Among the few international cocoa traders still in the race are Sucden and Amtrada Holding.

In the same way, warehouses are progressively being reduced because of the introduction of bulk transport, associated with *flat storage*¹⁰¹ instead of bags, and just in-time cocoa supply chains. Labour costs have been divided by 5, as a 16 tonnes bulk carrier can be emptied in 24 hours, whereas the same volume in bags took 60 workers a week¹⁰².

1.4. Cocoa cultivation

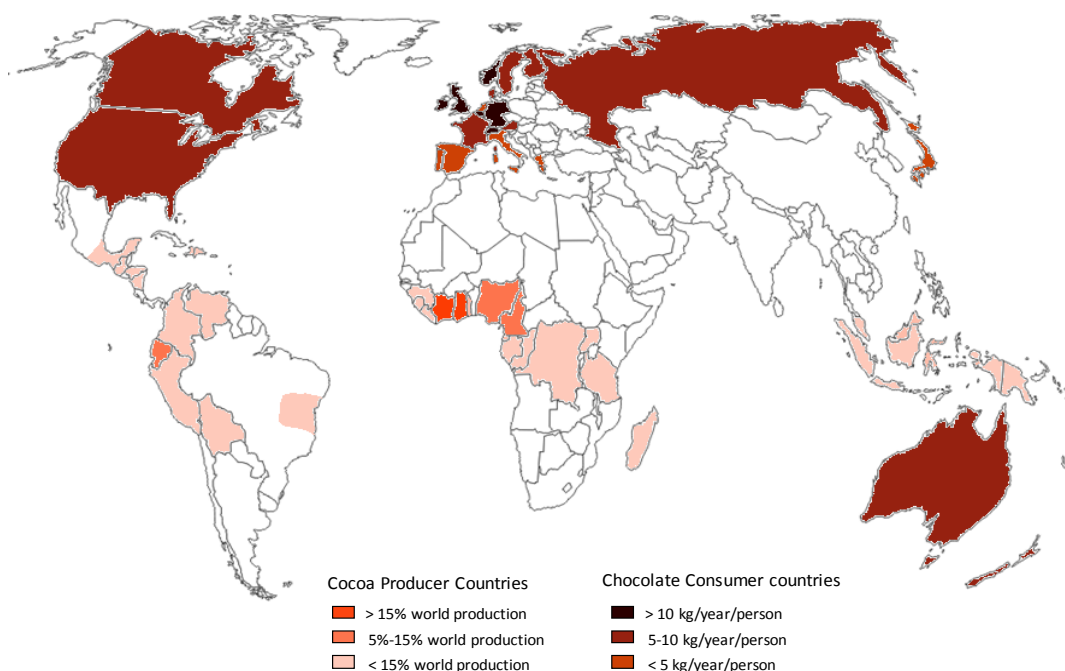


Figure 24. World map of cocoa production & consumption. Source: BASIC, based on ICCO and ICA data

100 N. Fold, « Lead Firms and Competition...» op. cit.

101 Storage techniques in large piles of 10 to 12 meters.

102 N. Fold, « Lead Firms and Competition...» op. cit.

The worldwide production of cocoa is mostly concentrated within 5 countries which account for 79% of global production and 76% of the total harvested area¹⁰³: Côte d'Ivoire, Ghana, Ecuador, Cameroon and Nigeria (in descending order).

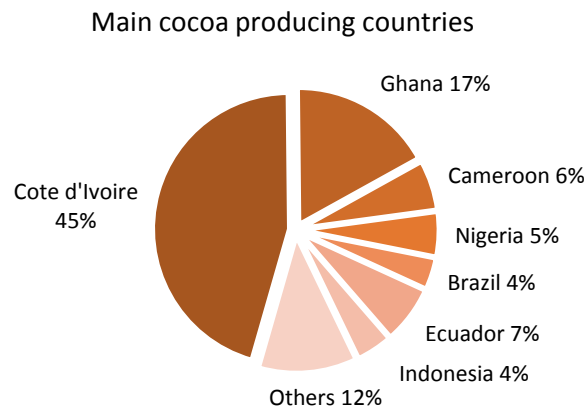


Figure 25. Main world cocoa consuming and exporting countries. Source: BASIC, based on ICCO data, 2020

On the short term, the concentration of the world cocoa production in Africa, especially Western Africa, should remain as ICCO forecasts an increase of the production of 5% by 2020 in this region, no changes in South America and a decline by 6% in Asia and Oceania¹⁰⁴. On the long term though, this might change as the Western African countries, especially Ghana and Côte d'Ivoire, are already experiencing negative impacts of climate change on cocoa cultivation, which are foreseen to likely worsen and create tensions (access to resources, migratory flows...).

In this context, the World Bank foresees a diversification of world cocoa supplies to reduce dependency towards a limited number of producing countries.

Among emerging cocoa origins are Nigeria, which also could be a developing end-consuming market, Uganda and the DRC which all seem to be in the lead to replace historical Western African cocoa producing countries.

In Asia, Indonesia, one of the world historical cocoa exporting country, is on the decline while Vietnamese and Indian attempts to produce cocoa on a large scale have achieved mixed results so far and China does not have the climatic conditions to grow cocoa¹⁰⁵.

Southern American countries are also forecast to take advantage of the current context, leveraging on three main attracting factors: the development of cocoa plantations of significant size (especially in Ecuador), State-led research programs to develop more productive and resilient cocoa varieties and a range of high quality cocoa beans demanded by niche markets¹⁰⁶.

103 ICCO, Production of cocoa beans, March 2020

and FAOSTAT 2018 in International Trade Centre (ITC), UNCTAD, GATT & al., The State of Sustainable Markets, 2018

104 ICCO in World Bank, 2019, op. cit.

105 World Bank 2019, op. cit.

106 Ibid

1.5. Certified cocoa value chains

Consumers' expectations regarding the chocolate they buy has been changing as the awareness on environmental and social issues have been rising thanks mostly to NGOs' work on the negative impacts of the cocoa production, mostly regarding hazardous child labour within cocoa plantations and deforestation linked to the expansion of cocoa farming¹⁰⁷. The expectations seem to have turned into increasingly pressing concerns in the 2000s as consumers perceived a lack of commitments and changes within the cocoa-chocolate value chain: for instance the Dutch government - represented by the Ministry of Foreign Affairs, Ministry of Agriculture and Nature and Food Quality – pledged with Dutch stakeholders in the Amsterdam Declarations of 2010 to achieve 100% of sustainable cocoa for its domestic consumption by 2025¹⁰⁸.

In reaction to the raising awareness of consumers on the negative impacts of agriculture, agri-food companies have developed internal standards to improve their business practices but also those of their suppliers. In the chocolate sector, Nestlé developed its *Corporate Business Principles* as far as 1998¹⁰⁹. More recently, other initiatives led by major companies have emerged: Mondelez international launched its *Cocoa Life Sustainability Program*, Barry Callebaut initiated *Cocoa Horizons*, Nestlé launched the *Nestlé Cocoa Plan*, etc.

These programs are primarily focused on improving cocoa production, in a context of widespread fear for mid-term supply¹¹⁰. Financing new cocoa plants or training producers on improved agricultural practices, as Nestlé and Cargill do in the Côte d'Ivoire, aim at increasing the productivity and profitability of cocoa plantations. The underlying argument is that these increases will allow producers to earn a better living by producing more cocoa volumes.

In addition to these initiatives conducted by major companies in the cocoa sector, several **certifications 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 norm¹¹¹.

They feature a set of principles, criteria and indicators, sometimes drawn up through multi-stakeholder consultative processes, and generally subject to regular revision. They also establish procedures for accredited bodies to award certificates to companies and products that meet agreed criteria, and procedures for tracing the movement of the products through the supply chain.

Four main certification schemes have been in use in the cocoa sector:

- Rainforest Alliance,
- UTZ, (which has now merged with Rainforest Alliance, a new standard is expected in 2020)
- Fair Trade
- Organic

107 World Bank, 2019, op. cit.

108 Amsterdam Declarations Partnership, "Towards deforestation-free sustainable commodities"

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

110 C. Mouzon, Commerce équitable : améliorer la qualité et s'orienter vers le bio, Alternatives économiques n°335, mai 2014

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

Combined, **they certified between 2.3 million and 3.8 million ha of cocoa in 2016**; the average of **3 million hectares, represents 30% of the global cocoa-growing area**¹¹².

Over 2.1 million hectares were UTZ certified, the largest cocoa area among the 4 certifications which increased by 37% between 2015 and 2016 only, **while Rainforest Alliance covered more than 0.7 million hectares**¹¹³.

UTZ is more developed in the African continent as the countries with the largest certified cocoa areas are Côte d'Ivoire, followed by Ghana, Nigeria, Indonesia and Cameroun, together representing almost 88% of the UTZ total cocoa area; whereas for Rainforest Alliance, 5 countries represented 96% of the standard's total cocoa area: Côte d'Ivoire, Ghana, Dominican Republic, Indonesia and Ecuador.

UTZ reported an estimated production volume of almost **1.2 million metric tons of cocoa beans in 2016**, which is nearly 27% of the global cocoa production volume whereas Rainforest Alliance reported almost **473,500 tonnes** for the same year.

These two standards, which correspond to the biggest area and production of the 4 systems analysed, cover both:

- The reduction of environmental impact and protection of biodiversity through good agricultural practices, including specific criteria relating to the fight against deforestation & forest degradation.
- Respect for the core conventions of the ILO (freedom of association, non-forced labour of children, non-discrimination, etc.)

There is no guaranteed price premium for certified products, though certification does tend to increase yields and, therefore, incomes. Whilst they agree with the finding that cocoa farmers are underpaid, **they consider that increased productivity is the main way, if not the only way, to enable farmers to earn more. Therefore, they do not require any regulation of prices** nor aim to strengthen of producers' bargaining power, instead **they provide payment of a non-systematic "quality bonus"**.

These sustainable certifications bring an added value to business actors in the chain: by adopting such third-party systems for their products, companies are able to gain legitimacy in the eyes of their customers while outsourcing risks and investing in new remunerative niche markets¹¹⁴.

The use of multiple certifications, sustainable as well as fair trade, not only allows companies to generate consensus on their commitment to help improve the social, economic and environmental conditions of their supply, but also enable them to have access to several suppliers potentially interchangeable¹¹⁵.

Sustainable certifications help find answers to two major issues of the cocoa industry:

- ensuring an image of respectability among consumers,
- securing mass volumes without interruption of supply with a focus on yields' improvement.

112 The estimated average is calculated in ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018. As many areas are multiple-certified, they calculate the average between the minimum 2.3 million ha & the maximum 3.8 million ha.

113 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018..

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

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

Another significant certification initiative, Fair Trade, is based on commitments of business actors in agricultural chains which aim at enabling small-holder farmers and workers to make a dignified living out of their work and invest collectively in the long run.

In 2016, Fairtrade International, the leading Fair Trade certification system worldwide, certified over 722,000 hectares of cocoa (an increase of 27% from 2015 only), constituting 7.1% of the global cocoa area, with a production of 292,000 metric tons or 6.5% of global cocoa production¹¹⁶.

Five countries combined accounted for 93% of the total Fairtrade International cocoa area: Côte d'Ivoire, Ghana, Dominican Republic, Peru and Ecuador.

More specifically, its founding principles are:

- Democratic grass-root organisations of small-holder farmers and workers which enable them to acquire greater management skills and negotiation capability in order to get a better position in the chain, interact with other stakeholders and become recognised actors.
- A Fair Trade Minimum Price is set. Based on detailed calculations of the costs of sustainable production, it has a stabilising effect, and sometimes a boosting effect, on farmers' income. Combined with longer-term contracts & prefinancing, it enables small-holder farmers to plan ahead.
- A Fair Trade Premium is set, which is collectively decided by small-holder farmers and workers, enabling them to develop income-generating activities (on the farm and off farm) and enhance their ability to save.
- Through awareness-raising and campaigning, the Fair Trade movement encourages consumers to look for the origin of the products they purchase and to care for the social and environmental conditions under which they were produced¹¹⁷.

Over the last decade, the increase in fair trade cocoa sales can be mostly explained by the certification of mass consumption chocolate products, for example:

- In 2009 and 2010, on the UK market, the 'Cadbury Dairy Milk' bar was entirely converted to Fairtrade certification followed by the Kit Kat bar¹¹⁸ ;
- In 2012, Maltesers Mars candy were labelled Fairtrade on the UK market¹¹⁹ ;
- In 2014, Mars committed to sourcing cocoa from Fairtrade certified cocoa farms for all of its Mars Bars on the United Kingdom and Ireland markets¹²⁰.

Last but not least, **organic cocoa has recently become the fastest developing certification in the cocoa/ chocolate sector in mature consumer countries.**

In 2016, **organic cocoa represented 3.1% of the global cocoa area, or 320,100 hectares** (estimated harvested area), an increase of 20% from the previous year, and an **estimated cocoa production of 157,275 metric tons amounting to 3.5% of the world's cocoa production¹²¹.**

116 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018..

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

118 Fairtrade International, Annual Report 2009-2010, 2010

119 Fairtrade Foundation, Annual Impact Report 2013-2014, 2014

120 Fairtrade International, Annual Report 2014-2015, 2015

121 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018..

In the cocoa sector, the organic 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 the Democratic Republic of Congo, Peru, Sierra Leone and United Republic of Tanzania which together represent 77% of the total cocoa organic area worldwide¹²².

The charts below show the main figures for the 4 certificates since 2008.

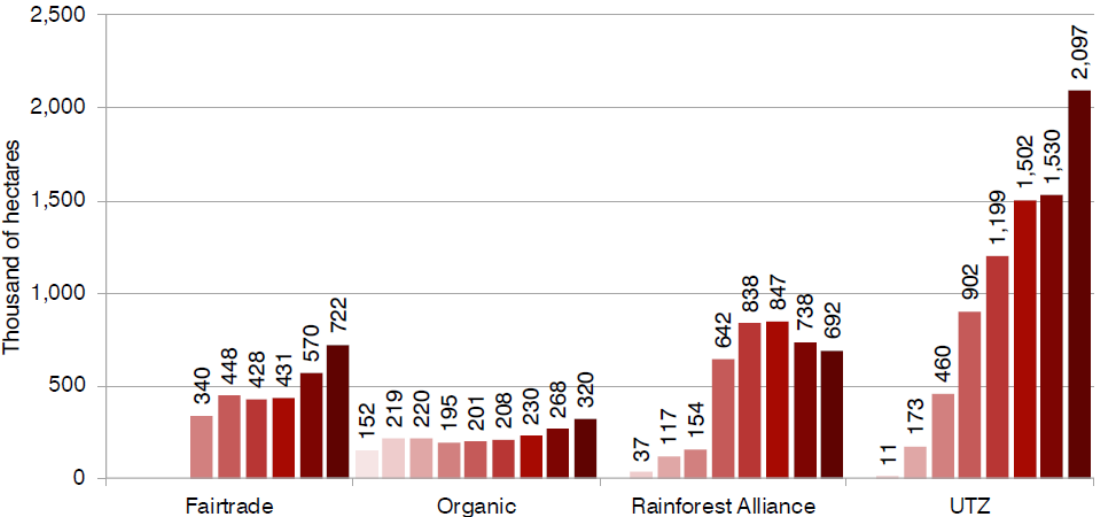


Figure 26. Cocoa: Production area by standard, 2008–2016. Source: ITC, UNCTAD, GATT and al.

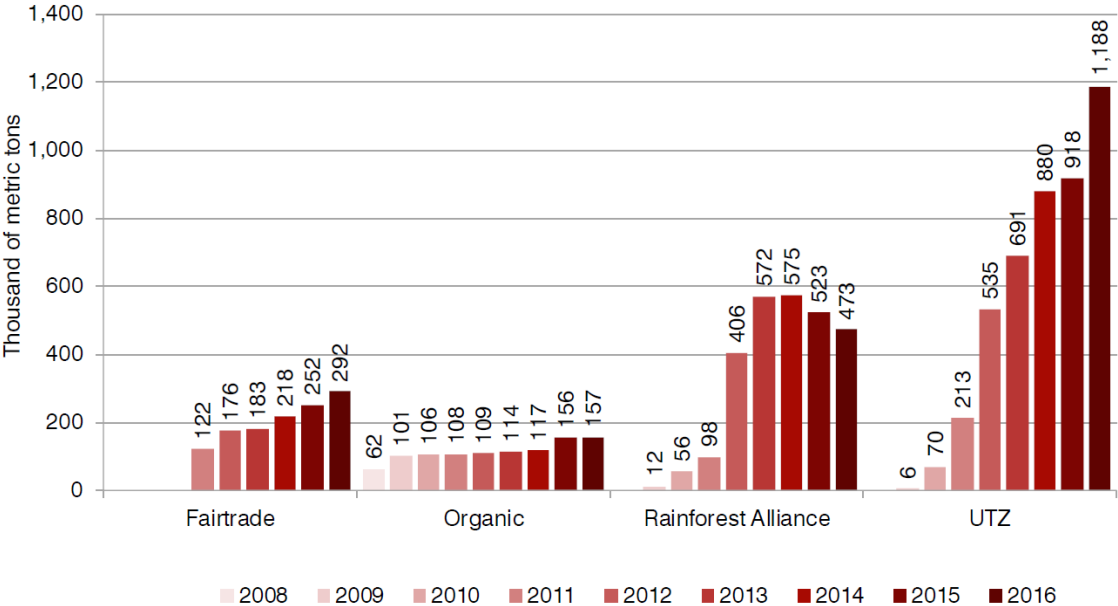
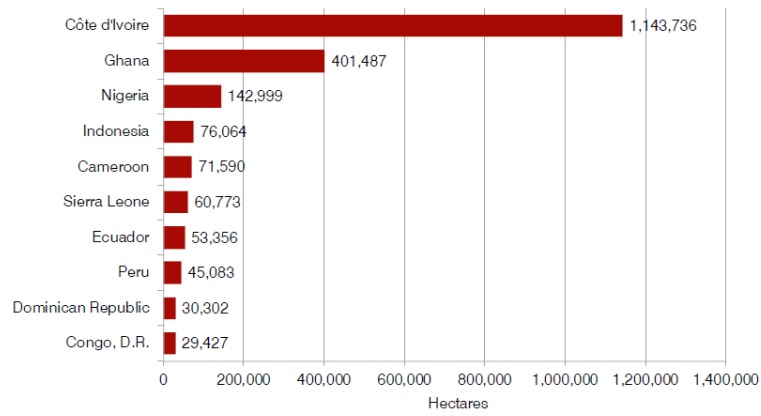
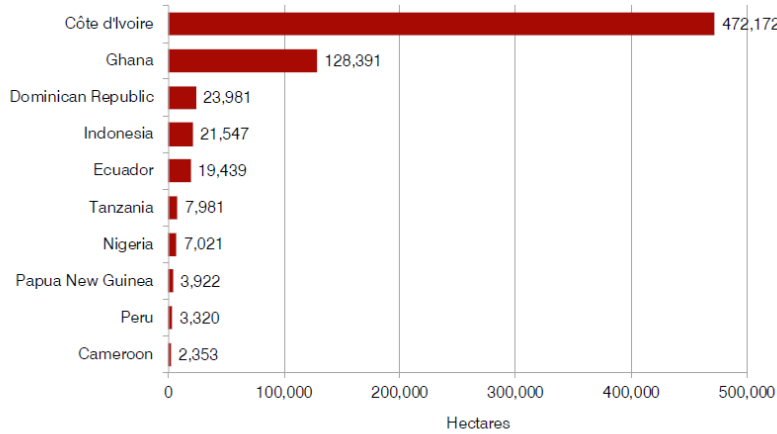


Figure 27. Cocoa: Production volume by standard, 2008–2016. Source: ITC, UNCTAD, GATT and al.

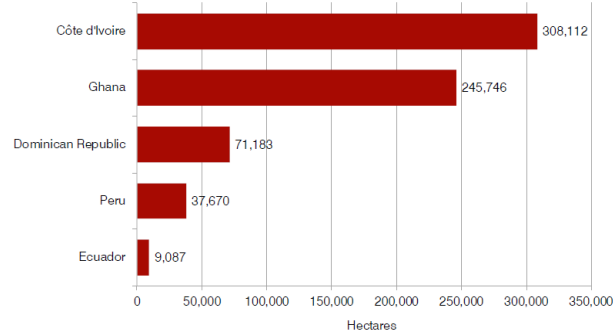
122 ITC, UNCTAD, GATT and al., “The State of Sustainable Markets”, 2018..



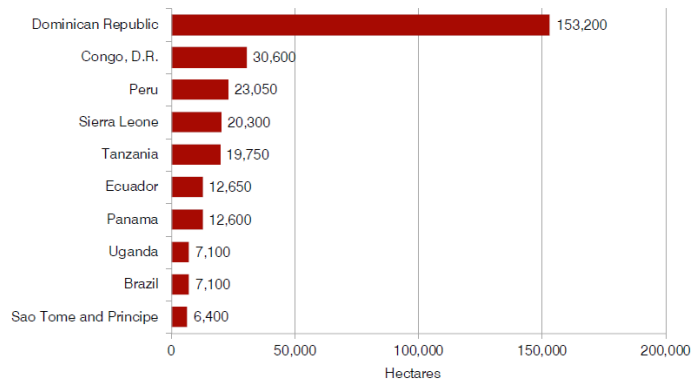
Source: UTZ, 2018.



Source: Rainforest Alliance, 2018.



Source: Fairtrade International, 2018.



Note: The organic area harvested was estimated by FiBL based on the assumption that 90% of the fully converted area is actually harvested.

Source: FiBL, 2018. Based on national data sources and data from certifiers.

Figure 28. Cultivated area by country for the 4 certification schemes. Source: ITC, UNCTAD, GATT and al.



1.6. Main learnings on the global context of cocoa-chocolate value chains

Chocolate has become a common food item throughout the world, available in a wide variety of forms: tablets, countline, spreads, cocoa powder... Its consumption has been multiplied by 16 since the beginning of the 20th century, a growth which has significantly accelerated in recent years. **Today, 4 million tons of chocolate are sold each year all over the world, an increase of 32% over 10 years ago.**

Consumption is highest in traditional consumer countries in North America and Europe but with a tendency to stagnate or even decline. In these markets, competition is fierce amongst brands to keep their market shares and the promotional offers struggle to stimulate the sales. As a result, leading brands are now turning to **emerging economies such as China and India, where the rise of global incomes and the tastes' standardization galvanise chocolate consumption.**

In the chocolate confectionery sector, modern retail is by far the leading distribution channel at global level, representing almost 70% of its total sales in Western Europe and North America (the rest being sold in convenience stores, independent small grocers and petrol station shops). This sector is quite concentrated at regional level: for example, **in Europe, the ten biggest retailers (five German, four French, and one British) represent almost 50% 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) **which are marketed by hundreds of brands. The leading brands are owned by a small number of international companies,** the 6 largest of them accounting for almost 50% of the global market.

These final product sellers have progressively outsourced up to 50% of world's chocolate manufacturing volumes to large-scale processors in recent decades, the 5 biggest accounting for 70% of the commercial market of chocolate couverture, as well as cocoa mass, butter and powder. These industrials are able to offer a wide variety of qualities of semi-processed products while keeping low costs per kg, thanks to their **high economies of scale, which have enabled to largely democratise the world consumption of chocolate over the past decades.**

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. The effect of this fragmentation of production is a lack of organisation that penalises smallholder farmers in their negotiations with cocoa bean buyers. Coordinated and financed by the major cocoa processing firms, it is hard for them to get a fair price for their cocoa

2. Chapter 2: Distribution of value, costs & margins from French consumers up to cocoa farmers in 4 countries

2.1. Introduction: Why investigating the distribution of value along cocoa chains?

Up until now, economic studies on the cocoa sector have been mainly limited to investigating price dynamics within producing countries, from farmers up until the export stage. A recent comprehensive work on this subject has been conducted in 2016 by SEO Economics Amsterdam on market concentration and price formation in cocoa chains from 5 countries (Côte d'Ivoire, Ghana, Cameroon, Nigeria and Indonesia)¹²³.

However, due to the complexity and lack of objective information on the downstream part of the chain, the price breakdown has not been analysed as systematically and thoroughly within consuming countries, from the import of cocoa beans, mass and butter, up to the final consumer.

Although the disconnection between world market prices and consumer prices has long been described¹²⁴, there is still a lack of understanding on its underlying causes and the main drivers of value creation in the end of the chain, as well as its influence on price breakdown within cocoa producing countries.

Moreover, to fully analyse these issues, there is a need to investigate not only prices and value creation at the different stages of the entire cocoa chain, but also the distribution of operational costs, taxes and, in the end, net margins of business operators.

This is all the more needed as both the Ivorian and the Ghanaian public authorities have decided, in consultation with the industry, to set a fixed "living income differential" (LID) of 400 USD per tonne on all cocoa contracts sold by either country for the 2020/21 season, as a way to increase and stabilise the income of small cocoa farmers in the two countries¹²⁵.

The purpose of this study, and the subsequent chapters, is to bridge the current knowledge gap in order to help facilitate and support discussions among the different stakeholders of the sector on the potential consequences of this decision on prices at different levels - up to the final consumer - and eventually on the evolution of demand and on business models of economic actors along the cocoa/chocolate chain.

123 SEO Economics Amsterdam, "Market Concentration and Price Formation in the Cocoa Global Value Chain", 2016.

124 SEO Economics Amsterdam, "Market Concentration and Price Formation in the Cocoa Global Value Chain", 2016.
Oxfam International, "Ripe for change: Ending human suffering in supermarket supply chains", 2018
BASIC, "The Dark side of Chocolate", 2016

125 Reuters. « Côte d'Ivoire and Ghana Team up for Greater Share of Chocolate Wealth ». Reuters, 2019.
<https://www.reuters.com/article/us-ivorycoast-ghana-cocoa-insight-idUSKCN1TT0RY> visited on March 28th 2020.

2.2. Context of French cocoa/chocolate value chains

2.2.1. The French consumer market for chocolate products

Mirroring other European consumption markets, the French market is mature with a tendency to stagnate or even decrease in volume terms¹²⁶. It is characterised by a preference for products with a higher content of cocoa, unlike other important markets such as the UK or the USA¹²⁷.

Overall sales of companies members of Syndicat du chocolat in France in 2018 (% of total volumes)

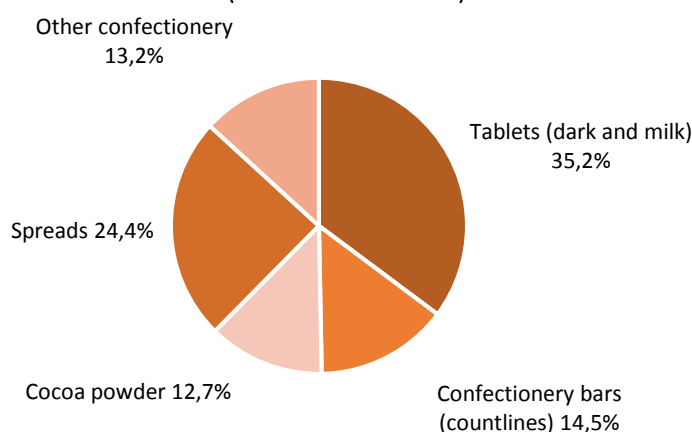


Figure 29. Overall sales of chocolate products in France in 2018. Source: IRI in Syndicat du chocolat, 2019

With more than 35.2% of total cocoa volumes consumed in France (338,000 tonnes in 2018), the chocolate tablet is the number one chocolate product sold in the country¹²⁸. The specific appeal of French consumers for products that have a higher content of cocoa can also be seen in the share of dark chocolate tablets' sales: a third of chocolate tablets sold in France is estimated to be dark chocolate¹²⁹. In comparison, the European average of dark chocolate tablets consumption is estimated at 5% against 9% in France.

Seasonal products are also important for the French chocolate consuming market: an estimated 52,3% of the confectionery products' volumes is sold during the week of Easter¹³⁰.

From a qualitative perspective, a large survey conducted in France between May 2018 and April 2019 shows that French consumers are mainly concerned by the composition of the chocolate products and looking for those which do not contain palm oil and lower sugar, before the price¹³¹.

126 Xerfi, La fabrication du chocolat, 2018

127 B. Dorin, « From Ivorian Cocoa Bean to French Dark Chocolate Tablet. Price Transmission, Value Sharing and North/South Competition Policy », in H. Qaqaya et G. Lipimile, The effects of anti-competitive business practices on developing countries and their development prospects, UNCTAD, 2008

128 Syndicat du chocolat, Chiffres clés 2018 de la chocolaterie en France, March 2019

129 Syndicat du chocolat 2019, op. cit.

130 Nielsen, IRI and Kantar data in Syndicat du chocolat 2018, op. cit.

131 LSA, « Le chocolat se transforme et se bonifie », September 4, 2019

2.2.2. Main actors of cocoa-chocolate chains in France

2.2.2.1. Retailers

In France, modern retail stores channel around 78% of the total sales of food consumed at home. Over the past decade, hypermarket formats - and to a lesser extent supermarkets - have lost momentum compared to smaller retail formats located in city centres, because of multiple factors: economic crisis, change in consumer expectations with regard to mass-consumption model, rise of hard discount, development of e-commerce... In response, French retail chains have invested heavily in the development of smaller shops, the extension of their range of private label products and the creation of drive-ins that have become important growth drivers¹³².

In the chocolate/confectionery sector, 75% of chocolate products' sales in France are made in modern retail stores (hypermarkets, supermarkets, hard discount and city-centre shops)¹³³.

Market shares of grocery sales by modern retailers in France (2018)

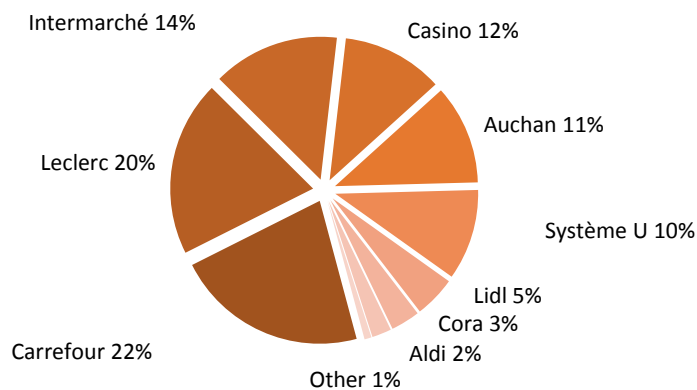


Figure 30. Market shares of grocery sales by modern retailers in France.
Source: BASIC based on Autorité Nationale de la Concurrence, 2018

The French modern retail sector has one of the highest concentration ratio in the European Union, the 6 leading chains (Carrefour, Leclerc, Intermarché, Casino, Auchan and Système U) making up to 92% of total grocery sales in modern retail outlets¹³⁴.

132 ADEME, Le Basic, ASca, 2017. Effets économiques et sociaux d'une alimentation plus durable : état des lieux. Volet 2 « analyse des valeurs socio-économiques de l'alimentation », novembre 2017

133 Xerfi, La fabrication de chocolat, 2018

134 Autorité nationale de la concurrence, 2018

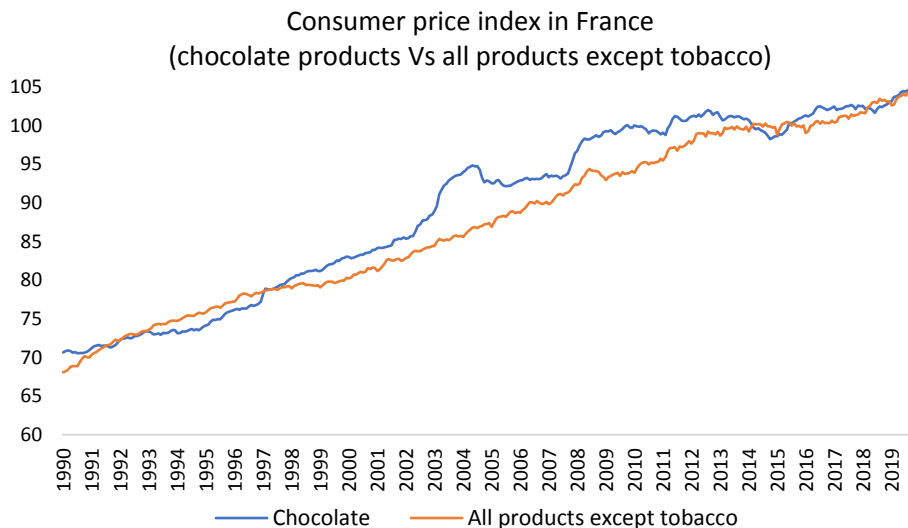


Figure 31. Consumption price index of chocolate Vs other products in France since 1990. Source: BASIC, based on INSEE

These 6 highly concentrated market leaders are in strong competition on prices to consumers, a situation which is correlated with a low inflation rate of 1.4% per annum since 1990 for food products sold in French retail, as well as for chocolate products which prices have only increased by 1.3% per year over the same period, and even almost stagnated between 2011 and 2017, as seen in the diagram above.

2.2.2.2. Chocolate brands

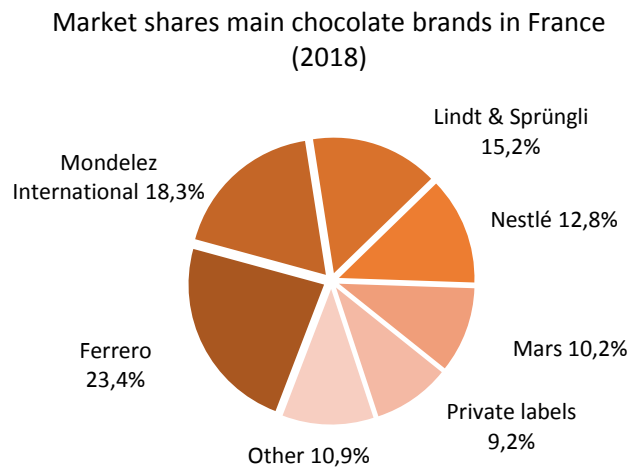


Figure 32. Market shares of main chocolate brands in France (Value terms). Source: BASIC, based on Xerfi data (2015)

The French chocolate market in supermarkets is as concentrated as the retail sector (like in most other mature consumer countries): Ferrero holds the first place with 23,4% of retail market sales, followed by Mondelez International, Lindt & Sprüngli and Nestlé. In 2018, the 5 biggest brands represented 80% of the sales in supermarkets in France¹³⁵. If private labels, which hold a significant market share of 9.2%, are added to the picture, they together make up almost 90% of chocolate product retail sales.

135 Xerfi 2018, op. cit.

France is an important market for international brands: it is the second market in Europe for Mars (after the United Kingdom), and the 3rd market worldwide for Nestlé (behind United States and China) as for Lindt & Sprüngli (that realises in France 10% of its global revenue).

Ferrero France is among the most important entity of the Group: its sales revenues doubled within 10 years thanks to investments, especially to modernise its factory of Villers-Ecalles, the biggest factory producing chocolate spread in the world per year: 24 000 tonnes of chocolate tablets Kinder Bueno and 84 000 tonnes of Nutella (an estimated 25% of the global production per year) are produced there¹³⁶. This factory is estimated to export over 33% of its production to other countries within the European Union¹³⁷.

Its main competitor is Mars Chocolat France, which is also leading the chocolate confectionery sector sold in retail stores: its brands Balisto, Bounty, M&M's, Mars and Twix are estimated to represent 10% of the total confectionery sales of French retail stores¹³⁸. Given M&M's is Mars' best-seller on the French market, the company decided to modernise and expand its factory of Haguenau where M&M's are produced (over 130 million of "beads" each day¹³⁹, 75% of them to be exported¹⁴⁰) along other chocolate tablets (Mars and Milky Way) which are exported to almost 30 countries¹⁴¹.

Lindt & Sprüngli is another leader on the French market for chocolate tablets in retail stores. It owns a factory in Oloron-Sainte-Marie that produces its chocolate tablets and pralines (Les Pyrénéens)¹⁴². France is an important end-consuming market for Lindt & Sprüngli as French consumers have an appetite for chocolate tablets including dark chocolate ones that largely exceed other countries. As a result, a tenth of the sales revenues of the Group is estimated to be realised in France in 2017 (355M€)¹⁴³.

Over the last years, Nestlé has reduced its chocolate manufacturing activities in France and focused its effort on the factory of Pontarlier which produces the famous Nesquik breakfast cocoa powder along with other cocoa powder to be sold into vending machines. Along with these new products, a best-seller of Nestlé in France is its range of cooking chocolate tablets 'Nestlé Dessert' which makes up more than 20% of total tablet sales in French retail. More recently, Nestlé recently developed a range of innovative chocolate tablets called 'Les Recettes de l'Atelier' (not manufactured in France)¹⁴⁴. This new brand of milk and dark chocolate tablets tried to echo the taste of French consumers for innovative chocolate but also a traceability on origins: the dark chocolate segments of this range of tablets indicates the cocoa's countries of origin, even in the case of mixing¹⁴⁵.

136 Ibid ; L'Usine nouvelle, « Ferrero rouve son usine Nutella à Villers-Ecalles », February 25, 2019

137 Xerfi 2018, op. cit.

138 Ibid

139 LSA, "Mars investit plus de 70 millions d'euros dans son usine d'Haguenau en Alsace », December 12, 2018

140 L'Usine Nouvelle, "Mars investit en Alsace... pour abandonner le dioxyde de titane dans ses M&M's », December 12, 2018

141 In France, a large share of Mars and Ferrero's sales revenues relies on exports (Xerfi 2018, op. cit.)

142 Xerfi 2018, op. cit.

143 Ibid

144 LSA, "Nestlé lance ses Recette de l'Atelier », March 12, 2014

145 Nestlé, "Les recettes de l'atelier »

Eurazeo is a newcomer on the market which bought the French chocolate and confectionery activities of Mondelez (including the Suchard brand Poulain) which only kept the Milka brand. These brands have been regrouped under the entity Carambar & co¹⁴⁶. Its ambition is to try to revive historical brands that lost market shares over the years due to underinvestment and to renew their image by producing them entirely in France by 2020¹⁴⁷. In the chocolate sector, the Group invested close to 5M€ in February 2018 in a 6th line of production dedicated to Poulain chocolate tablets¹⁴⁸ and opened two R&D laboratories, one dedicated exclusively to chocolate in Blois¹⁴⁹.

2.2.2.3. Chocolate manufacturers



Figure 33. Main cocoa & chocolate producing sites in France. Source: Syndicat du Chocolat

France is the 3rd chocolate producer in Europe, after Germany¹⁵⁰ and Italy, with a high specialisation in chocolate spread production as the biggest Nutella factory worldwide is located in France¹⁵¹. More than 1 400 companies work in the French chocolate sector, five times more than in Germany and twice as much as Italy¹⁵². Over 80% of these companies have less than 10 employees in 2016 but nonetheless, the major part of the sales revenue is realised by the biggest companies¹⁵³. In 2018, the 3 leading brands (Ferrero France, Cémoi and Mars) amounted for 55% of the French chocolate manufacturing's sales revenues¹⁵⁴. Most of their facilities are located in Northern France, close to the beet sugar production region¹⁵⁵, ports, and neighbouring countries of importance within the cocoa-chocolate value chain (The Netherlands, Belgium, Germany).

146 LSA, Carambar & co, nouveau géant de la confiserie, May 10, 2017

147 Xerfi 2018, op. cit.

148 Ibid

149 LSA, « Carambar & co veut dépoussiérer ses marques vedettes », February 20, 2018

150 Germany is the first chocolate manufacturer and chocolate consumer in Europe (Xerfi 2018, op. cit.)

151 Xerfi 2018, op. cit. ; France is now the 4th world exporter of chocolate behind Germany, the Netherlands and Belgium, with a share of the global exports on the decline while global exchanges rose thanks to higher demand coming from the Asian markets (Xerfi, 2018, op. cit.)

152 Xerfi 2018, op. cit.

153 Ibid

154 Ibid

155 Ibid

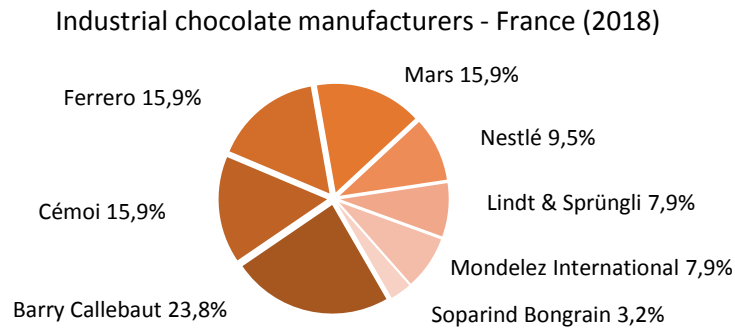


Figure 34. Main actors of the chocolate manufacturing in France (shares in % of the total chocolate manufacturing).
Source: BASIC, based on Xerfi data 2018

Barry Callebaut is the leading processor in France, mostly specialised in the production of high-end cocoa in its factories of Hardricourt and Gravelines¹⁵⁶. In Hardricourt, the Swiss company produces chocolate for professionals or agri-food industrials and developed a lab to create customised chocolate to *artisans chocolatiers*¹⁵⁷. This custom-made chocolate is estimated to currently represent over 250 recipes of dark and milk chocolate tailor made for independent chocolatiers¹⁵⁸. To complete this strategy, Barry Callebaut also developed an Ambassadors Club of over 200 members, including 33 in France, all professionals with among them 14 *Meilleurs ouvriers de France* in bakery, *chocolaterie* and restaurant¹⁵⁹. Finally, in its factory of Louviers, it is estimated that Barry Callebaut processes 10% of the world cocoa production per year into cocoa butter and powder to supply its other factories in Europe, as well as agri-food industrials and *artisans chocolatiers*¹⁶⁰.

Its competitor Cémoi is a French chocolate manufacturer, at first exclusively specialised in chocolate tablets but now with a wider range of chocolate products following the buyout of Dolis in 1988, Bouquet d'Or in 2003 and Jacquot & Cie in 2007. It is now the first French chocolate manufacturer with 10 out of 15 of its factories in the country. Its business model is mostly oriented towards the French retailers for which the company produces the majority of tablets, powders, confectionery etc. to be sold under their private labels¹⁶¹. Cémoi also produces chocolate tablet for the newly born brand "C'est qui le patron ?!" ("Who's the boss?!") in English), an ethical brand first launch on dairy products which encounters a great success on the French market¹⁶². Along with these products, Cémoi also offers a wide range of semi-processed products for professionals sold under its brand Pupier (moulding, coating, tablets etc.) and out-of-home products under the brands Bouquet d'Or, Pupier and Cémoi (couverture chocolate, chocolate spread, cocoa powder etc.). More recently, Cémoi has been developing a strategy on organic chocolate tablets (13 references)¹⁶³ & "made in France" products¹⁶⁴.

156 Bought from Petra Foods in 2013.

157 Xerfi 2018, op. cit.

158 Paris Normandie, 2016, op. cit.

159 Ibid

160 Ibid ; Le Parisien, « Barry Callebaut, c'est 175 ans d'histoire du chocolat », 4 juin 2017

161 LSA, « Cémoi veut imposer sa marque dans le chocolat bio », November 22, 2018

162 LSA, « Cémoi signe la nouvelle tablette de chocolat « C'est qui le patron ?! », October 31, 2018

163 Ibid

164 Ibid

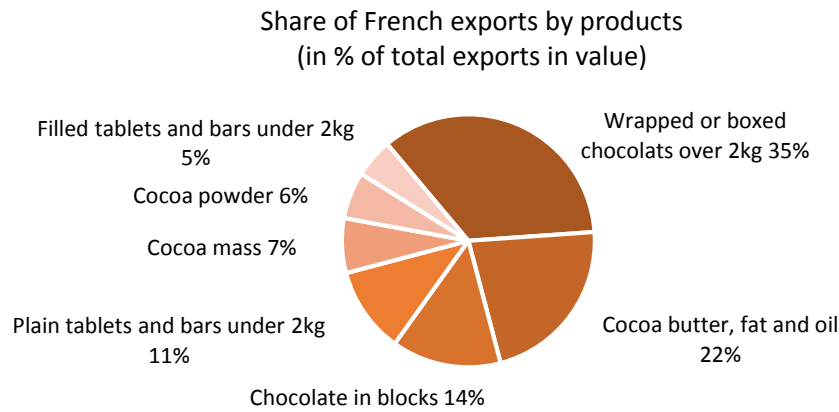


Figure 35. Share of French exports by products (in % of total exports in value). Source: BASIC, based on Comtrade data

Regarding exports, the two main cocoa processors in France, Barry-Callebaut¹⁶⁵ and Cémoi¹⁶⁶, have different strategies: a large share of Barry Callebaut sales revenues in France relies on exports whereas Cémoi's mainly depends on the domestic market¹⁶⁷. Because of the presence of these two big chocolate manufactures in France¹⁶⁸, the overall French exports are mostly made of wrapped chocolates of over 2kg, cocoa butter and chocolate in blocks of over 2kg¹⁶⁹.

2.2.2.4. Cocoa sourcing

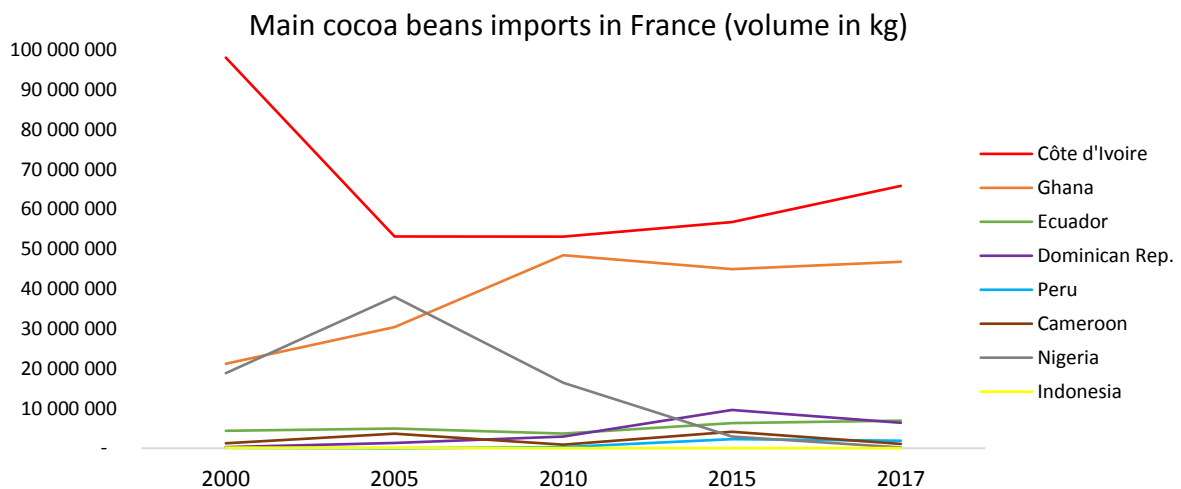


Figure 36. Main cocoa beans imports in France (in tonnes). Source: BASIC, based on Comtrade data

In terms of cocoa beans imports in France, the French customs statistics show that 4 countries make up almost 90% of total volumes:

¹⁶⁵ Barry Callebaut owns 3 factories in France where the company mainly produces cocoa butter, powder and industrial chocolate in liquid form (Xerfi 2018, op. cit.)

¹⁶⁶ Interview with the director of a cocoa processing factory.

¹⁶⁷ Ibid

¹⁶⁸ 10 out of 15 factories owned by Cémoi are located in France for instance.

¹⁶⁹ Xerfi 2018, op. cit.

- Côte d'Ivoire is by far the first origin of cocoa beans, making up more than 46% of imports (being recently on the rise after a significant drop at the beginning of the 2000s),
- Ghana ranks second and represents 33% of all imported volumes of cocoa beans,
- Ecuador is the 3rd biggest origin in volume, corresponding to almost 5% of imports,
- Dominican Republic is the 4th origin, making up 4.5% of total imported volumes
- Cameroon and Peru are smaller origins, representing both around 1% of cocoa beans imports
- Nigeria, which used to be an important origin 15 years ago currently make up 0.1% of imports.

The French profile is quite aligned with the global pattern of cocoa beans production, except for the high share of Dominican Republic (probably linked to the thriving organic and Fairtrade chocolate market in France) and the very low imports from Nigeria and Indonesia which both correspond to less than 0.1% of French imports of cocoa beans.

These imports of cocoa beans enable to manufacture only an estimated 45% of the total volumes of chocolate bought annually by French consumers, the rest being made from imported semi-processed cocoa (mass, butter, powder) or, to a lesser extent, directly imported as finished goods.

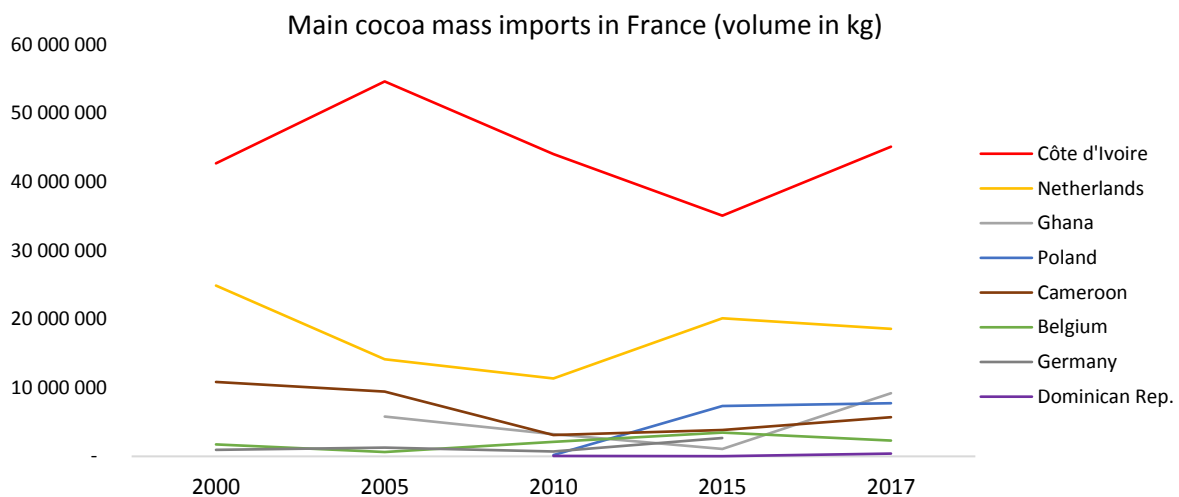


Figure 37. Main cocoa mass imports in France (in tonnes). Source: BASIC, based on Comtrade data

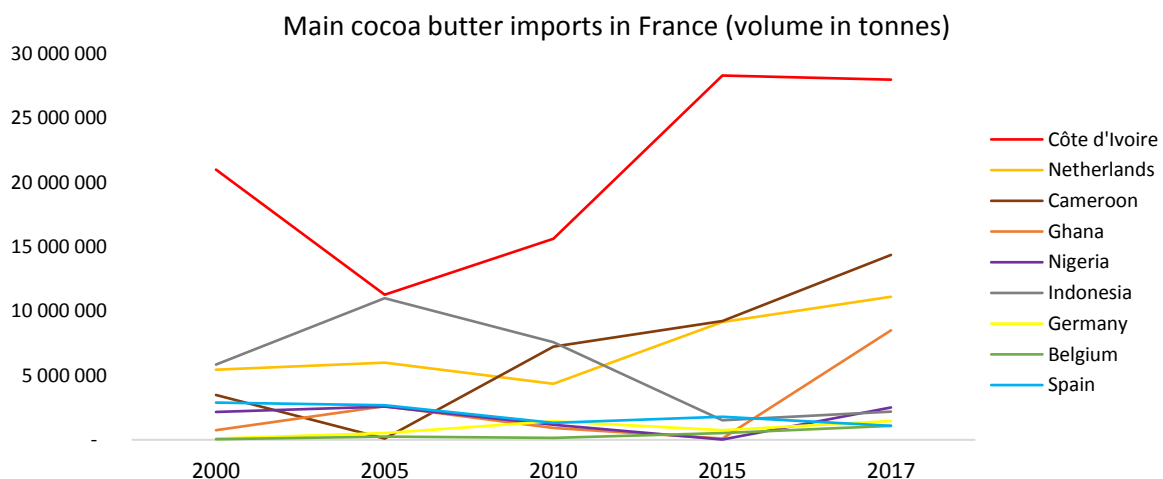


Figure 38. Main cocoa butter imports in France (in tonnes). Source: BASIC, based on Comtrade data

Regarding French imports of both cocoa mass and cocoa butter, Côte d'Ivoire is by far the first origin, representing 48% of the former and almost 36% of the latter (with strong increases for cocoa butter over the past 15 years). This illustrates the rise of this producing country which has become the leader on the world market of cocoa semi-processed products.

Netherlands, the European country with some of the biggest historical industrial capacities for cocoa processing, is the other important origin, with the 2nd highest imports of cocoa mass in France and the 3rd highest imports of cocoa butter.

In addition, certain origins have emerged over the past 15 years, illustrating the gradual displacing of cocoa processing capacities in producing countries, and to a lesser extent Eastern Europe:

- Ghana and Poland for cocoa mass imports in France
- Cameroon and Ghana for cocoa butter imports in France

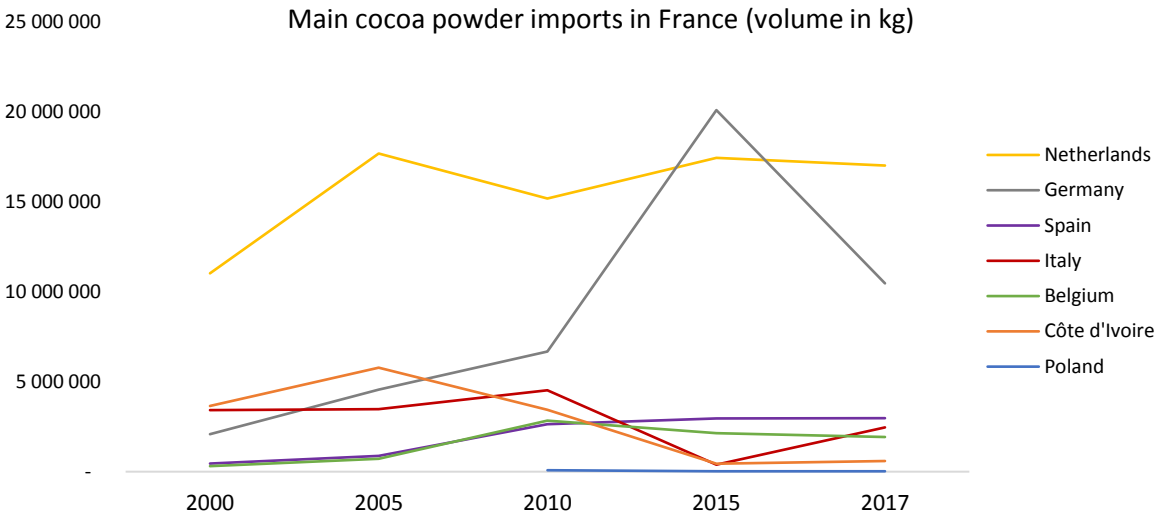


Figure 39. Main cocoa powder imports in France (in tonnes). Source: BASIC, based on Comtrade data



Figure 40. Main chocolate finished goods imports in France (in tonnes). Source: BASIC, based on Comtrade data

In comparison, the origins of French imports of cocoa powder and chocolate finished goods appear to be more European-oriented, and more stable over the past 20 years in the case of the latter:

- Netherlands & Germany are the main origins for cocoa powder (the latter strongly increasing)
- Belgium & Germany are the leading origins for chocolate finished goods imports



2.2.3. Main learnings on French cocoa-chocolate value chains

The French chocolate market is characterized by a preference for products rich in cocoa. With more than 32% of sales by volume, the chocolate tablet remains the most commonly purchased chocolate product in French households, while the European average is around 5%. This appetite for stronger cocoa products is also reflected in a large share of sales of dark chocolate tablets which represent 50% of total tablet sales in France.

Like other European consumer markets, the French chocolate market is mature with a tendency to stagnate or even erode. The competition between the main supermarket chains, where 80% of chocolate purchases are made, has limited significantly chocolate price increases over the past 20 years.

At the level of brands, France remains an important country for most large international players: it is the 2nd market in Europe for Mars (after the United Kingdom) and the 3rd world market for Nestlé (behind the United States and the China) as well as for Lindt & Sprüngli (which generates 10% of its total turnover in the country). As a result, the chocolate brand market is quite concentrated: the 5 biggest companies account for 80% of total chocolate sales in supermarkets.

Further upstream, France is also an important country for the cocoa processing and chocolate manufacturing industries: most major industrials have factories in the country which is the second producer of chocolate and confectionery in the European Union (with 15% of the total value). A key illustration is Ferrero which produces 1/3 of its worldwide production of Nutella spread in its group-based factory in the North-West of France. The sector is also quite concentrated at this level as the 5 largest manufacturers located in the country account for 81% of total national production.

In terms of workforce, ¾ of the cocoa and chocolate processing entities located in France employ less than 10 employees. The associated large number of small businesses is a specificity of the French cocoa-chocolate industrial fabric. In addition, the import figures tend to show the **growing trend towards the outsourcing of processing activity to producing countries:** imports of semi-processed products have been increasing strongly in recent years (especially from Côte d'Ivoire and Ghana).

At the beginning of the chain, imports of cocoa beans mainly come from West Africa, as for most other European countries, but the proportion of beans imported from Côte d'Ivoire and Ghana is higher than in most other EU member states.

2.3. Analysis of 4 key product types: plain dark & milk chocolate tablets, confectionery bars and cocoa breakfast powder

2.3.1. Key background information on value & cost distribution

2.3.1.1. Contextualisation of the chosen product categories & cocoa origins

As described in the terms of references of the study, **France has been chosen as the end consumer market** as it is the 2nd biggest chocolate market in Europe and features one of the largest ranges of chocolate products consumed. Although this market is more oriented towards chocolate tablets (tablets) and dark chocolate, the business dynamics of the sector, in particular regarding the influence of retailers, are quite comparable to the other major markets in Europe.

In terms of products, the 4 following categories have been included in the scope of the research:

1. **Single-origin and mixed-origins plain dark chocolate tablets** (mass-consumed tablets) made with Ivorian, Ecuadorian, Ghanaian and Cameroonian cocoa.
2. **Mixed-origins plain milk chocolate tablet** (mass-consumed tablets) made with Ivorian, Ecuadorian, Ghanaian and Cameroonian cocoa.
3. **Mixed-origins mass-consumed chocolate confectionery** (countlines of the KitKat or Mars type) made with Ivorian, Ecuadorian, Ghanaian and Cameroonian cocoa.
4. **Mixed-origins mass-consumed breakfast cocoa powder** (with or without sugar) made with Ivorian, Ecuadorian, Ghanaian and Cameroonian cocoa.

Overall sales of companies members of Syndicat du chocolat in France in 2018 (% of total tonnes of cocoa bean equivalent)

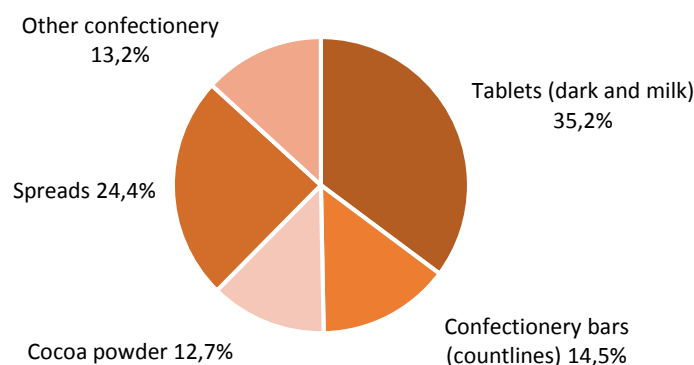


Figure 41. Overall sales of chocolate companies in France in 2018. Source: IRI in Syndicat du chocolat, 2019

Indeed, as described at the beginning of chapter 2, **these categories**, when combined, are associated with **60% of the total French sales of chocolate manufacturers** (expressed in tonnes of cocoa beans equivalent, see above).

Overall sales value of products containing chocolate in French retail in 2018 (% of total value in euros)

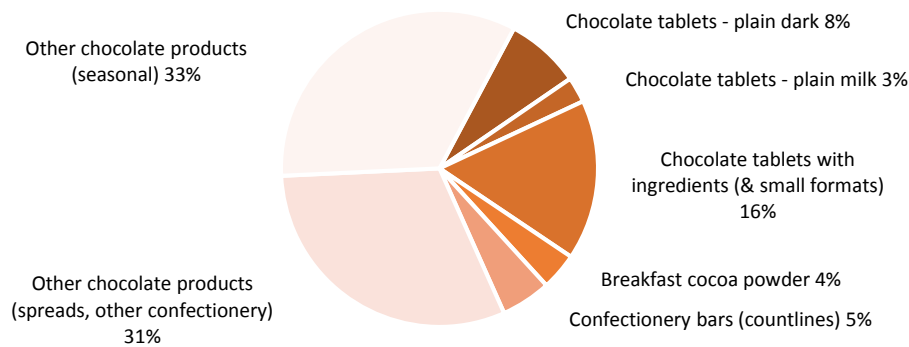


Figure 42. Overall sales of chocolate products in France in 2018. Source: BASIC, based on IRI data, 2019

However, it is worth noting that these products only correspond to a minority of the total retail sales of chocolate products in France (approximately 20% in 2018), as supermarket chains also sell many other products categories that contain a fraction of chocolate (confectionery other than countlines and seasonal chocolate products). These categories have not been integrated in the scope of the study because of their complexity and their lower content of cocoa.

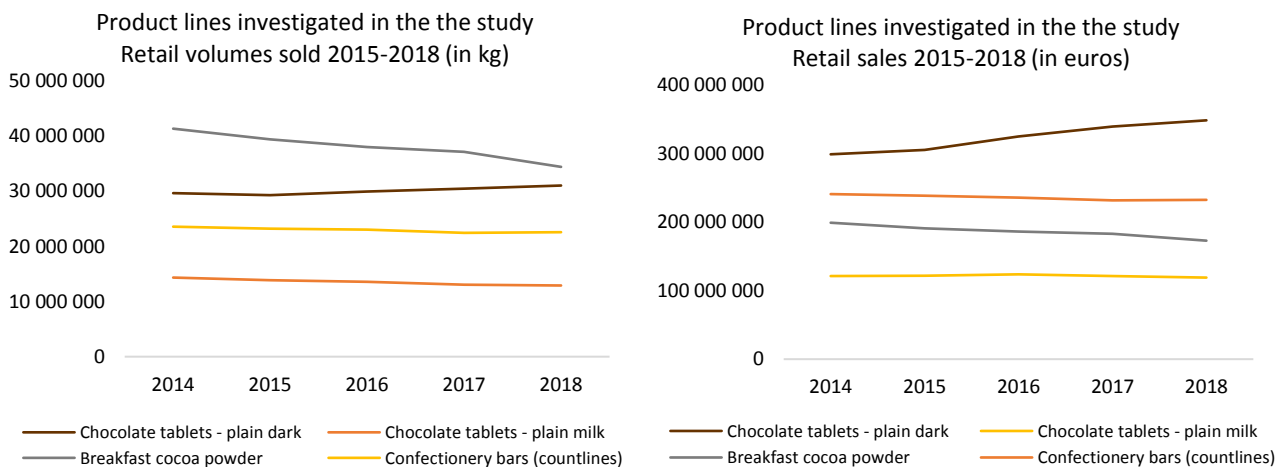


Figure 43. Evolution of total volumes sold and total market value of the 4 product categories in France (2014-2018).

Source: BASIC, based on IRI data, 2019

Looking more specifically at the dynamics of the 4 product categories analysed since 2015, we can notice the following market trends:

- while plain milk chocolate tablets and confectionery bars have been quite stable and eroding in terms of volumes as well as value between 2015 and 2018,
- plain dark chocolate tablets have been significantly increasing (especially in value terms),
- and breakfast cocoa powder has been on a steep decline (especially in volume terms).

At the other end of cocoa/chocolate chains, **the 4 producing countries chosen in the terms of references of the study - Côte d'Ivoire, Ghana, Ecuador and Cameroon** – correspond to the 4 main origins of cocoa beans as well as cocoa mass and butter imported in France.

Given the fact that approximately half of the chocolate consumed in France is made from semi-processed ingredients imported from other EU countries, we have used European (instead of French) average benchmark figures in our model:

- for prices and costs related to chocolate couverture manufacturing, cocoa pressing and grinding,
- for the percentages of cocoa beans originating from each producer country included in the scope¹⁷⁰.

2.3.1.2. 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 cocoa chain.

| STAGE OF THE CHAIN | CONTENT OF THE SHARE OF VALUE |
|--|---|
| Retail | <ul style="list-style-type: none"> - profit - 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"> - profit - payment of income tax & net VAT - financial expenses - annual payroll of employees (chocolate/confectionery sales force as well as mutualized personnel in headquarters) - advertising costs - Industrial costs (moulding, packaging...) - other costs (logistics...) |
| Cocoa processing <i>(grinding, pressing, chocolate couverture manufacturing)</i> | <ul style="list-style-type: none"> - profit - payment of income tax & net VAT - financial expenses - annual payroll of employees - costs of logistics and processing - amortization of machinery & buildings |
| Collection & export | <ul style="list-style-type: none"> - profit - 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"> - profit (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 |
| 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) |

Figure 44. Overall framework used to estimate the value distribution along cocoa chains. Source: BASIC

170 For cocoa mass: 58% Côte d'Ivoire, 17% Ghana, 16% Ecuador and 8% Cameroon

For cocoa butter: 70% Côte d'Ivoire, 20% Ghana and 10% Ecuador (these parameters can be changed in the calculator)

As illustrated in the previous diagram, **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"¹⁷¹ 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, amortization of machinery, logistics and warehousing...), pay their employees, pay taxes and financial expenses, plus a potential net profit.
- **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 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).

¹⁷¹ <https://observatoire-prixmarges.franceagrimer.fr>

- The **last component is the costs of non-cocoa based processed ingredients** that are not analysed in detail in the current study: sugar (beet or cane) and milk as well as other ingredients when relevant (e.g. for confectionery: palm oil, wheat flour...).

2.3.2. Plain dark chocolate tablets

2.3.2.1. Modelling of the plain dark chocolate tablets' category

The first product category to be analysed corresponds to **plain dark chocolate tablets** (i.e. tablets without ingredients such as nuts, fruits, etc.) sold to French consumers in retail chains.

In order to investigate it, we first conducted a more detailed analysis of the different market sub-categories associated with these tablets.

It enabled us to develop the following mapping for the French market:

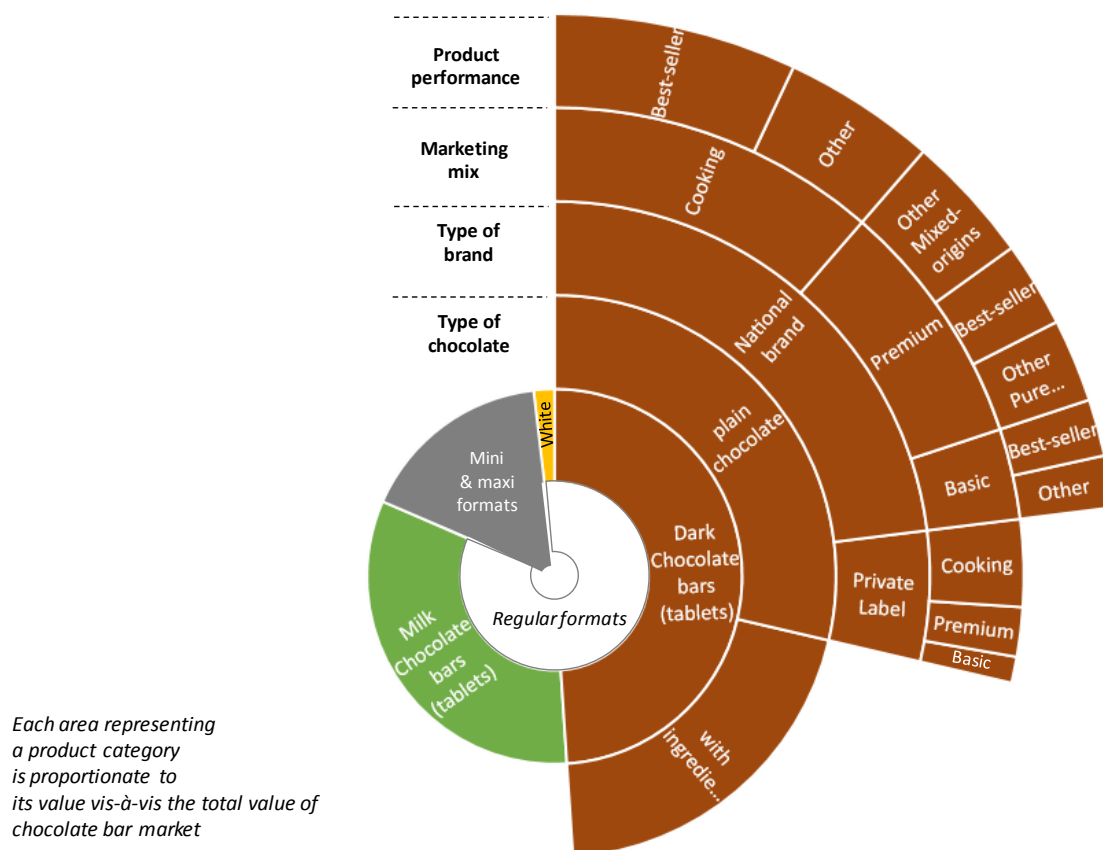


Figure 45. Mapping of the dark chocolate tablets category on the French retail market. Source: BASIC

As illustrated above, the **dark chocolate tablet category accounts for approximately half of the total retail market sales of chocolate tablets in France.**

Plain dark chocolate tablets make up around 60% of this category (i.e. 30% of total chocolate tablets sales), the rest corresponding to dark chocolate tablets 'with ingredients' (nuts...).

It is worth noting that only standard format of 100g and 200g tablets are included in this scope, as specific formats (mini and maxi tablets of dark milk and white chocolate) have been isolated out because their characteristics and dynamics are not comparable.

Deepening the investigation, we figured out that it is meaningful to disaggregate the plain dark chocolate tablet into the following subsequent sub-categories:

- **First, separate between so-called:**
 - o **‘National brands’** which make up 80% of sales and comprise brands with an international reach such as Lindt or Nestlé, and French national or local brands such as Cémoi or Poulain
 - o **‘Private labels’** (which comprise all products sold under brands owned by retailers such as ‘Carrefour’, ‘Marque Repere’ for Leclerc or ‘Ivoria’ for Intermarché).
- Then, for both ‘National brands’ and ‘Private labels’, **differentiate between 3 main marketing segments: basic, premium and cooking chocolate tablets.**
- **Finally, in the case of ‘National brands’, differentiate** each marketing group depending on the sales performance of the product: **best-sellers and other products** (i.e. non best-sellers).

The details of this classification are described in more depth in the following sub-chapter (“investigation of the downstream factors influencing the distribution of value”)

2.3.2.2. “Averaged” results for plain dark chocolate tablets

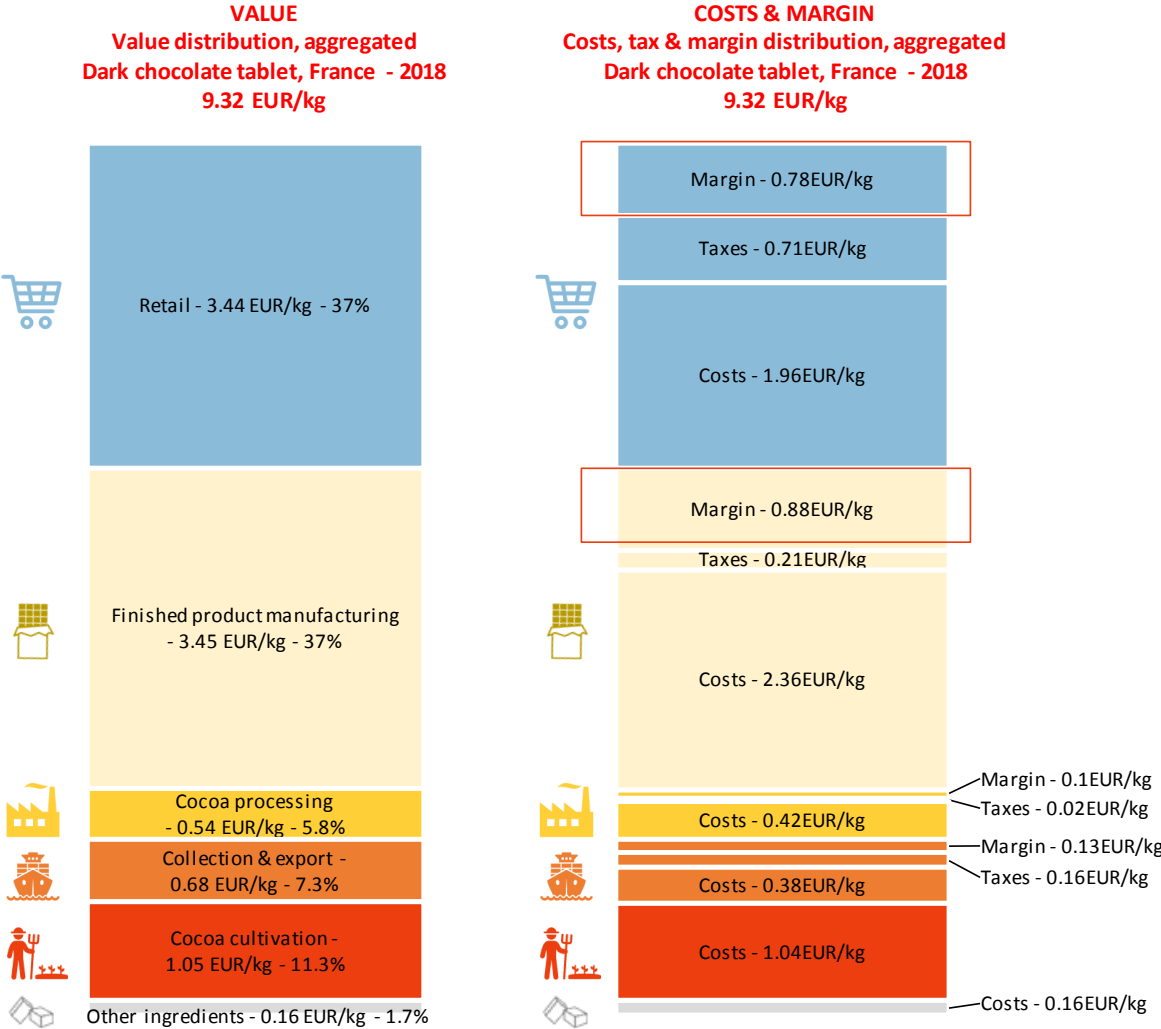


Figure 46. Distribution of value, costs & margins of ‘averaged’ plain dark chocolate tablets. Source: BASIC

The results of our estimations of value, costs and margins from cocoa farmers to end consumers for an 'averaged' plain dark chocolate tablet are shown in the above diagram.

The quantified estimates are organised in two separate bar charts:

- **The bar chart on the left displays the distribution of the value** generated by each stage along the chain (from cocoa cultivation down to retailing)
- **The bar chart on the right provides a consolidated view of the costs and margin** related to each stage along the chain (i.e. to each share of value displayed on the left), aggregating these different components in 4 groups: costs (of operations), taxes (cocoa taxes in producing countries and income taxes all along the chain) and net margins (in other words net profits).

These estimates are based on:

- the average distribution of value, costs and margins across all the different product sub-categories (national brands and private labels; basic premium, and cooking segments; best-sellers and other products) of the French retail market of plain dark chocolate,
- average recipes associated with each product sub-category (in terms of cocoa paste, cocoa butter and sugar),
- average cocoa sourcing modelled for the French market, based on the mix of 4 origins analysed: Côte d'Ivoire, Ghana, Ecuador and Cameroon.

These results are also based on the publicly available data collected and the detailed modelling of all value and costs components for each stage along the chain (full transparency on assumptions made, ratios used, calculation formulae modelled, sources of information collected and limitations are provided in the 'Cocoa Value Chain Calculator' released together with this study).

As shown in the previous diagram, we can observe the following main elements on the 'averaged' plain dark chocolate tablets sold in French retail stores in 2018 :

- **The share of value accruing to cocoa farmers** (used to cover their costs of production and living) is **slightly above 11%** of the total value and reaches approximately 1.05 euros/kg.
- **The share of value dedicated to the 3 first stages** of the cocoa chain, up to the manufacturing of chocolate couverture in Europe is **around 24.4%** of the total value (2.23 euros/kg).
- **The share of value dedicated to the 2 last stages** of the chain – final product manufacturing and retailing – is **quite evenly distributed** between the 2 related actors: around 37% for brands (3.45 euros/kg) and 37% for retailers (3.44 euros/kg).
- The **total amount of tax paid** along the chain amounts to 11.9% of the total value (and 1.10 euros/kg), the majority (two thirds) being in the form of Value Added Tax paid in France.
- The **total amount of net margins** generated along the chain amounts to 20% of the total value (and 1.89 euros/kg), the vast majority (almost 90%) being generated – quite evenly – by the two last actors in the chain, brands (0.88 euros/kg) and retailers (0.78 euros/kg).

In order to better understand and analyse the different components of these quantified estimations, **we have successively investigated the influence of the following variables on the distribution of value, costs, taxes & margins:**

- In the downstream part of the chain:
 - o type of brand (i.e. national brands Vs private labels),
 - o marketing mix (i.e. basic, cooking and premium segments)
 - o sales performance of National Brands' products (i.e. best sellers Vs other products)

- In the upstream part of the chain:
 - o cocoa content in the recipe,
 - o country of origin,
 - o country of first processing
 - o evolution of cocoa beans prices on the world markets

The results of these investigations are detailed in the following sub-chapters.

2.3.2.3. Investigation of downstream factors influencing the distribution of value, costs, taxes & margins

Type of brand : National brand Vs private label

The **first investigated factor is the type of brand**, i.e. the distinction between National Brands and Private Labels, which characteristics are listed in the table below.

| | National brand | Private label |
|-------------|--|---|
| Promotion | Heavy advertisement | Small advertisement |
| Brand costs | <ul style="list-style-type: none"> • Sales force • R&D • Product manufacturing (depending on brand) <ul style="list-style-type: none"> o Moulding and packing (most cases) o Chocolate manufacturing o Cocoa processing (rarer) | <ul style="list-style-type: none"> • Small R&D • Outsourcing of product manufacturing to supplier |

Figure 47. Main respective characteristics of national brands and private labels. Source: BASIC

‘National brands’ represent almost 80% of plain dark chocolate tablets’ sales and correspond to the products that are sold by private companies, distinct from retailers, under brand names that they fully own. This category encompasses brands which are the property of:

- multinational groups such as Mondelez, Lindt or Nestlé,
- French national companies such as Cémoi or Carambar & Co,
- French local companies such as Carré Suisse.

Their level of sales performance depends upon **heavy advertisement campaigns**, especially for high street brands present at the international level (e.g. Milka, Lindt or Nestlé).

In addition, the presence of their products on retailers’ shelves requires the work of **important sales force teams** which promote the brands’ products towards the operational teams of retailers (at the level of the buying group as well as in individual stores).

National brands are also characterised by **significant investments in research & development**, required to maintain a sufficient pace of innovation so as to:

- remain connected to the changing expectations of final consumers,
- remain on par with competitors in terms of bringing innovations to the market, and this way avoiding lagging behind competitors’ brands

Depending on their vertical integration strategies, **the mother companies of ‘National Brands’ can limit their manufacturing operations to moulding and packaging** (hence purchasing industrial chocolate from suppliers on the open market) **or internalise the production of chocolate**, and in some cases also the processing of cocoa beans into mass and butter (see details in chapter 1).

In contrast, **‘Private labels’**, which represent roughly 20% of retail sales of plain dark chocolate tablets, comprise the products sold by retailers under their own brands. They are quite distinct as:

- they are associated with **(very) limited investments in advertising** as retailers mostly conduct commercial campaigns to promote the name of their entire supermarket chain, which benefit the hundreds or thousands of private label products they sell in their stores (thereby diluting the advertisement expenses per product category).
- Private labels products are also associated with a somewhat lower level of investments in research & development because some of them are ‘me-too products’ which try to replicate the characteristics of successful tablets on the market, while recognizing that a substantial proportion of them are specifically developed for retailers with higher R&D and stiff product requirements. In recent years, the R&D expenses of chocolate manufacturers working for private labels have been on the rise so as to support the retailers’ strategies of differentiation (from ‘National brands’ and from their direct competitors) in their quest to attract customers.

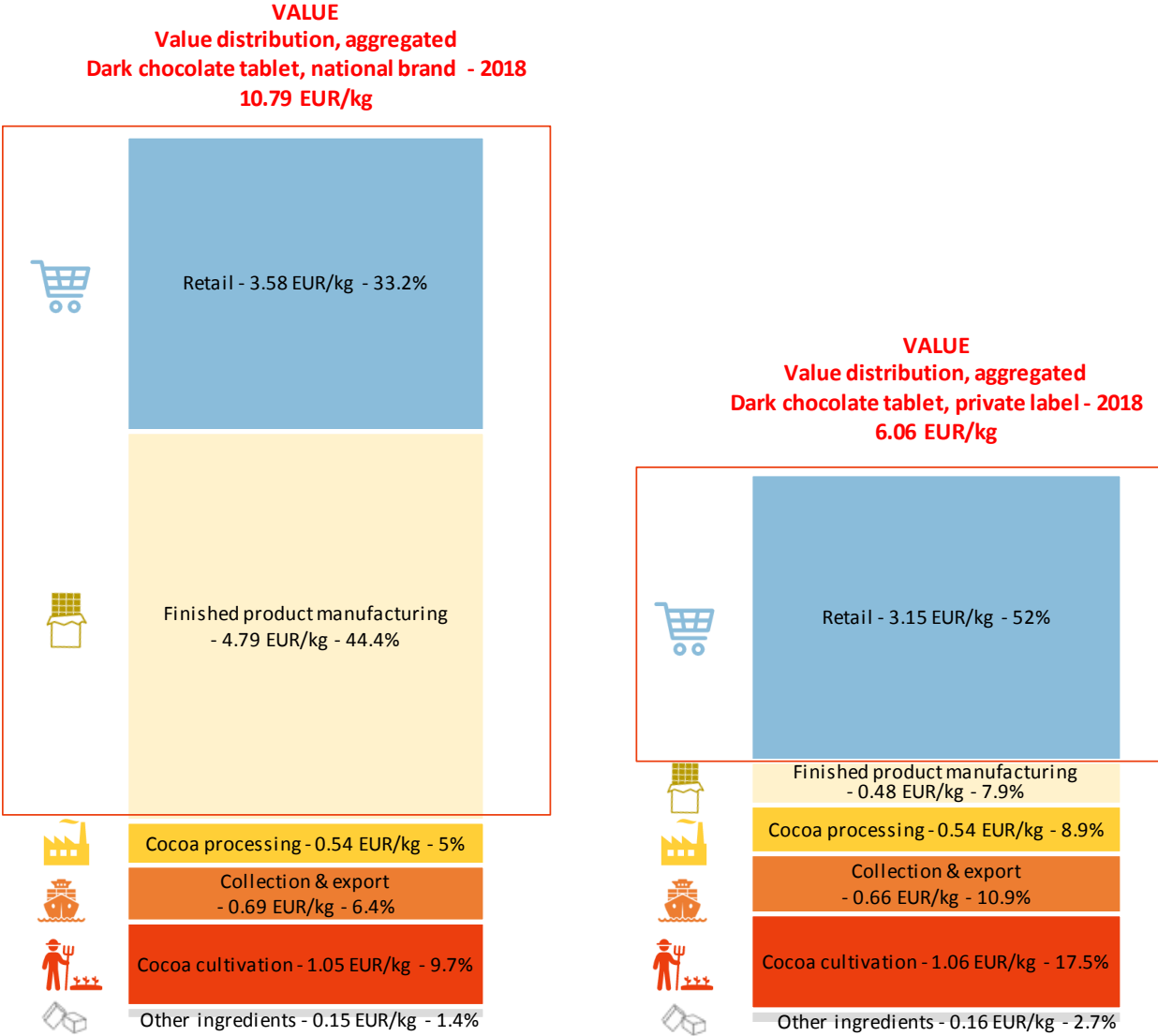


Figure 48. Distribution of value for ‘National brands’ Vs ‘Private Label’ for dark chocolate tablets. Source: BASIC

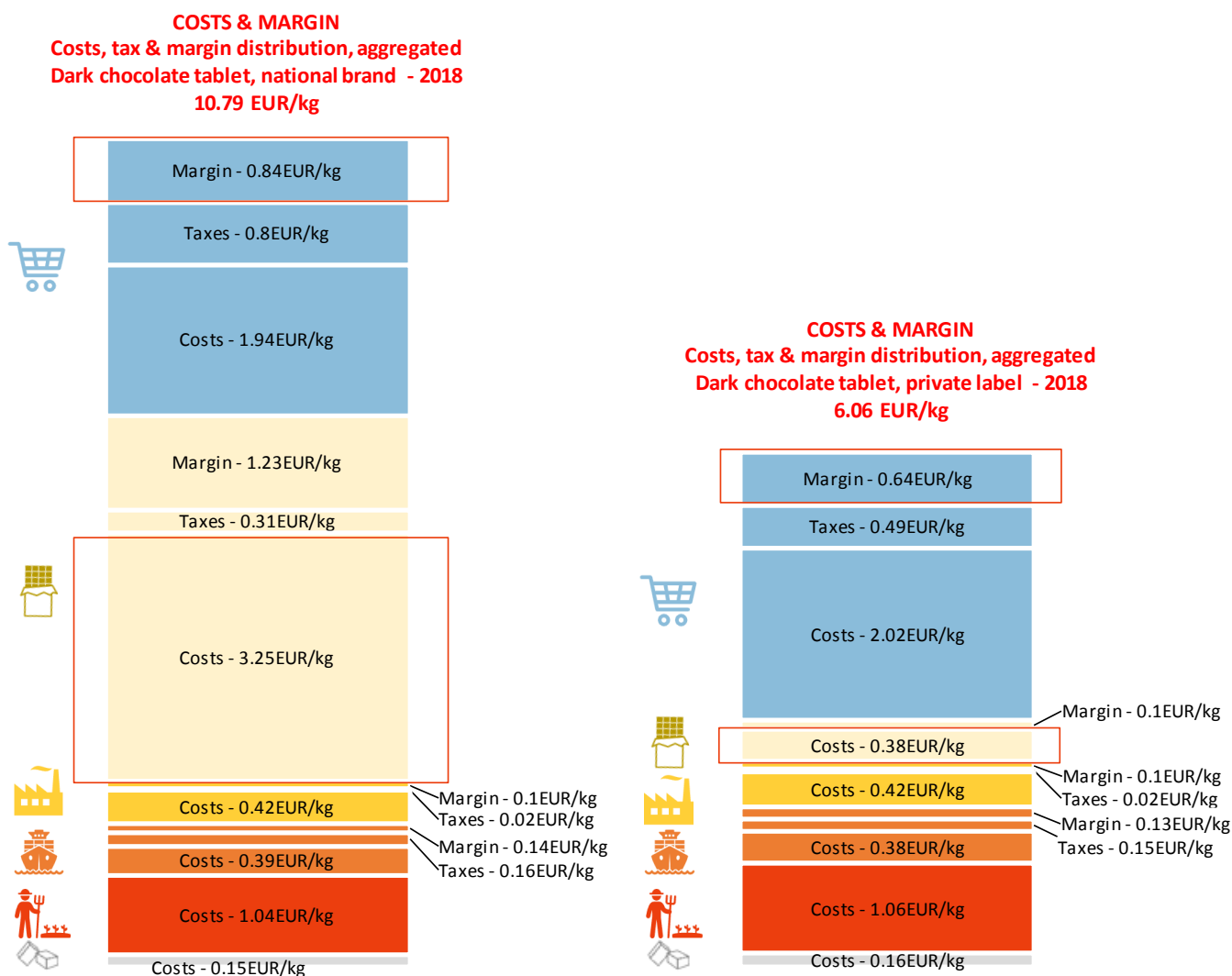


Figure 49. Distribution of value for 'National brands' Vs 'Private Label' for dark chocolate tablets. Source: BASIC

The first learning that stems out of our estimates is the **sheer difference in consumer prices between the two sub-categories** :

- whereas the average final price of 'National Brand' dark chocolate reaches 10.79 euros/kg,
- the 'Private label' tablets are priced just above 6 euros/kg, almost twice cheaper than their branded competitors.

The **retailers' share of value is very similar in euros/kg between the two product sub-categories** (although it differs in percentage, because of the price difference to consumers):

- 3.58 euros/kg of share of value for retailers in the case of 'National Brand' products
- 3.15 euros/kg of share of value for retailers in the case of 'Private Label' products

The same goes for **their level of net margin expressed in euros/kg which is quite similar** for both product sub-categories, showing that they are **apparently as profitable in the eyes of retailers**:

- 0.84 euros/kg of net margin for retailers in the case of 'National Brand' products
- 0,64 euros/kg of net margin for retailers in the case of 'Private Label' products

At the other side of the chain, **all upstream stages combined** (from cocoa growers to chocolate couverture) **amount to a very similar share of value when expressed in euros per kilo**: 2.28 euros/kg in the case of 'National brands' products Vs 2.26 euros/kg in the case of 'Private labels'.

The **share of value accruing to these upstream stages, if expressed in percentages**, highlights a clear difference between the two product sub-categories:

- whereas for **'Private Labels' products, 37.3% of the total value is related to the upstream stages of the chain**, from cocoa growers to chocolate couverture manufacturing,
- for **'National Brands' products, only 21.1% of the total value** is associated with these same upstream stages.

This clearly shows the strong influence of intangible value creation which 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 manufacturing of mass, butter and even chocolate,
- the **'National Brands' are able to achieve a much 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 **brand and product reputation, which is what consumers seem to value rather than the intrinsic features of the chocolate they eat**. This last point has been confirmed through our interviews with experts from the sector who have stressed the difference of consumer panel results, depending on whether they are blind tested or see the packaging/brand of the product they taste.

In the case of 'Private Labels', **the main adjustment variable is the final product manufacturing stage**. 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:

- for 'Private Labels', the final product manufacturing is associated with a share of value of only 0.48 euros/kg, with operational costs of 0.38 euros/kg.
- whereas the share of value of the same stage for 'National brand' plain dark products reaches 4.79 euros/kg, with operational costs of 3.25 euros/kg, (i.e. more than 8.5 times more).

These results, which can seem quite surprising from afar, **have been cross-checked with experts from the industry** (through anonymised interviews). They can be mostly explained by the very specific characteristics of 'Private label' product manufacturing which entails:

- very limited advertisement costs (which have been included in the model)
- no sales force expenses
- (very) reduced research & development costs.

As shown by our estimates, the low share of value associated with the manufacturing of Private Labels' tablets is not entirely at the expense of the chocolate manufacturer which still generates a net margin – albeit quite limited – on each product sold: around 0.10 euros/kg, i.e. 1.6% of the final price (to be compared with 1.23 euros/kg of net margin for the final product manufacturer in the case of 'National Brands' products).

This illustrates the fact that the **business model of 'Private label' manufacturers is mainly volume-based, as opposed to the value-based profitability model of 'National Brands'**, the latter being sustained through high expenses in advertisement and research & development **which amount to almost 16% of the selling price of the tablet to retailers (equivalent to 10% to 11% of the end price of branded dark chocolate tablets)**.

These differences in business models are reflected in our detailed estimates of the operational costs for both types of actors, as shown in the diagram below:

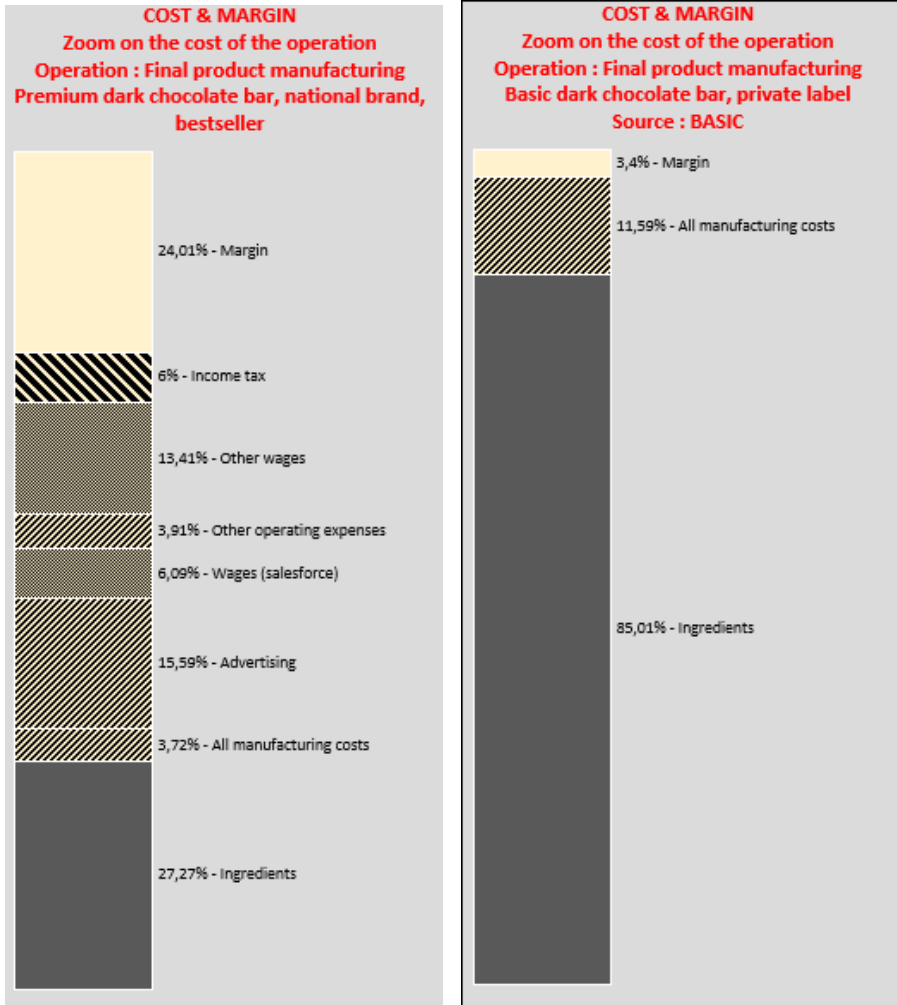


Figure 50. Detailed costs & margins for ‘National brands’ Vs ‘Private Label’ manufacturer in the case of ‘premium’ dark chocolate tablets in France in 2018. Source: BASIC

Beyond the differences in numbers estimated above, **although the value generated by ‘Private Label’ manufacturers is very low, the relationship with the retailers for whom they work appears to be more partnership-based than in the case of ‘National brands’**, according to the interviews we have conducted.

Indeed, the **discussion is often ‘open book’ and the retailers’ Private Label teams seem to be quite aware of ‘what it costs’ to manufacture their products**, and understand that there is very little room to manoeuvre in case of cost increases (e.g. when prices go up on the world cocoa market). In such cases, retailers seem to accept more easily to increase their price of purchase to manufacturers, and potentially reflect it on the end consumer price (or otherwise reduce temporarily their net margin).

The **relationship between retailers and ‘National Brands’ in France appears to be much different** according to the interviews conducted: **much more competitive and based on exerting as much negotiation pressure as possible on the other party** (from both sides – see the later section on product performance for greater details).

Marketing mix : Basic, Cooking and Premium segments

The **second factor under investigation is the segmentation of products** achieved through different sets of marketing mix characteristics.

| | Basic tablet | Cooking tablet | Premium tablet |
|-------------------------|------------------|--------------------------------|---------------------------------|
| Intangible features | Everyday product | Product to use in home cooking | Higher quality Finer flavour |
| Consumer price (brands) | < 9 €/kg | 9-11 €/kg | > 12 €/kg |
| Format | 100g | 200g | 100g |
| % cocoa | 45%-55% | 45%-55% | 70%-99% |
| Cocoa Origins | mixed | mixed | mixed pure |

Figure 51. Main respective characteristics of marketing segments for plain dark chocolate. Source: BASIC

According to the interviews we have conducted with experts, and to the official classification used by IRI, the chocolate tablets market in France (and more widely in Europe) is segmented in 3 different categories with the following characteristics:

- **Basic tablets** correspond to everyday products consumed quite frequently by French families, available at an affordable price (below 9 euros/kg), containing between 45% and 55% of cocoa content (for dark chocolate) sourced from mixed origins and sold in a 100g format. They represent roughly **14% of retail sales of plain dark chocolate tablets in France** a proportion that has decreased from 18% in 2015, showing the downward trend of this market segment).
- **Cooking tablets** are mainly designed for being used at home to cook (cakes, desserts...), although they are also often consumed by French families as higher quality substitutes to basic tablets. The two share many similar characteristics (percentage of cocoa, mixed origins), albeit for the format (200g in the case of cooking tablets instead of 100g) and the price which is slightly higher for cooking bars (between 9 and 11 euros/kg). They account for an estimated **49.5% of plain dark chocolate tablet sales in French retail stores** (also in decrease since 2015 when it accounted for 52.5% of the plain dark chocolate tablets' sales).
- Finally, **premium tablets** are very distinct products (their only similarity with basic tablets being the format of 100g pack-size): their cocoa content is above 70% - and up to 99% - their price is above 12 euros/kg and they are made with higher quality/finer flavour beans potentially in single origins (although the majority of volumes are mixed-origins chocolates). These 'Premium' tablets represent **36.5% of French retail sales of plain dark chocolate tablets**, in strong increase since 2015 when it accounted for only 29.5% of the market (which illustrates the **significant uptake in demand from French consumers for this product segment**).

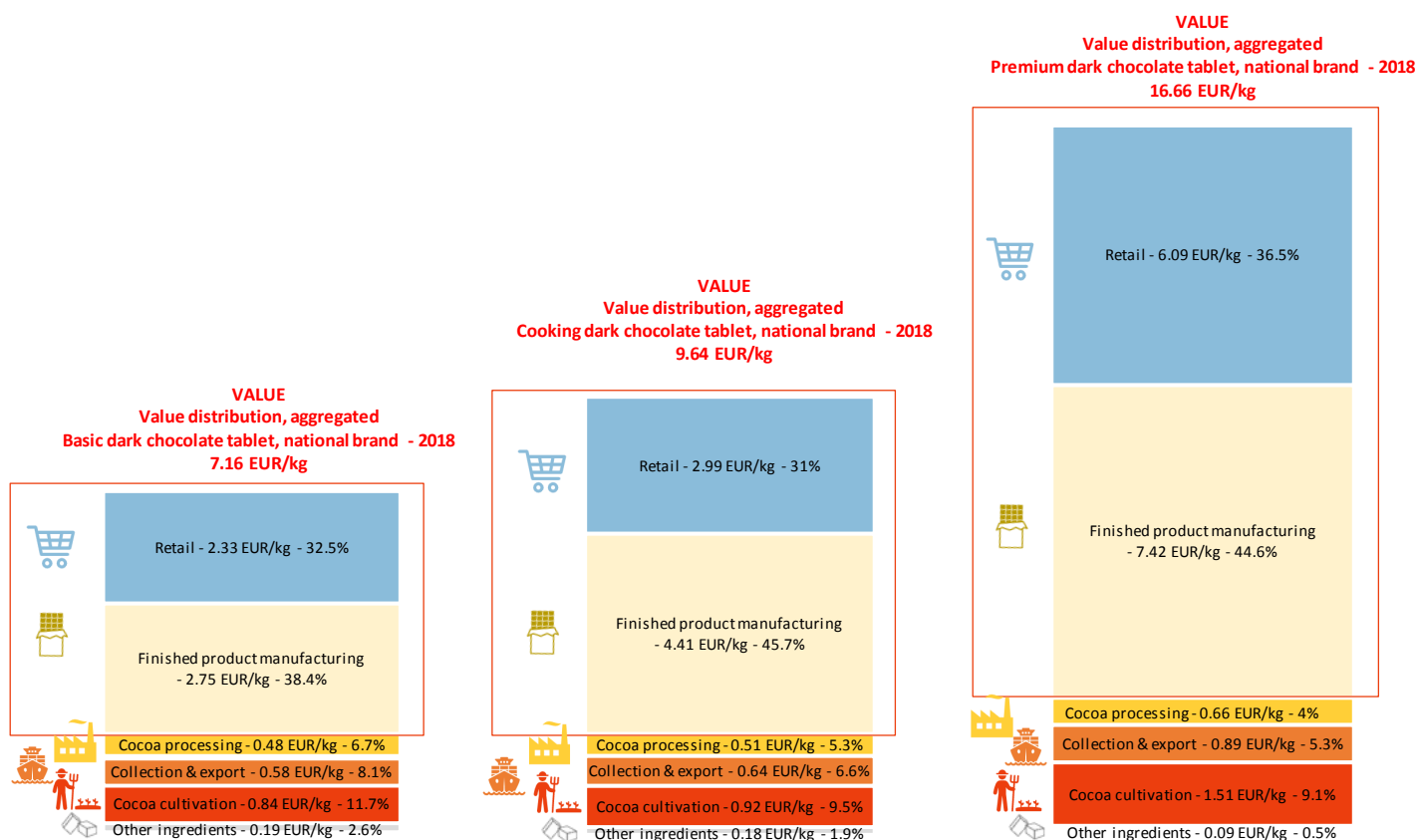


Figure 52. Distribution of value for 'basic', 'cooking' & 'premium' dark chocolate tablets of National Brands. Source: BASIC

The first result of our quantitative estimates for National Brands is the **very significant consumer price differentials among the 3 segments analysed:**

- whereas the average final price of 'Basic' dark chocolate tablets is slightly above 7 euros/kg,
- the 'Cooking' tablets have an average price of 9.64 euros/kg,
- and 'Premium' dark chocolate tablets reach an average price as high as 16.66 euros/kg

As shown in our estimates, **this price difference at the end of the chain, has very little connection with the share of value dedicated to chocolate making**, although the quality of cocoa beans and resulting chocolate, and the cocoa content, are quite higher in the case of 'premium' tablets.

Consequently, it appears that **the greater value paid by consumers for 'Premium' tablets is not so much related to additional costs/value upstream for chocolate manufacturing, but mainly associated with the intangible value attached to these 'Premium' brands**, as described in details in the earlier section on brand type, and confirmed by the interviews we have conducted.

In other words, the main leverage for value creation in the 'Premium' segment lies in the **reputation of the brand, and in the style of consumption which is attached to this segment of products** (a key illustration, according to the interviews we have conducted, is the 99% cocoa bar which is not so often enjoyed by consumers in terms of taste, but highly valued by many because of its association with the consumption habits of the 'upper-class').

These intangible leverages downstream are combined with **industrial leverages upstream** which enable cocoa processors and chocolate manufacturers to **offer of a wide variety of qualities of semi-processed products while keeping low costs per kg thanks to high economies of scale** (a key feature/asset of the sector and a result of its long history of industrialisation since the 19th century):

- whereas for 'Basic' tablets of National Brands, the value associated with all upstream stages from cocoa farmers to chocolate couverture manufacturing amounts to 1.90 euros/kg (and 2.07 euros/kg in the case of 'Cooking' tablets),
- it reaches 3.06 euros/kg for 'Premium' tablets, which is 60% higher than for 'Basic' tablets and corresponds to a price differential of 1.16 euros/kg for all upstream stages, to be compared with the much higher price differential of 9.50 euros/kg at the level of end consumers (a multiplication by 2.3 between the two segments).

As a result, the **high additional value generated by 'Premium' tablets seems to be mostly - and quite evenly - distributed between the two last actors in the chains, 'National Brands' and retailers:**

- for 'Basic' dark chocolate tablets: 38.4% for the National Brand Vs 32.5% for the retailer
- for 'Cooking' tablets: 45.7% for the National Brand Vs 31% for the retailer
- for 'Premium' tablets: 44.6% for the National Brand Vs 36.5% for the retailer

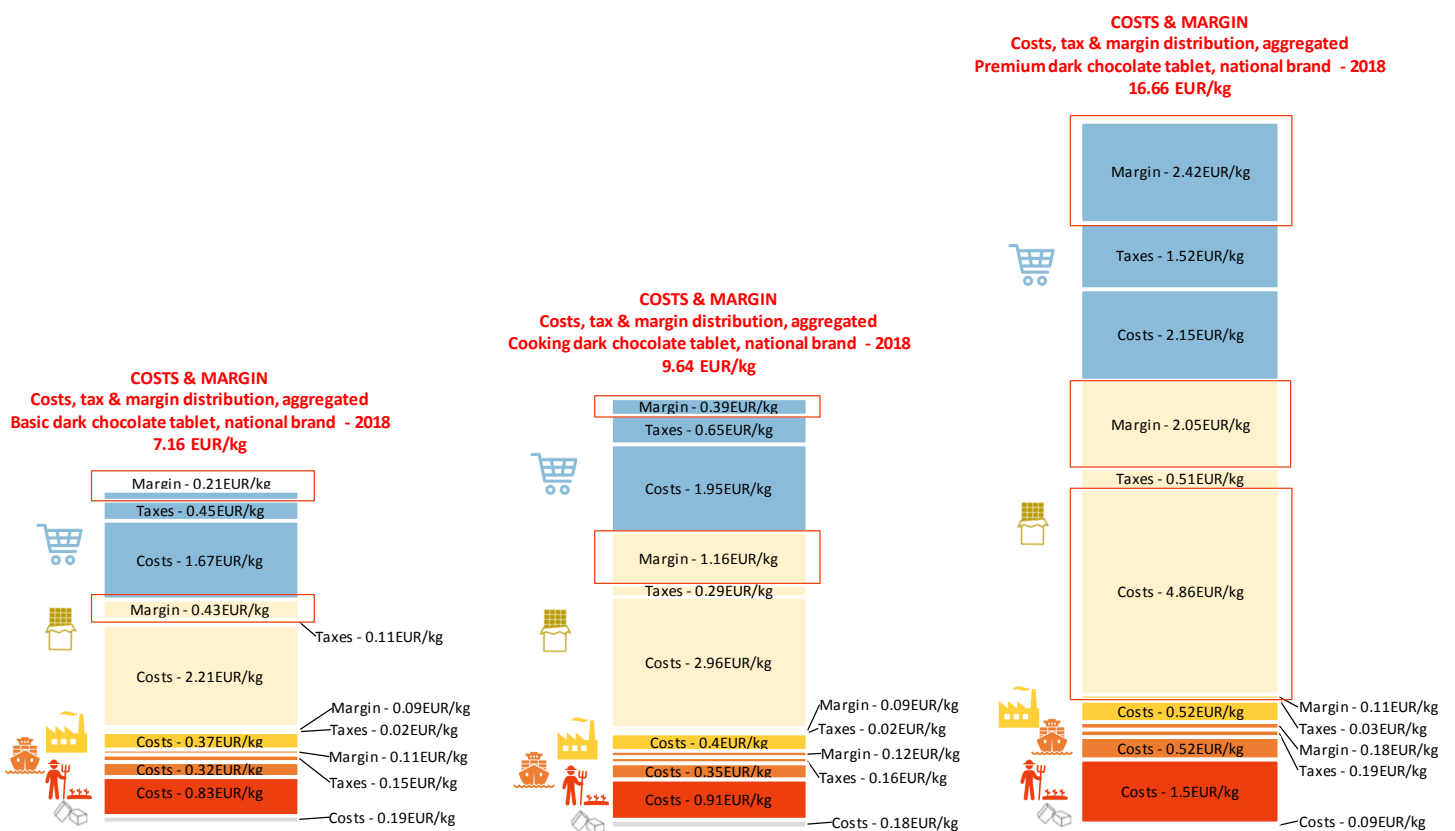


Figure 53. Costs & margins for 'basic', 'cooking' & 'premium' dark chocolate tablets of National Brands. Source: BASIC

These trends are further reflected in the distribution of costs and net margins (see above). The first main result of our estimations of costs, taxes and margins is that the **downstream price differentials of National Brands and retailers between the 3 segments is associated with an amplified differential in net margins**, indeed:

- whereas 'Basic' dark chocolate tablets are associated with an average 0.43 euros/kg of net margin for 'National brands' and 0.21 euros/kg for retailers,
- 'Cooking' tablets generate on average 1.16 euros/kg of net margin for 'National brands' and 0.39 euros/kg of net margin for retailers (hence almost twice the 'basic' tablets' ones),

- and 'Premium' tablets are associated with average net margins of 2.05 euros/kg of net margin for 'National Brands' and 2.42 euros/kg for retailers (almost 5 times higher than 'Basic' tablets for National Brands, and more than 10 times higher for retailers).

This confirms the finding that the **greater value created by higher quality segments are associated with limited additional costs for most stages in the chain**, at the exception of the final product manufacturing, because of the higher investments in advertisement for 'Premium' tablets when expressed in euros/kg (which explain the doubling of the operational costs related to final product manufacturing, from 2.21 euros/kg in the case of 'Basic' tablets to 4.86 euros/kg for 'Premium' ones).

This is reflected in our detailed estimates of operational costs for both types of actors, as shown below in the example of example of a 'Basic' Versus 'Premium' dark chocolate tablet:

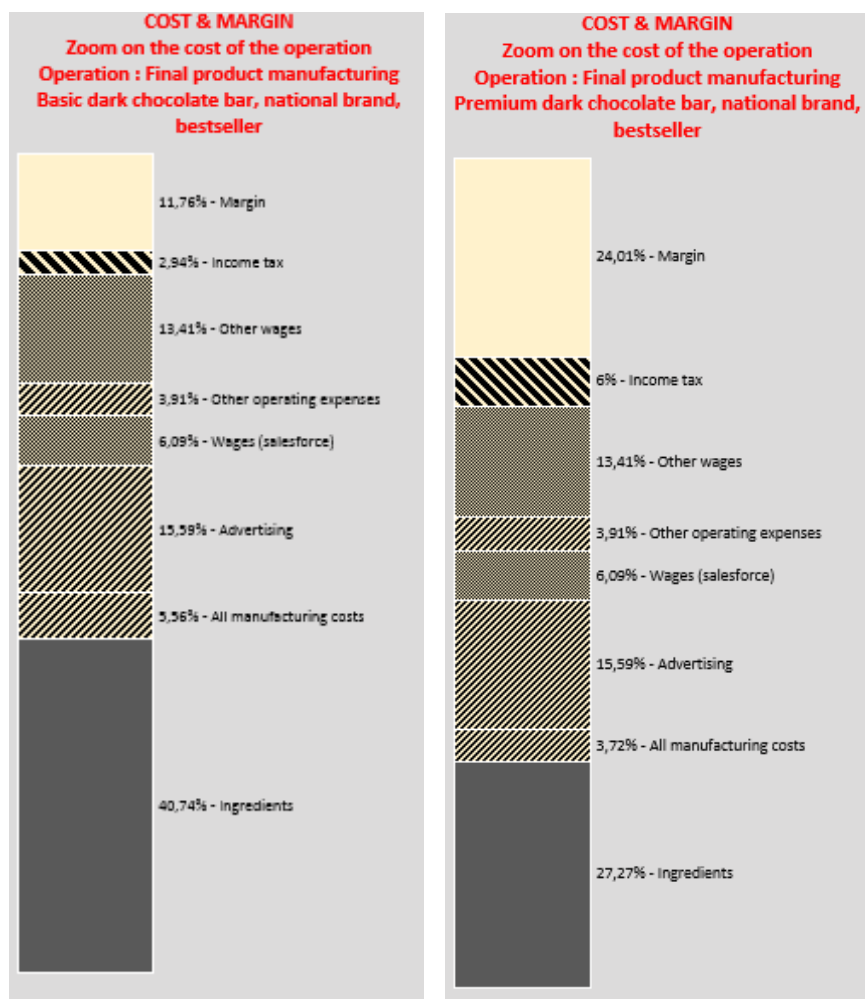


Figure 54. Detailed costs & margins for 'National brands' for 'basic' and 'premium' dark chocolate tablets. Source: BASIC

Similar overall findings, amplified to a certain degree, are observed in the case of 'Private labels' as illustrated below with estimates for the 3 segments: 'Basic', 'Cooking' and 'Premium' (in particular regarding the margin of the retail stage which is apparently much higher for 'Premium' than for 'Basic' tablets, while the margin of the final product manufacturing stage is very similar across the 3 segments).

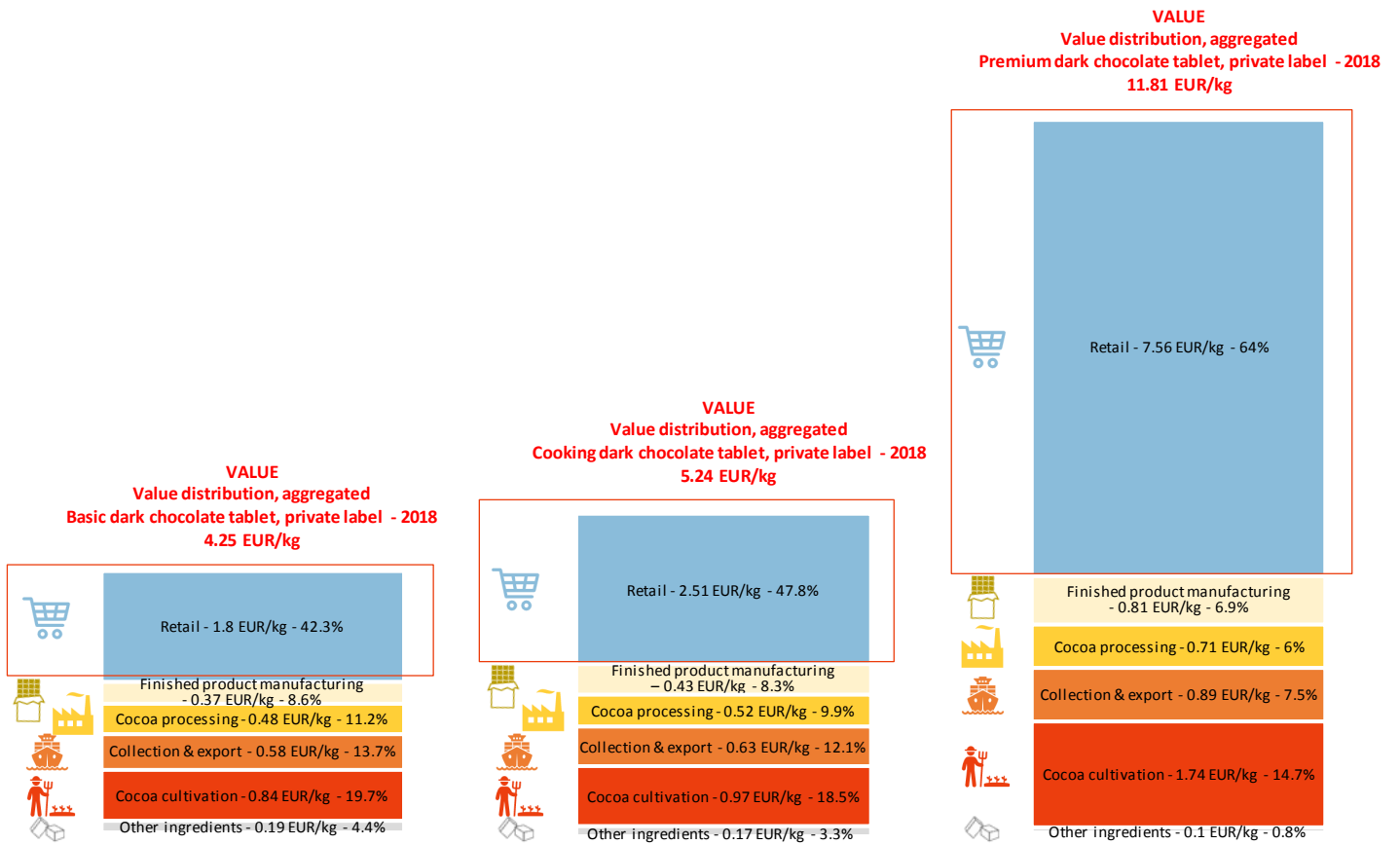


Figure 55. Distribution of value for 'basic', 'cooking' and 'premium' dark chocolate tablets of Private Labels. Source: BASIC

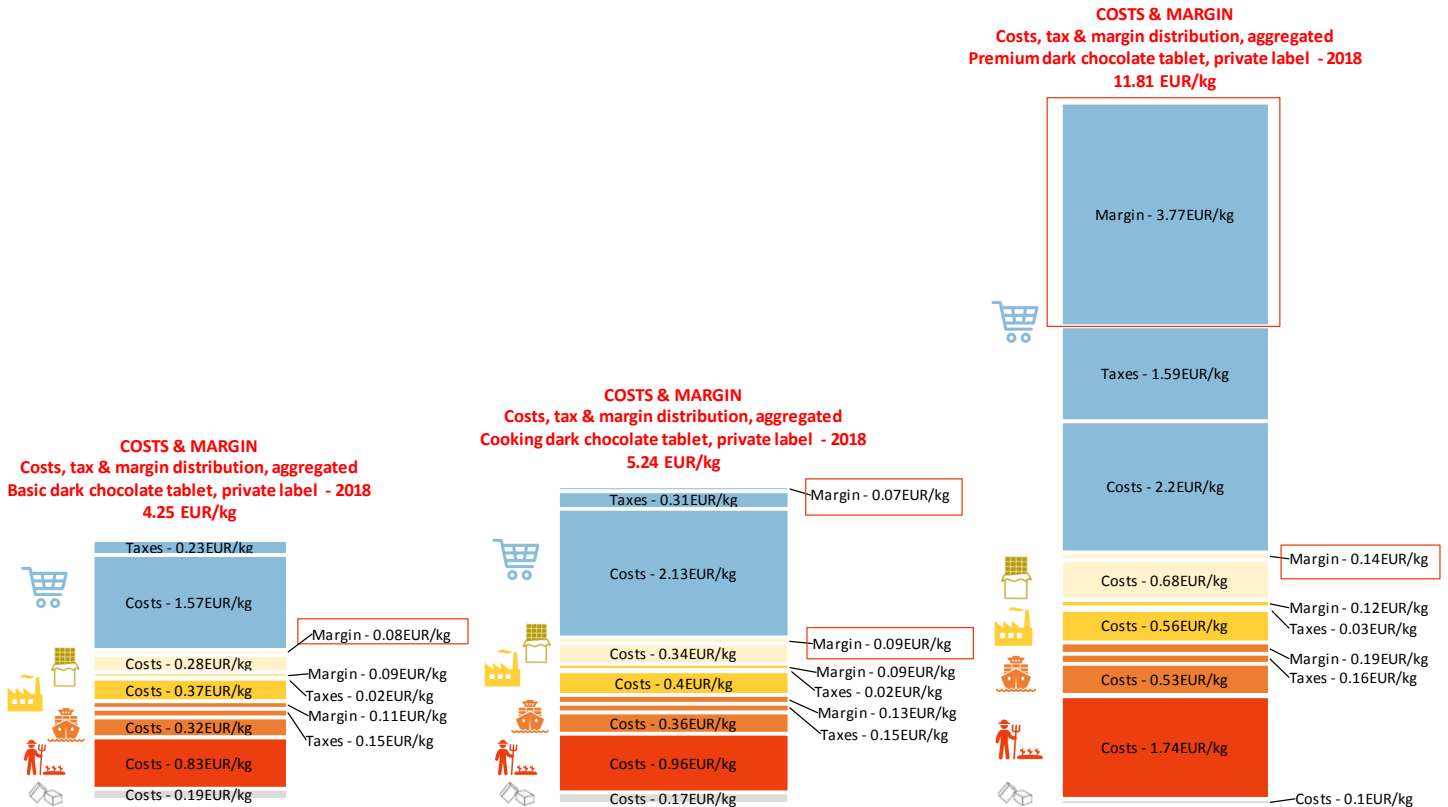


Figure 56. Costs & margins for 'basic', 'cooking' and 'premium' dark chocolate tablets of Private Labels. Source: BASIC

Product performance : Best-sellers Vs other products (in the case of National Brands)

The last main downstream variable we analysed is linked to the commercial performance of products. This enables to differentiate between ‘best-seller’ products and other products, which respective characteristics are listed below:

| | Best-sellers | Other products |
|--------------------|--|---|
| Market positioning | Most well-known product of a category which consumers are specifically looking for | Portfolio of products offering a variety of choice to consumers |
| Features | <ul style="list-style-type: none"> • High sales volume and “rotation rate” within supermarkets • Heavy advertisement • High competition between supermarkets to market the product at the lowest price • Represents up to 50% of sales within a category | <ul style="list-style-type: none"> • Lower and variable sales volume and “rotation rate” • Small advertisement • Pressure on brands to innovate & demonstrate success to retailers |

Figure 57. Main respective characteristics of national brands and private labels. Source: BASIC

The ‘best-seller’ products of ‘National Brands’ correspond to (very) rare products – 1 or 2 barcodes per market segment – which are so successful that they alone represent a high proportion of the total sales of the market segment they belong to.

Based on our analysis of the detailed sales data of French retailers, we identified:

- in the plain dark ‘Basic’ segment, **2 products (2 barcodes) which make up 52%** of all ‘National brands’ sales of the segment,
- in the plain dark ‘Cooking’ segment, **a single product (1 barcode) which makes up 62%** of all ‘National brands’ sales of the segment,
- in the plain dark ‘Premium’ segment, **a single product (1 barcode) makes up 29%** of all ‘National brands’ sales of the segment.

To sustain this success, the related advertisement costs are higher for best sellers when compared to other products on the market (and have been modelled in our estimates).

Based on the interviews we have conducted, **these products are, in each segment, clearly the most well-known to almost everybody and represent critical leverages for retailers** to attract customers in their stores, because of their appeal to consumers. Indeed, **they are associated with high sales volume and ‘rotational rate’ within the shelves, thereby generating regular influx of clients.**

As a result, retailers are ready to compete strongly with one another in order to put these products at the lowest possible price, because **they are often used by consumers as key reference indicators to compare the level of prices between supermarket chains and stores in their surroundings.**

Separately from these very specific ‘best-sellers’, which all ‘National Brands’ are trying to create, **all other products seem to share much more similar characteristics** regardless of their respective market performance: National Brands use them to **offer a wide variety of choices to consumers**, and compete against each other to find their place on the retailers’ shelves. These ‘non Best Sellers’ products enable National Brands to **constantly innovate and test new offers towards consumers so as to adapt to their evolving taste**, differentiate from competitors, build an image of innovator, and

hopefully try to create a new ‘best-seller’ or even a new segment of the market (as Nespresso managed to do it in the coffee sector with capsules).

In the eyes of retailers, these products generate much less sales and rotation rates, and have to constantly demonstrate their market relevance and financial profitability in order to remain on offer on their shelves.

Our estimates of the distribution of value & costs provide the following results for ‘Basic’ tablets:

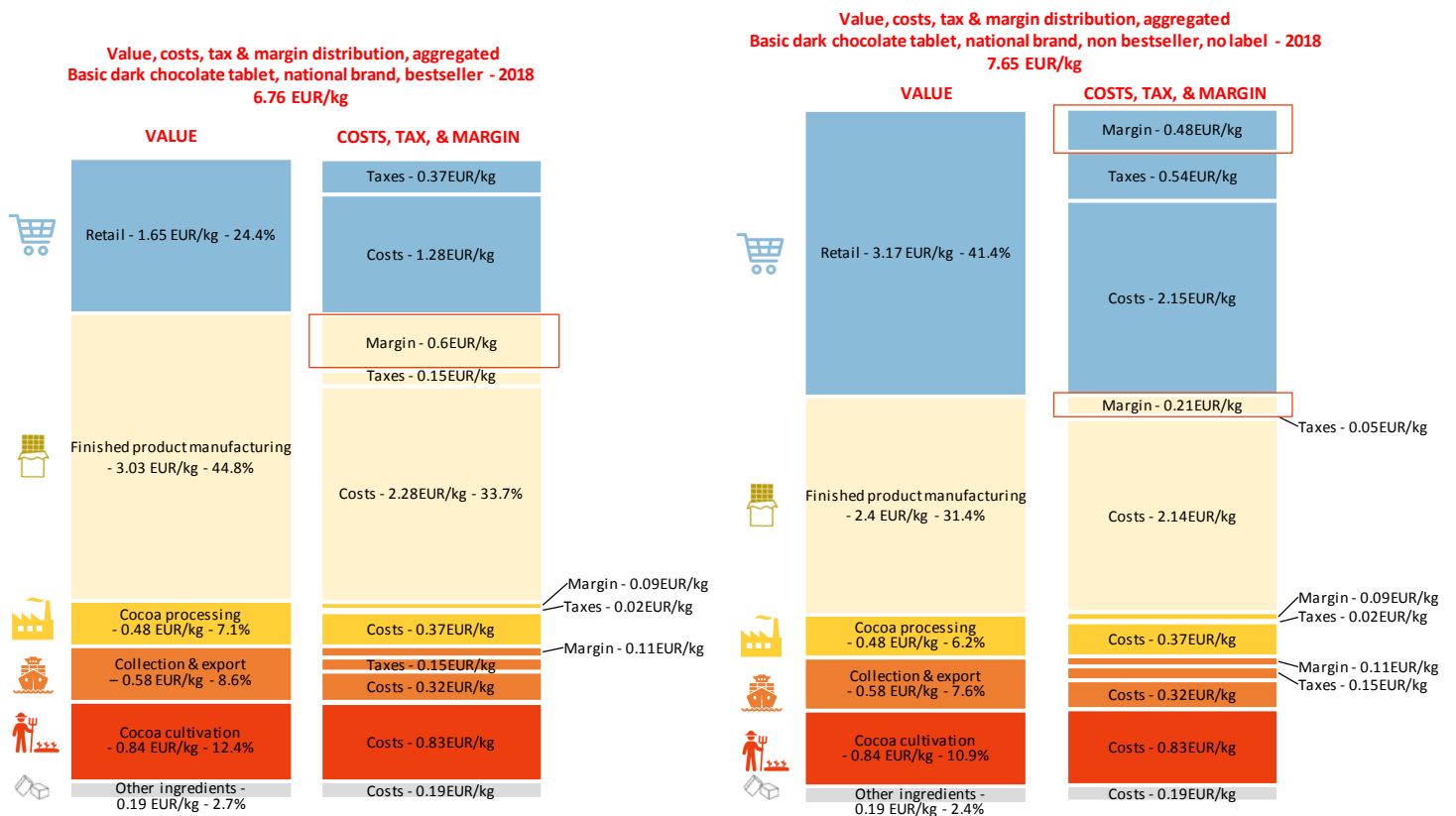


Figure 58. Distribution of value, costs & margins of ‘best-seller’ Vs other ‘basic’ dark chocolate tablets. Source: BASIC

As illustrated above, our estimates show the **significant differences of value share associated with the two last stages of the chain** (brands and retailers) between the two categories of products:

- whereas for the ‘Best-seller’ product, the majority of the share of value accrues to the ‘National Brand’ (44.8%) as opposed to the retailer (24.4%),
- the situation is the opposite across other products for which the retailers manage to generate the biggest share of value (41.4%) compared to ‘National brands’ (31.4%)

This differential is not impacted by the final price to consumers, as both product groups have roughly the same price per kg, although a little lower for the ‘Best seller’ at 6.76 euros/kg (compared to 7.65 euros/kg for other products) which potentially illustrates the price wars between retailers to get these products at the lowest possible price for consumers.

According to the interviews conducted, **these estimates can be explained by the differences in competitive environment between the two groups of products:**

- **for the ‘Best-seller product, the ‘National Brand’ prevails over the retailer in terms of negotiation power**, as the latter needs to have it in its portfolio and cannot afford a temporary delisting (a leverage often used by retailers to put pressure on brands to accept

their price terms and conditions). As a result, the 'National brand' are in a position to sell its 'Best-seller' product at the highest possible price to retailers.

- **The situation is reversed in the case of other products: retailers have the upper hand and put 'National brands' in direct and strong competition to get access to their shelves**, using the argument of their limited available space to place the various innovations proposed by the different brands. In these cases, the 'National Brands' are much more inclined to accept the price conditions of retailers to maintain a regular flow of new products on the market.

The differences are even more visible when analysing the distribution of costs and margins in the two cases for 'basic' plain dark chocolate tablets:

- **For the 'Best-seller' product, retailers appear to make no net profit**, barely managing to cover their costs (of employees, real estate, energy, logistics...) whereas the 'National brand' apparently manages to make a profit of 0.60 euros/kg (accounting for 8.9% of the final price).
- **In comparison, for other products, it is the 'National Brand' which appears to make little profit** (around 0.21 euros/kg) and just cover its costs of production, whereas the retailer apparently generates a significant net margin of 0.48 euros/kg (i.e. 6.2% of the final price).

This situation is mirrored in the case of 'Cooking' and 'Premium' dark chocolate tablets, with specificities associated with the respective consumer price of these products, as illustrated below:

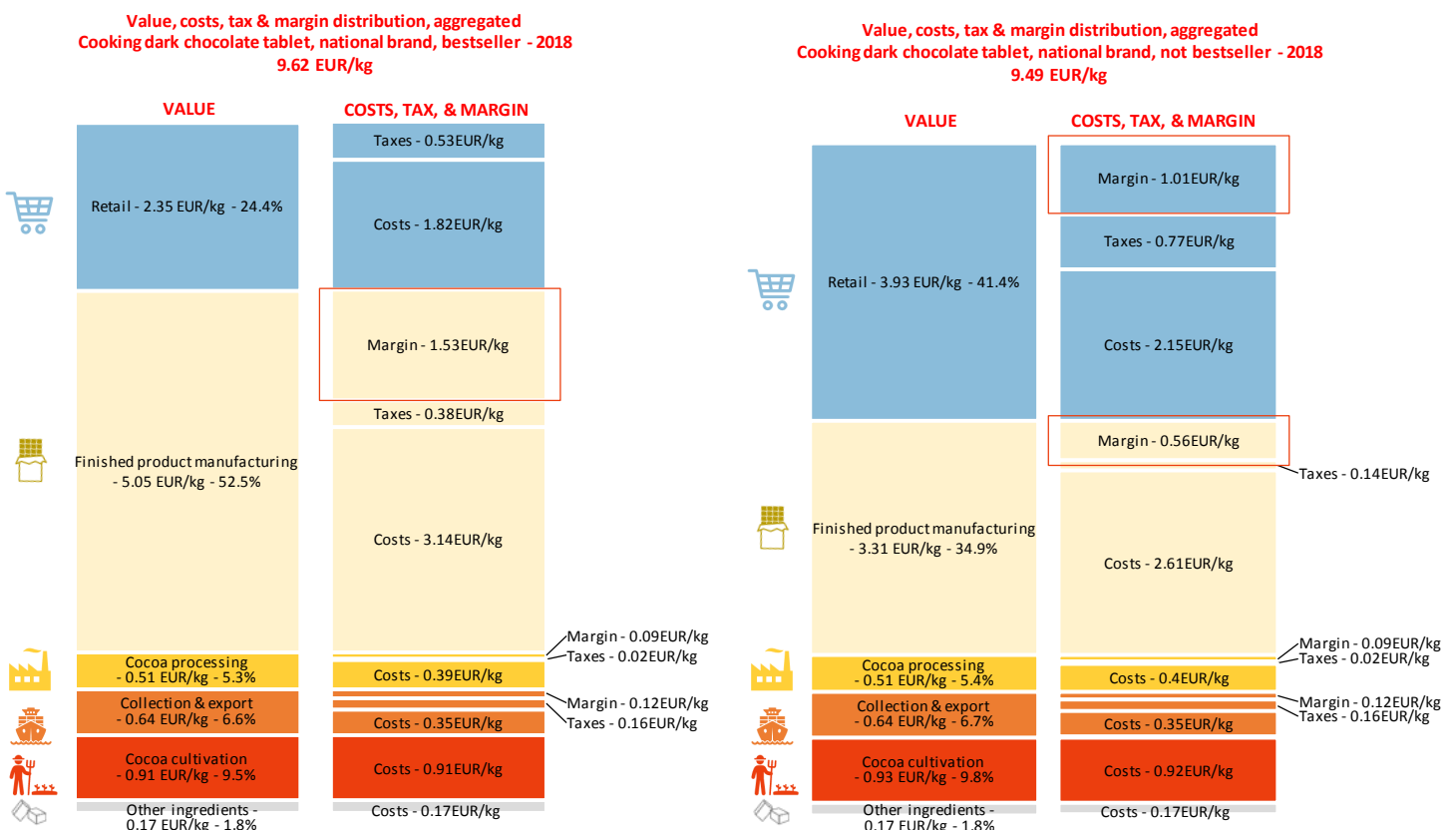


Figure 59. Distribution of value, costs & margins of 'best-seller' Vs other 'Cooking' dark chocolate tablets. Source: BASIC

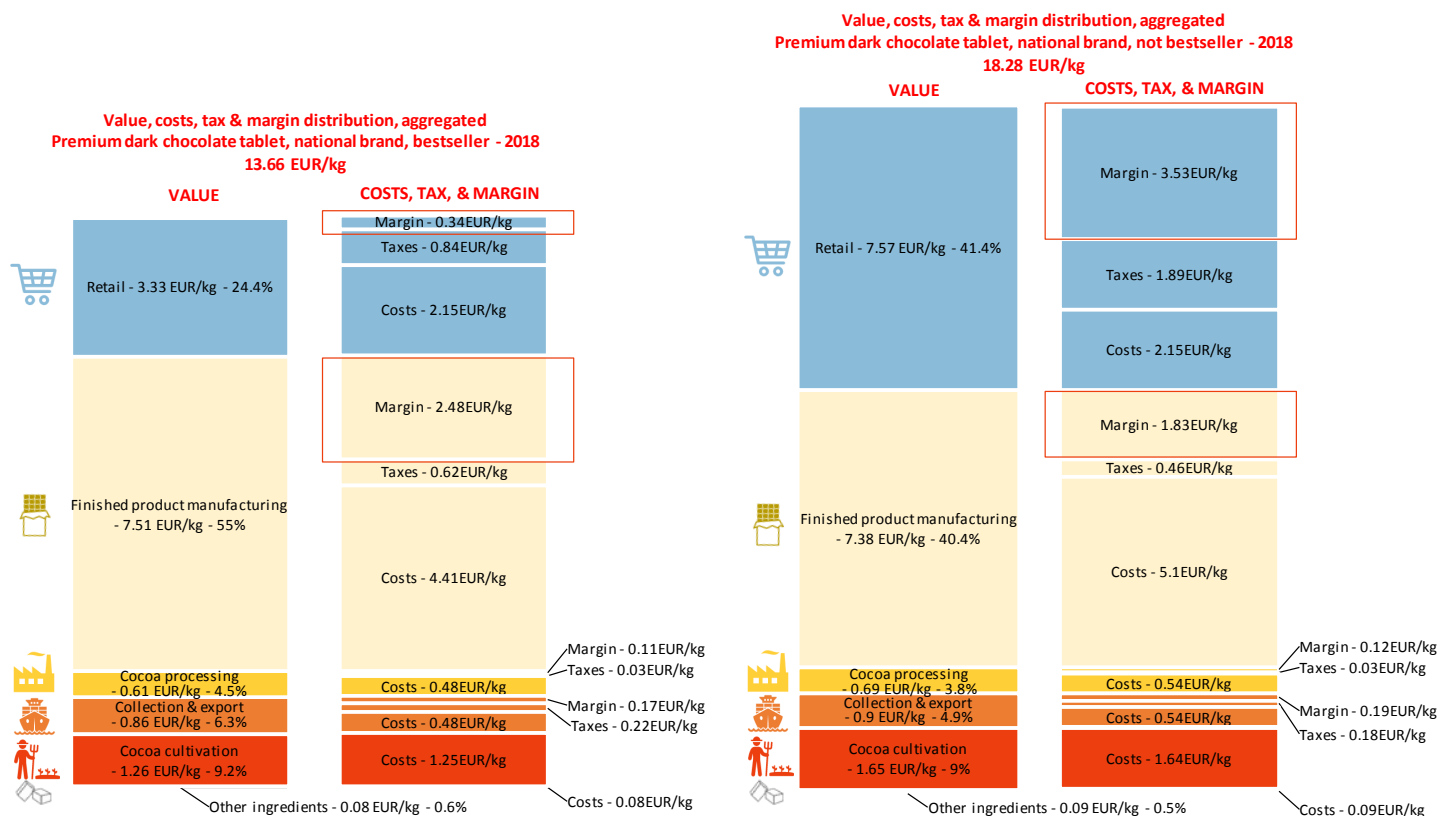


Figure 60. Distribution of value, costs & margins of 'best-seller' Vs other 'Premium' dark chocolate tablets. Source: BASIC

The case of 'Best-seller' in the 'Cooking' segment is very close to the situation in the 'Basic' segment. In comparison, **the 'Premium' segment features some specificities because of the much higher price to consumers of the related tablets.** The two last stages of the chain (brands and retailers) appear to achieve a substantial net margin for 'Best-sellers' as well as for other products, while still reflecting the change in equilibrium of negotiation power between the two:

- In the case of the 'best-seller' product, the 'National Brand' has the upper hand and seems to achieve a high level of net margin: 2.48 euros/kg corresponding to more than 18% of the final price (to be compared with 0.34 euros/kg for retailers).
- In the case of other products, the retailers are on top of the negotiation and apparently generate a level of net margin of 3.53 euros/kg, amounting to more than 19% of the final price (to be compared with "only" 1.83 euros/kg of net margin for 'National Brands').

These different estimates illustrate the **difficult situation of smaller brands which do not possess a 'Best-seller' in their portfolio:** pressured by the highly competitive environment in the 'Basic' segment, and to a lesser extend 'Cooking' segment, they can only sustain their business model (and their lower economies of scale) if they manage to enter and remain in the 'Premium' segment.

Regarding the rest of the chain upstream (from cocoa cultivation to chocolate making), there is apparently almost no difference between 'Best-sellers' and other products across the 3 segments - 'Basic' as well as 'Cooking' and 'Premium' - whether in terms of share of value acquired, or costs, taxes and net margins.

2.3.2.4. Investigation of upstream factors influencing the distribution of value, costs & margins

Following the analysis of downstream factors that influence the distribution of value, costs and margins, we have studied in a second phase the impact of 4 upstream variables:

- **Content of cocoa** (i.e. total % of cocoa in the recipe of the tablet),
- **Country of origin** (compared on the basis of comparable 'single-origin' products),
- **Country of 1st processing**,
- **Evolution of cocoa prices** on the world market.

Content of cocoa (%)

In order to investigate the **influence of the cocoa content** on the distribution of value, costs and margins, we have modelled **two case studies of comparable 'Premium' plain dark chocolate tablets sold by the same well-known 'National Brand'** (in order to offset the potential impact of the brand reputation and its related intangible values):

- the first tablet has a content of 70% cocoa,
- the second tablet has a content of 90% cocoa (so as to test a significant difference in recipe)

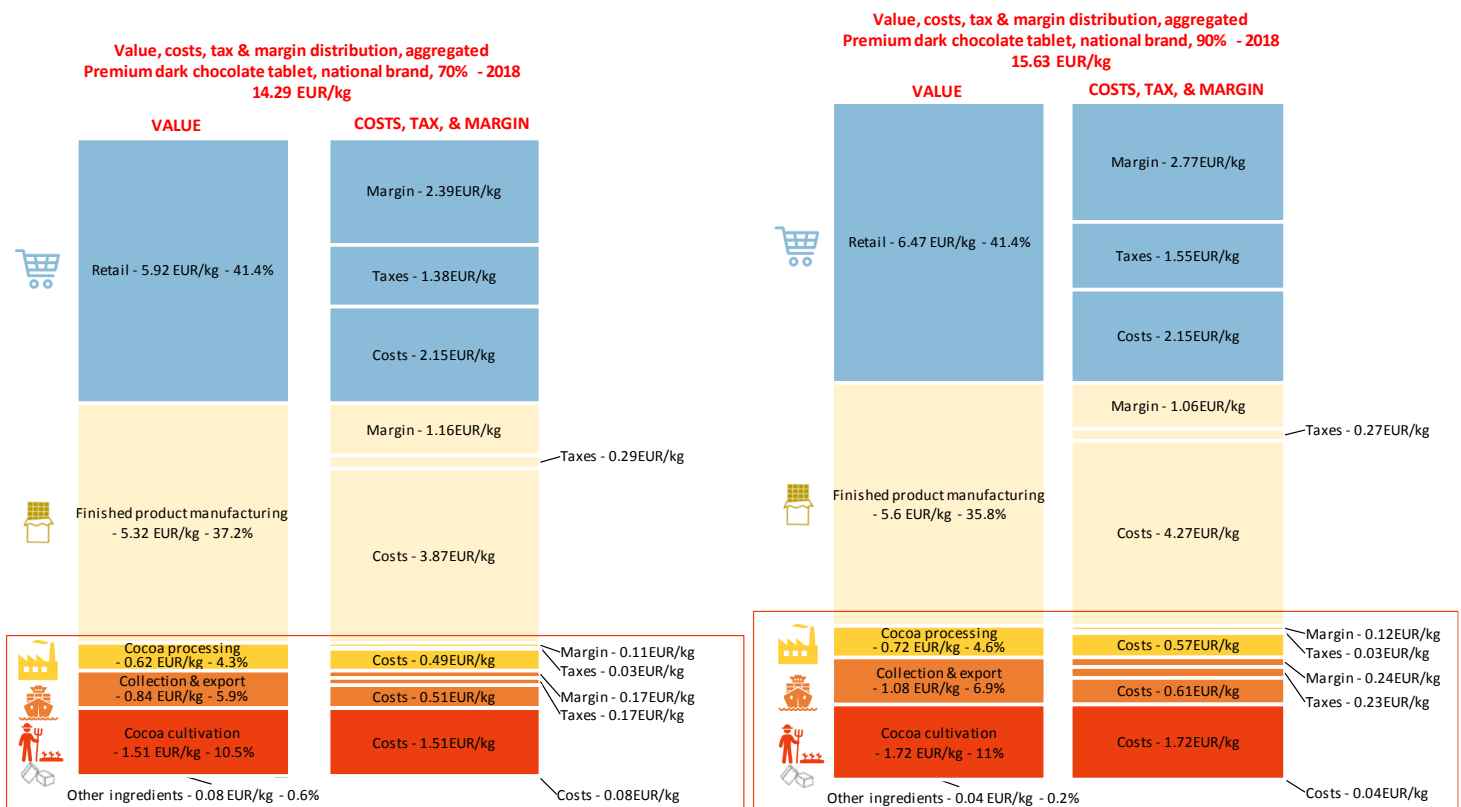


Figure 61. Distribution of value, costs & margins of 2 cases of 'premium' plain dark chocolate tablets of 'National brands': Left corresponds to 70% cocoa content, and right, to 90% cocoa content. Source: BASIC

As illustrated above, our result tend to show that **the impact of a difference in cocoa content (even by 20%), for the same product segment ('Premium') and the same 'National Brand' is very limited:**

- the **share of value generated by all stages from cocoa farming to chocolate couverture manufacturing** only varies by 18.5%: from 2.97 euros/kg (dark tablet 70% cocoa) to 3.52 euros/kg (dark tablet 90% cocoa). Hence a price differential upstream of 0.55 euros/kg to be compared with the increase of the final price to consumers of 1.34 euros/kg.

- this is even more visible in the case of the **share of value accruing to cocoa farmers** which only increases by 0.21 euros/kg (from 1.51 euros per kg for the 70% cocoa tablet to 1.72 euros/kg for the 90% cocoa tablet), an evolution mainly related to the difference in cocoa content, the **farmer receiving the same price for its cocoa beans** according to the interviews we have conducted.
- regarding other operational costs along the chain, there are no significant changes apart from the change in cocoa content, hence the margins of all business actors remain globally the same.

Country of origin

To extend the analysis, we have investigated **the influence of the country of origin of the cocoa beans**. In order to analyse this factor independently from the others, we have modelled **two case studies of comparable 'Premium' plain dark chocolate tablets sold by the same well-known 'National Brand' and based on real products sold on the French retail market** (in order to offset the potential impact of the brand reputation and its related intangible values):

- the first tablet sold as 'single-origin' from Côte d'Ivoire,
- the second tablet sold as 'single-origin' from Ecuador

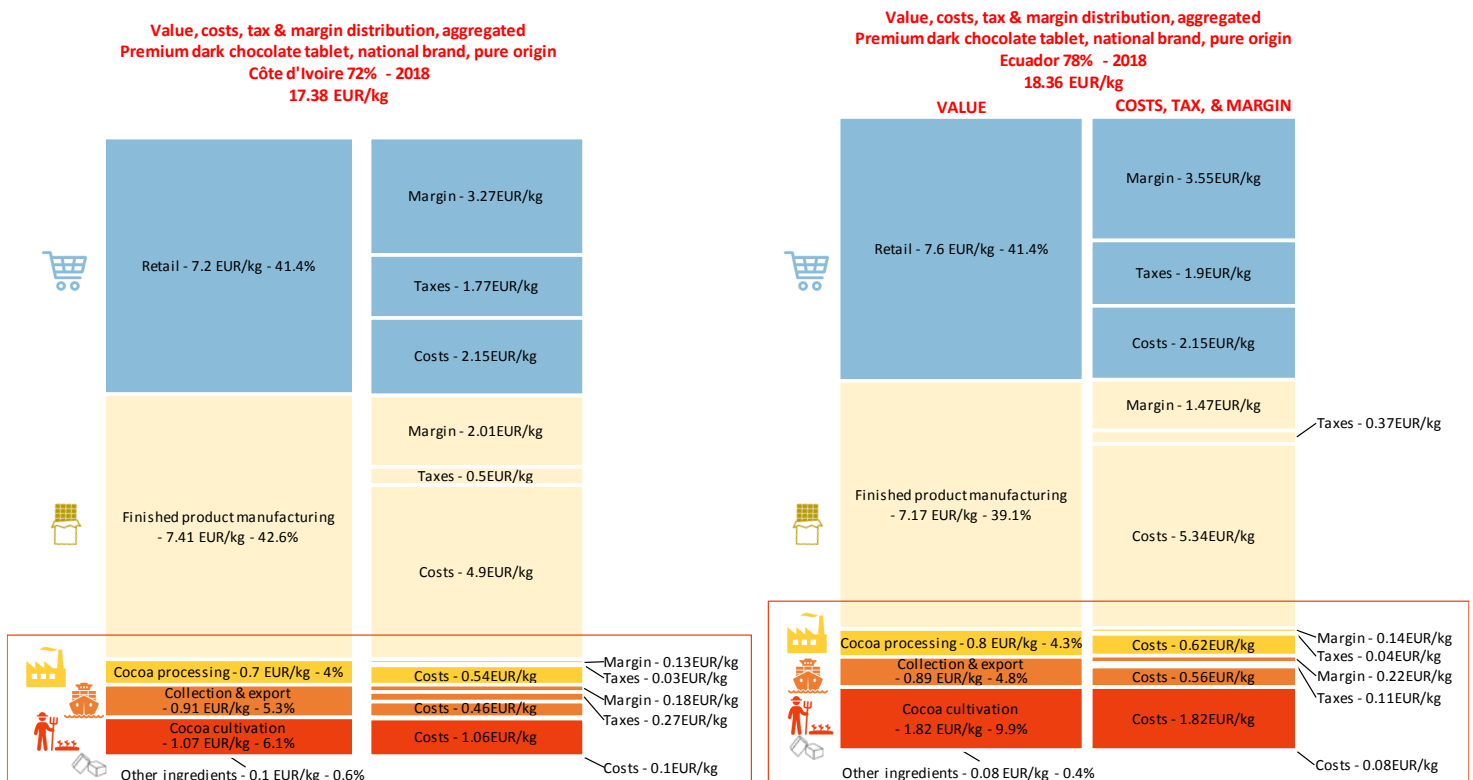


Figure 62. Distribution of value, costs & margins of 2 cases of 'premium' dark chocolate tablets of 'National brands': Left corresponds to 'single' origin from Côte d'Ivoire, and right, to 'single origin' from Ecuador. Source: BASIC

As illustrated above, our result apparently shows that, **similarly to the cocoa content, the impact of different origins for the same product segment ('Premium') and the same 'National Brand', is also quite limited:**

- the **share of value generated by all stages from cocoa farming to the import of cocoa beans from the country of origin only varies by 0.73 euros/kg, or 31%, between the 2 countries** (from 2.68 euros/kg in Côte d'Ivoire to 3.51 euros/kg in Ecuador), **which is almost reflected in the final consumer price** (0.98 euros/kg higher for Ecuador).

- the main difference stems from the percentage of the cocoa export price that reaches the farmer, which is almost 80% in the case of Ecuador - 1.82 euros/kg - compared to little more than 60% in Côte d'Ivoire – 1.07 euros/kg (see the chapter 3. for more details)
- regarding other operational costs and margins along the chain, there are no significant changes for actors downstream in Europe and France.

Country of first processing

To deepen the analysis, we have then investigated the influence of the country of first cocoa processing. To conduct this analysis, we have managed to model the value, costs and margins associated with the processing of cocoa paste and butter in Côte d'Ivoire, and integrated it in the real case scenario of a 'basic' private label table, which is the most likely to use such a sourcing strategy on the French market. The results are shown in the diagram below:

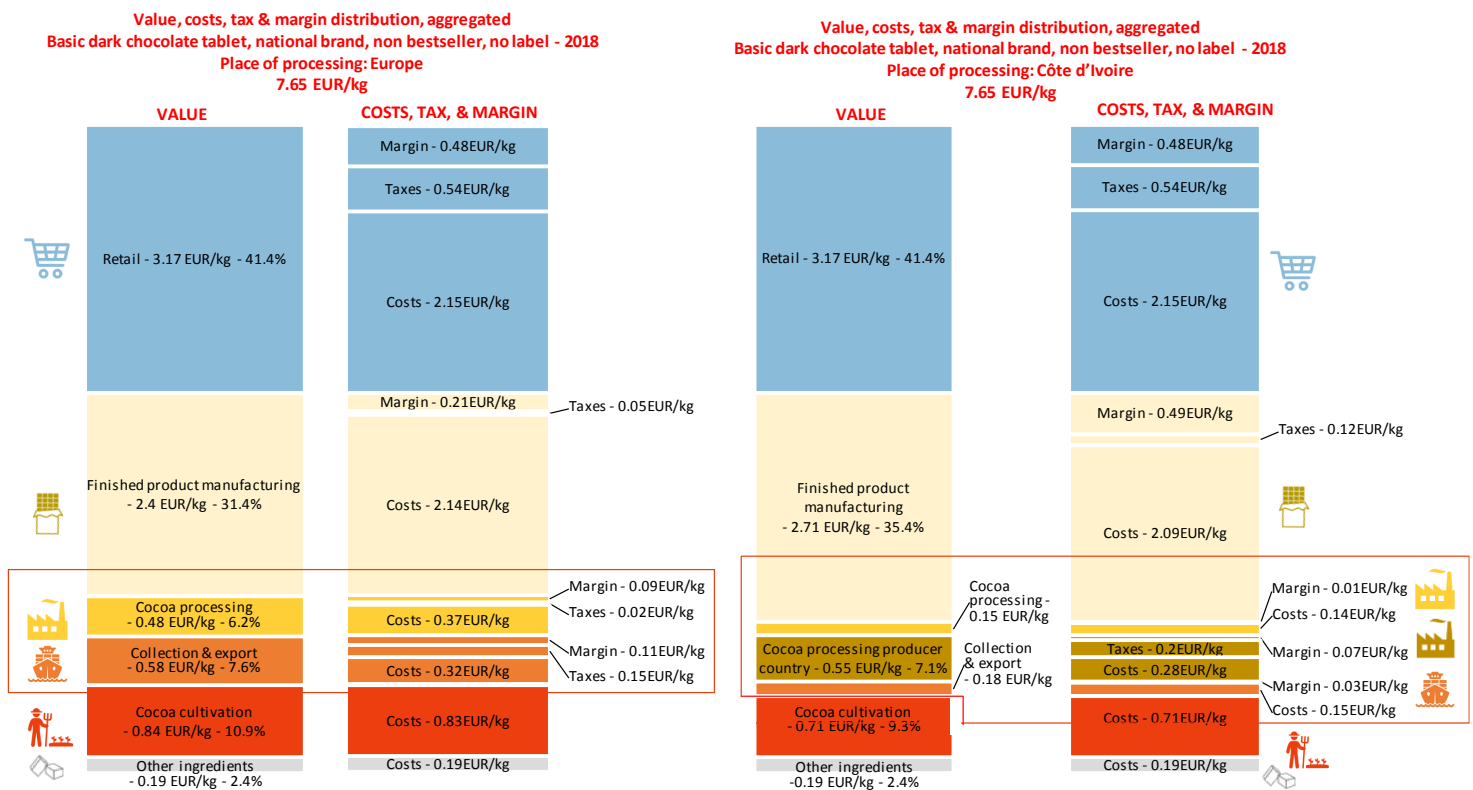


Figure 63. Distribution of value, costs & margins of 'Private label' tablets with 1st processing in Europe and Côte d'Ivoire.

Source: BASIC

As illustrate above, the displacement of the first cocoa processing stages in Côte d'Ivoire (for both mass and butter manufacturing) only shifts 7% of the total value of a 'Basic' tablet into the producing country.

The overall costs and profitability of the first processing staged performed in Côte d'Ivoire does not appear to be much different as when it is done in Europe, as confirmed by our interviews on the ground which tend to show that the lower personnel costs are offset by the need for higher work intensity because of the lower level of infrastructure and automation (i.e. higher number of employees per kg of cocoa processed) and by the higher costs of investments (machinery...) and supplies (packaging...).

Looking at the distribution of value, as well as costs and net margins for all actors downstream (chocolate maker, finished good manufacturer, retailer), they seem to vary very little between the two configurations, except for the National Brand profit which seems higher when processing is done in Côte d’Ivoire.

As for the 2 previous factors, the country of first processing does not seem to have any significant impact on the overall distribution of value, costs and margins.

Evolution of cocoa prices on world markets

The last factor to be investigated is the evolution of cocoa prices on the world market. In order to analyse this factor, we have estimated the **evolution of prices at the key stages of the cocoa chain** over the past 5 years (2014 to 2018) for the **‘averaged’ dark chocolate tablet sold by retailers**. The results are as follows:

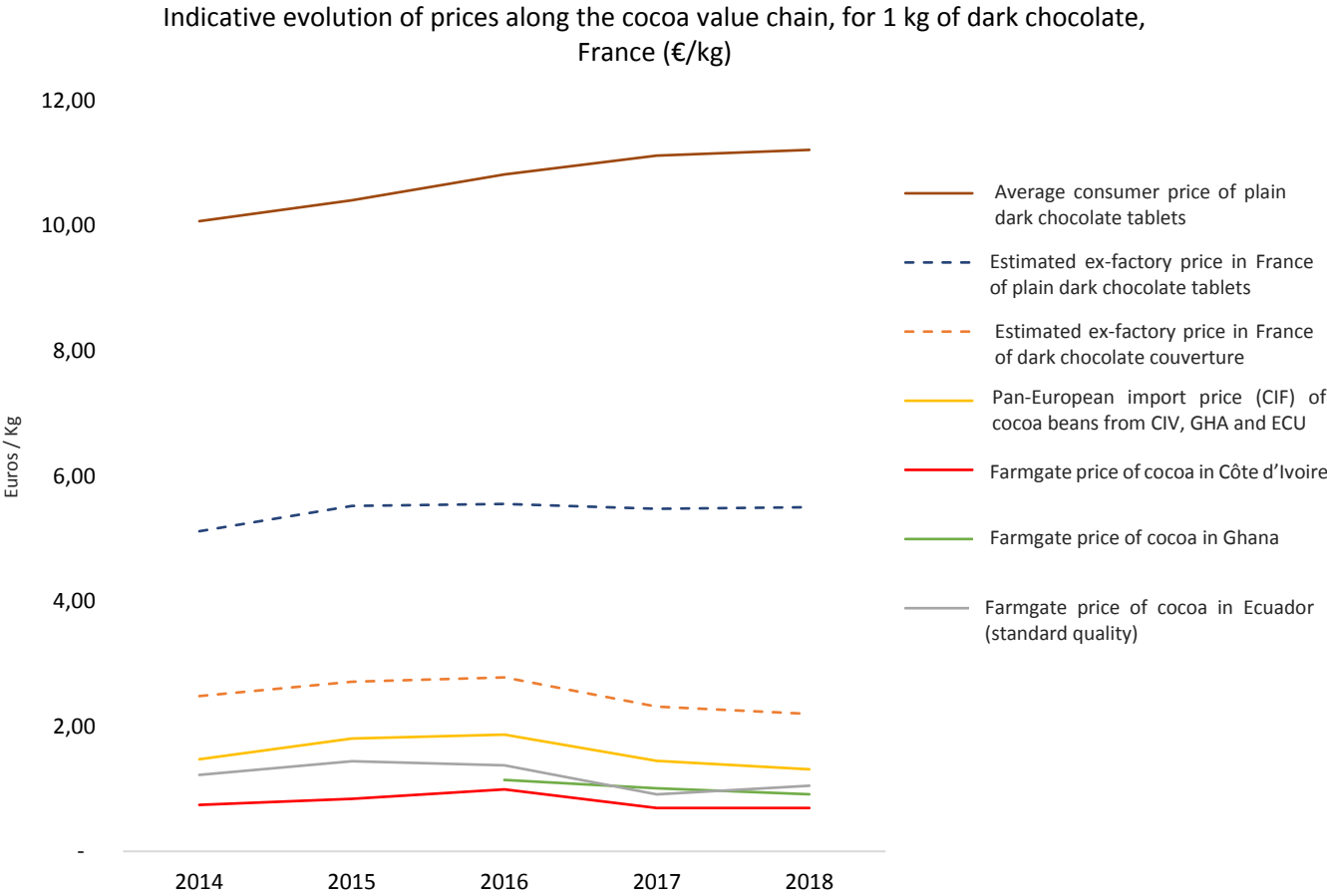


Figure 64. Evolution of the prices of the ‘averaged’ plain dark chocolate tablet at different stages. Source: BASIC

- The above diagram shows the evolution:
- **at the top of the graph, of the consumer price** of the ‘averaged’ dark chocolate tablet sold by retailers in France,
 - **at the bottom, of the farmgate prices in 3 countries** – Côte d’Ivoire, Ghana and Ecuador – **with above them (in yellow) the average import price** in Europe of the cocoa beans originating from these 3 origins

In between, two indicative lines have been added:

- **in 'dotted' orange we reconstructed the average price of industrial chocolate couverture**, based on our modelling of cocoa processing stages (which assume that the final price of chocolate couverture is somehow proportionate to the prices of cocoa beans, hence the orange curve is quite parallel to the yellow one).
- **In 'dotted' blue, we mapped the Prodcom data** which provide the selling price to retailers by the industry of all finished plain chocolate tablets manufactured in France. **This curve is also quite indicative** as part of these tablets might be exported or sold to buyers other than retailers (artisans...), and a minority part of companies do not report their annual sales.

The main learning of these estimations is that it is apparently **the 2 last actors in the cocoa chain – brands and retailers – appear to clearly play a 'one-way' buffering role:**

- When the prices have increased on the world cocoa market (between 2014 and 2016), they appear to have compensated with a lowering of their gross margin.
- However, the reciprocal behaviour has not taken place, and **when prices have decreased on world cocoa markets, the price to consumers has continued to increase, thereby enabling these actors to regain their share of value and even extend it further.**

To illustrate, between 2016 and 2018, while the average consumer price has increased by 3.6% (from 10.82 euros/kg to 11.21 euros/kg), the import price of cocoa beans has decreased by 30% (from 1.87 euros/kg down to 1.31 euros/kg). As a consequence, **the estimated combined share of value of brands and retailers has increased by 12%, from 8.04 euros/kg to 9.01 euros/kg.**

Based on this observation, it is difficult to know whether which actor has gained the most from the increase in consumer prices since 2016 while the cocoa prices were decreasing upstream, either the retailers, the brands, or both (as a purely indicative evidence, the Prodcom data seems quite flat as if the two actors had partially gained from the situation).

This finding corroborates a long list of studies on the business models of retailers, especially in France, which have already documented a similar behaviour of brands and supermarket chains in many food products¹⁷².

172 Reports published by the French Observatory on Prices and Margins of Food Products since 2006 and available at <https://observatoire-prixmarges.franceagrimer.fr>

Cliquet, Basset, and Picot-Coupey, Retailing: management et marketing du commerce, 2018.



2.3.2.5. Main learnings on plain dark chocolate tablets

The first **main learning of our investigation is that the biggest share (around 70%) of the total value of plain dark chocolate tablets is associated with the 2 last stages of the chain, retailing and final product manufacturing.** At the other end of the chain, all other upstream stages (farmers, transporters, traders, cocoa processors and chocolate couverture manufacturers) are associated with 30% of the total value for almost all types of dark chocolate tablets analysed.

Regarding **net margins, they are essentially related to brands and retailers which account for almost 90%** of all margins generated along the plain dark chocolate chain, when combined.

Investigating 3 major downstream factors that can influence the distribution of value as well as costs and margins, our analysis shows that all of them appear to have a (very) significant impact:

- type of brand (national brand Vs private label)
- marketing mix (basic, cooking, premium)
- products' sales performance (best-sellers Vs other products)

The results **across the different cases investigated highlight that :**

- **both value and margins can vary strongly for retailers and National Brands** (as well as manufacturers of Private Label), **depending on the 3 downstream factors** listed above:
 - o from sell at loss for retailers in the case of 'Basic' plain dark chocolate tablets,
 - o up to very high margins for 'Premium' plain dark chocolate tablets (for both retailers and 'National Brands', regardless of the product performance).
- **but remain quite stable** (same order of magnitude) **for upstream actors: cocoa farmers, transporters, traders, cocoa processors and chocolate couverture manufacturers.**

When compared with downstream factors, the main upstream factors analysed seem to have a very limited impact on the distribution of value and costs along the chain, whether it is:

- the cocoa content,
- the country of origin (even when highlighted on the packaging of the finished good),
- the country of 1st processing,

These results seem to be mostly explained by the combination of three key elements:

- firstly, the main leverages **for value creation in the cocoa/chocolate chain appear to be the intangible assets developed by brands, and to a lesser extent retailers. They enable these two actors to achieve higher selling prices** to final consumers, thanks to heavy investments in advertisement and R&D that strengthen their brand and product reputation, which is in the end what consumers seem to value more than the intrinsic features of the chocolate they eat.
- secondly, the capacity of upstream cocoa processors and chocolate manufacturers to **offer a wide variety of qualities of semi-processed products while keeping low costs per kg, thanks to their large industrial capacity and high economies of scale, which have enabled to democratise quite largely the world consumption of chocolate over the past decades.**
- the **consumers, because of the marketing and advertisement made by major brands, consider that the percentage of cocoa is what matters most and defines the quality of chocolate tablets sold by retailers** (especially in the premium segment) **and not the terroir or the work of farmers.**

2.3.3. Milk chocolate tablets from mixed origins

2.3.3.1. Modelling of the plain milk chocolate category

In order to investigate the plain milk chocolate tablet category, we have followed the exact same methodology as for plain dark chocolate tablets, starting with a detailed analysis of the different market sub-categories associated with milk tablets.

It enabled us to develop the following mapping for the French market:

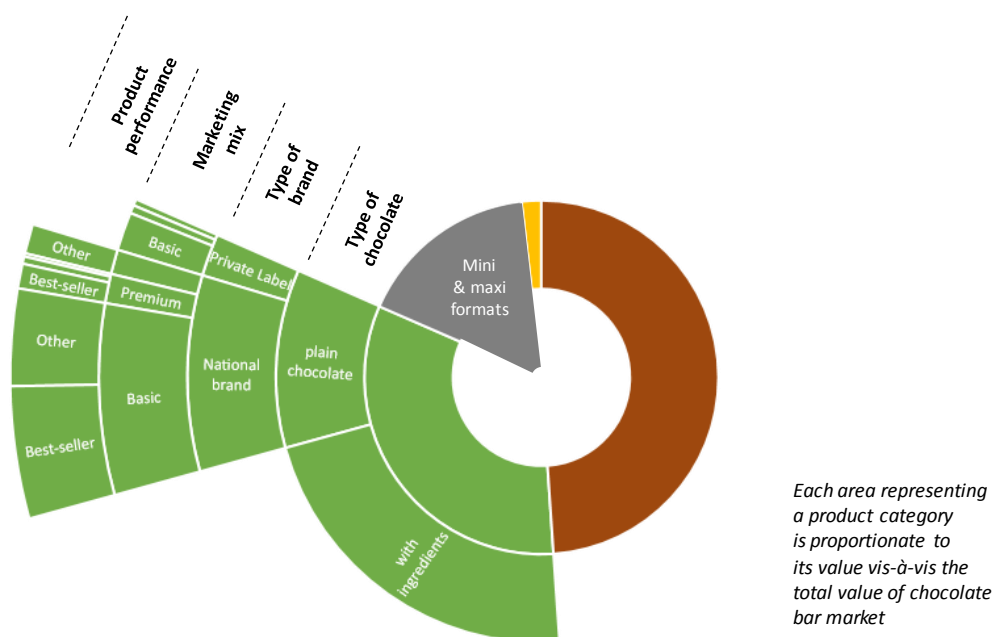


Figure 65. Mapping of the dark chocolate tablets category on the French retail market. Source: BASIC

As illustrated above, the **milk chocolate tablet category accounts for approximately 35% of the French retail market sales of chocolate tablets.**

Plain milk chocolate tablets make up around one third of this category (i.e. around 10% of total tablets sales), the rest corresponding to tablets ‘with ingredients’ (nuts...).

As for dark chocolate tablets, only standard format of 100g and 200g tablets are included in this scope, and specific formats have been left out (mini and maxi tablets).

As for plain dark chocolate, we have disaggregated the plain milk chocolate tablet into the following sub-categories:

- **First, we have separated ‘National brands’** (which make up approximately 84% of sales, a bit more than for plain dark chocolate) **from ‘Private labels’**
- Then, we have **differentiated essentially between the 3 market segments: ‘Basic’, ‘Cooking’ and ‘Premium’.**
- Finally, in the case of ‘National brands’, **we have differentiated between ‘Best-sellers’ and other products** (non best-sellers).

The details of this classification are described in more depth in the previous chapter on plain dark chocolate tablets, in the sub-chapter “investigation of the downstream factors influencing the distribution of value”.

2.3.3.2. "Averaged" results for plain milk chocolate tablets

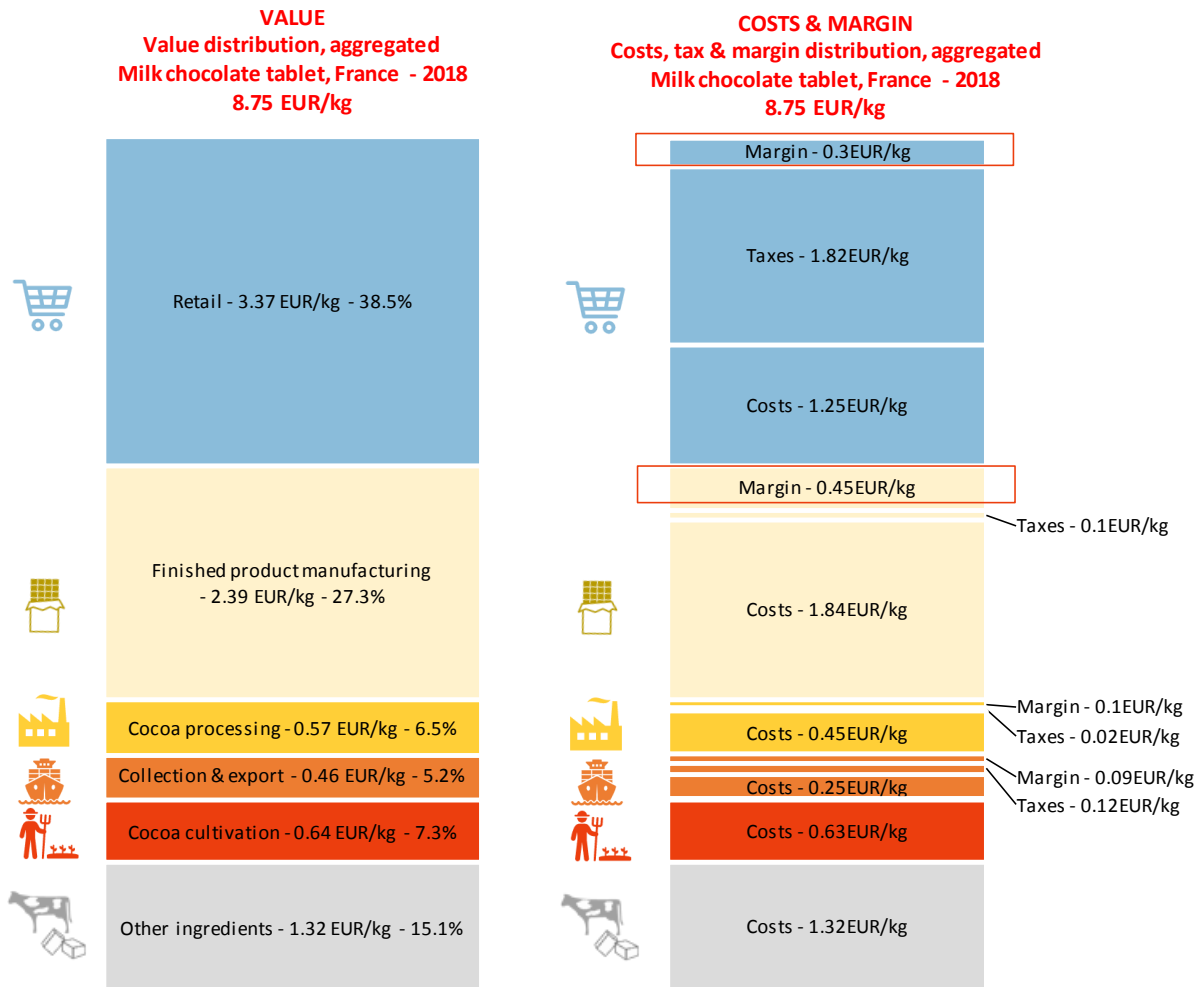


Figure 66. Distribution of value, costs & margins of 'averaged' plain milk chocolate tablets. Source: BASIC

The results of our estimations of value, costs and margins from cocoa farmers to end consumers for an 'averaged' **plain milk chocolate tablet** are shown in the above diagram.

As for plain dark chocolate, the quantified estimates are organised in two separate bar charts:

- **The bar chart on the left displays the distribution of the value** generated by each stage along the chain (from agricultural production to retailing)
- **The bar chart on the right provides a consolidated view of the costs and margin** related to each stage along the chain, aggregating these different components in 4 groups: costs of operations, taxes and net margins.

These estimates are based on:

- detailed estimates across all the different product sub-categories (national brands and private labels; basic and premium segments; best-sellers and other products),
- average recipes associated with each sub-category (cocoa paste & butter, sugar and milk),
- average cocoa sourcing modelled for the French market, based on the mix of 4 origins.

These results are also based on the publicly available data collected and the detailed modelling of all value and costs components for each stage along the chain (full transparency on assumptions made,

ratios used, calculation formulae modelled, sources of information collected and limitations are provided in the 'Cocoa Value Chain Calculator' released together with this study).

As shown in the previous diagram, we can observe the following main elements on the 'averaged' plain milk chocolate tablets sold in French retail:

- **First, the comparison with dark chocolate tablets highlights two main significant differences:**
 - o The **Value Added Tax (VAT) is almost 4 times higher** (20% instead of 5.5%) as milk chocolate, as opposed to dark chocolate, is not included by French authorities in the basket of 'first necessity' food products which is associated with a low level of VAT
 - o The **cost of the additional ingredient – milk – is almost equivalent to cocoa in euros/kg**, hence the substitution of one by another does not create more room for profitability (quite the contrary in real facts).
- **The share of value accruing to cocoa farmers** (used to cover their costs of production and living) is **slightly above 7%** of the total value and represents 0.64 euros/kg of final product because of the lower cocoa content in the milk chocolate tablets.
- **The share of value dedicated to the 3 first stages of the cocoa chain**, up to the manufacturing of chocolate couverture in Europe is **around 19%** of the total value (1.67 euros/kg).
- **The share of value dedicated to the 2 last stages of the chain** – final product manufacturing and retailing – seems to be accruing more to the former (27.3%) than to retailers (18.5%) **when VAT is not taken into account.**
- The **total amount of tax paid** along the chain amounts to almost **24% of the total value** (and greater than 2 euros/kg), which is three times the case of dark chocolate, essentially because of the higher Value Added Tax paid in France.
- The **total amount of net margins** generated along the chain accounts for 10.6% of the total value (around 0.97 euros/kg), which is more than twice less than in the case of plain dark chocolate, the vast majority (almost 80%) being generated by retailers and final product manufacturers.

In order to better understand and analyse the different components of these quantified estimations, we have successively investigated the influence of the same variables as for plain dark chocolate:

- In the downstream part of the chain: type of brand, marketing mix and sales performance of products (for national brands)
- In the upstream part of the chain: cocoa content in the recipe, country of origin, country of first processing and evolution of cocoa beans prices on the world markets

The results of these investigations are detailed in the following chapters.

2.3.3.3. Investigation of downstream factors influencing the distribution of value, costs & margins

Type of brand : National brand Vs private label

The first investigated factor is the type of brand, i.e. the distinction between National Brands and Private Labels, which respective characteristics are described in the section 2.3.2.3. on plain dark chocolate tablets.

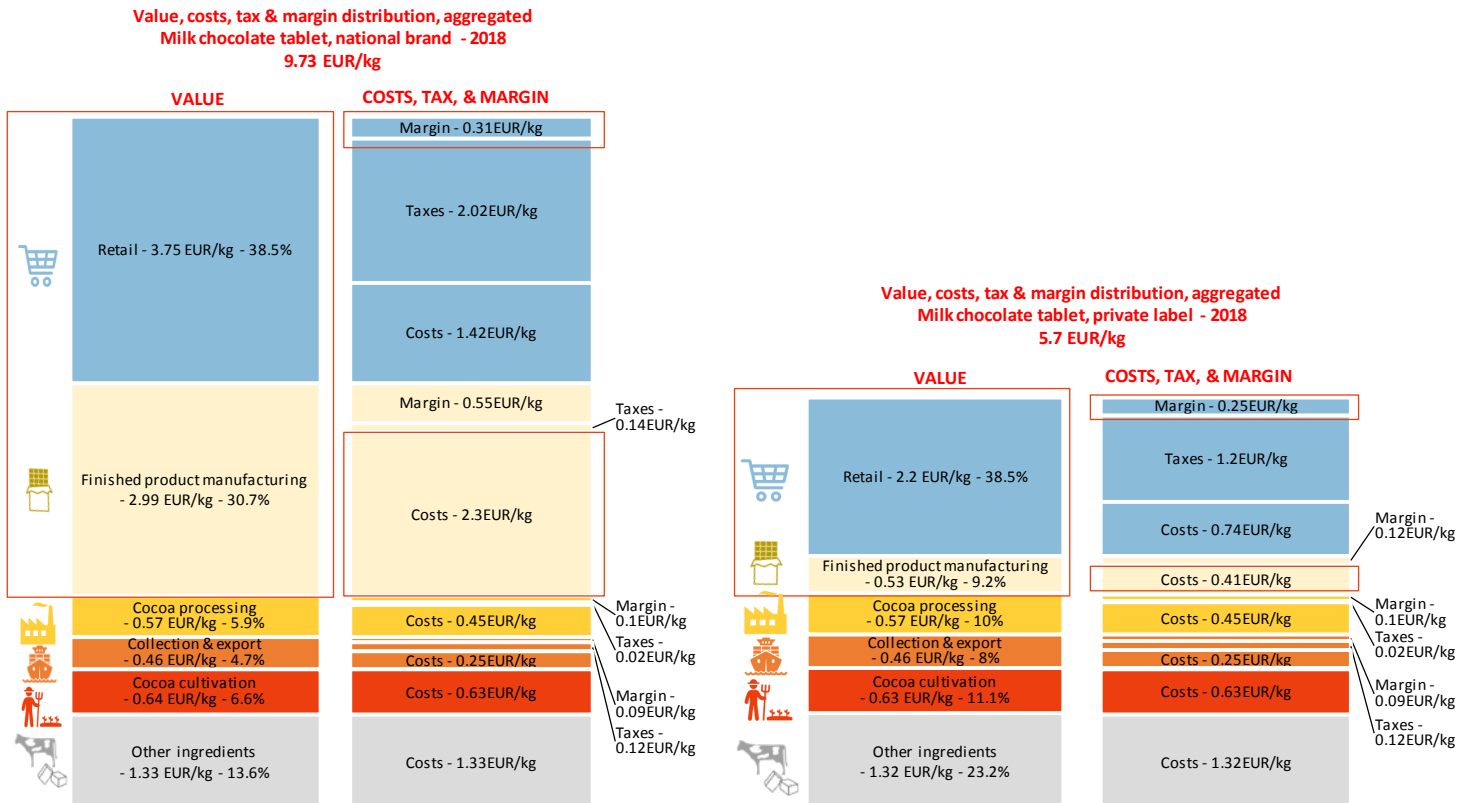


Figure 67. Distribution of value, costs & margins of 'National brands' Vs 'Private Label' plain milk chocolate tablets.
Source: BASIC

The results obtained for plain milk tablets are quite aligned with the findings for plain dark tablets and show the **sheer difference in consumer prices between the two sub-categories:**

- whereas the average final price of National Brand milk chocolate tablets reaches 9.73 euros/kg,
- the Private label tablets are priced just only 5.7 euros/kg, hence 1.7 times cheaper than their branded competitors

The **retailers' share of value for plain milk chocolate tablets is the same between the two product categories when expressed in percentage – 38.5% – and is thus inferior in euros/kg for 'Private labels'** because of the price difference with 'National Brands' (whereas for dark chocolate, retailers apparently manage to generate the same value in euros/kg in both cases):

However, **retailers appear to generate almost the same level of net margin from their 'Private Labels' (0.25 euros/kg) as from the 'National Brands' plain milk tablets (0.31 euros/kg),** showing that they are **apparently as profitable in the eyes of retailers** (as for plain dark chocolate).

At the other side of the chain, **all upstream stages combined** (from cocoa growers to chocolate couverture) **amount to an almost similar share of value of 1.67 euros/kg** for 'National brands' and 'Private labels' (the similarity being a result of estimates and not built in the model we developed). The **share of value accruing to these upstream stages, if expressed in percentages**, highlights a clear difference between the two product sub-categories: :

- whereas for **'Private Labels' products, 29.1% of the total value is attributed to the upstream stages from cocoa growers to chocolate couverture manufacturing,**
- **only 17.2% of the total value accrues to these same upstream stages for 'National Brands' products.**

As for plain dark chocolate tablets, this clearly shows the strong influence of intangible value creation which 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 manufacturing of mass, butter and even chocolate,
- **the 'National Brands' are able to achieve a much 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 brand and product reputation, which is what consumers seem to value more than the intrinsic features of the chocolate they eat.** This last point has been confirmed through our interviews with experts from the sector who have stressed the difference of consumer panel results, depending on whether they are blind tested or see the packaging/brand of the product they taste.

In the case of 'Private Labels', **the main adjustment variable is the final product manufacturing stage.** 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:

- the 'Private Label' final manufacturing is associated with a share of value of 0.53 euros/kg and operational costs amount to only 0.41 euros/kg (due to very limited advertisement costs, absence of sales force expenses and reduced R&D).
- whereas the share of value for the final manufacturing of 'National brand' products reaches 2.99 euros/kg with operational costs of 2.30 euros/kg (i.e. more than 5 times more)

As for dark chocolate, the **business model of 'National Brands'** is sustained by high expenses in advertisement and research & development **which amount to almost 16% of the selling price of the tablet to retailers (equivalent to 10% of the end price of branded milk chocolate tablets)**, according to the interviews we have conducted and the advertisement expenses consolidated by Kantar.

This illustrates the fact that the **business model of 'National Brands' is mainly value-base, as opposed to the volume-based profitability model of 'Private Label' manufacturers** (and the relationship of these manufacturers with retailers appears more collaborative and less confrontational than the one of National Brands with retailers).

These differences in business models are reflected in our detailed estimates of the operational costs for both types of actors, as shown in the diagram below:

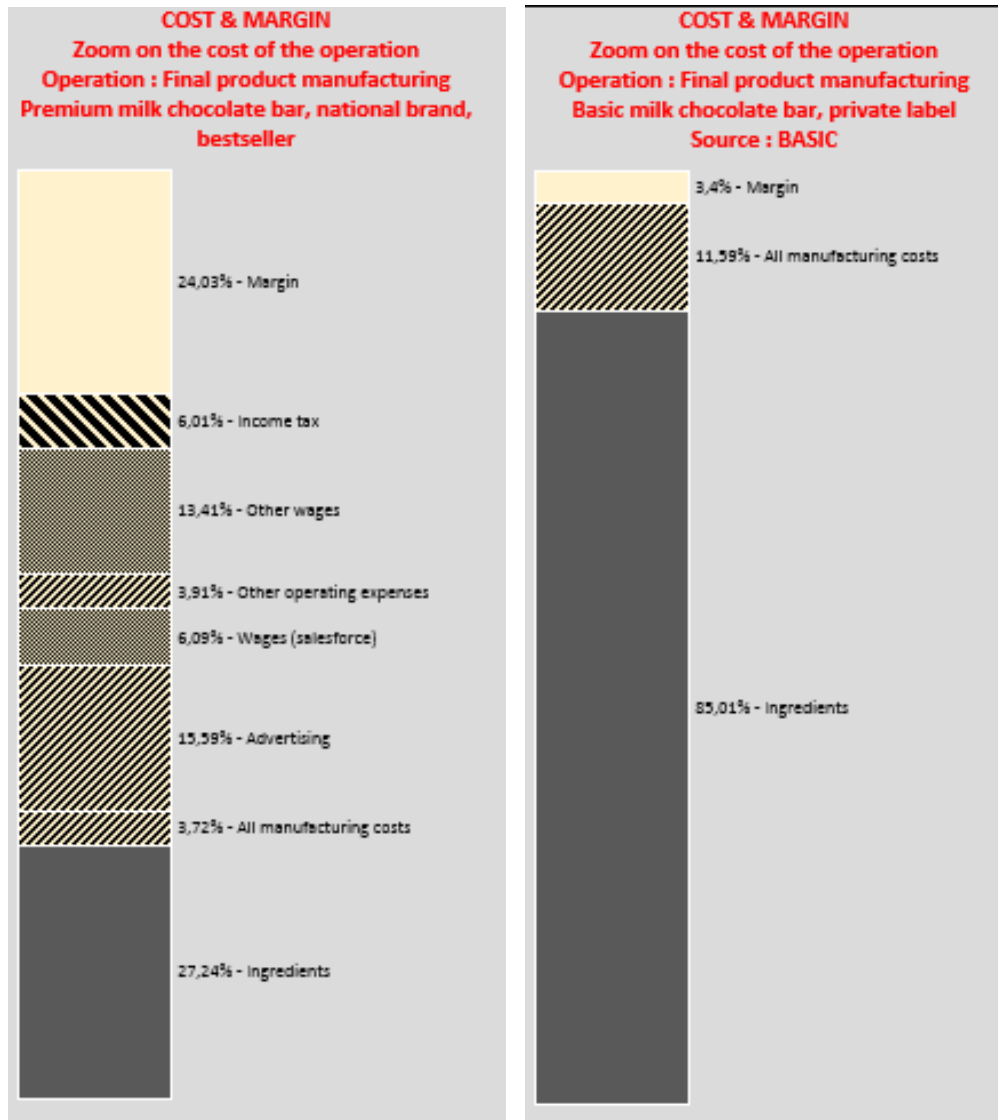


Figure 68. Detailed costs & margins for 'National brands' Vs 'Private Label' manufacturer in the case of 'premium' milk chocolate tablets. Source: BASIC

Marketing mix : Basic, Cooking and Premium segments

The **second factor under investigation is the segmentation of products** achieved through different sets of marketing mix characteristics described in the section 2.3.2.3. on plain dark chocolate tablets.

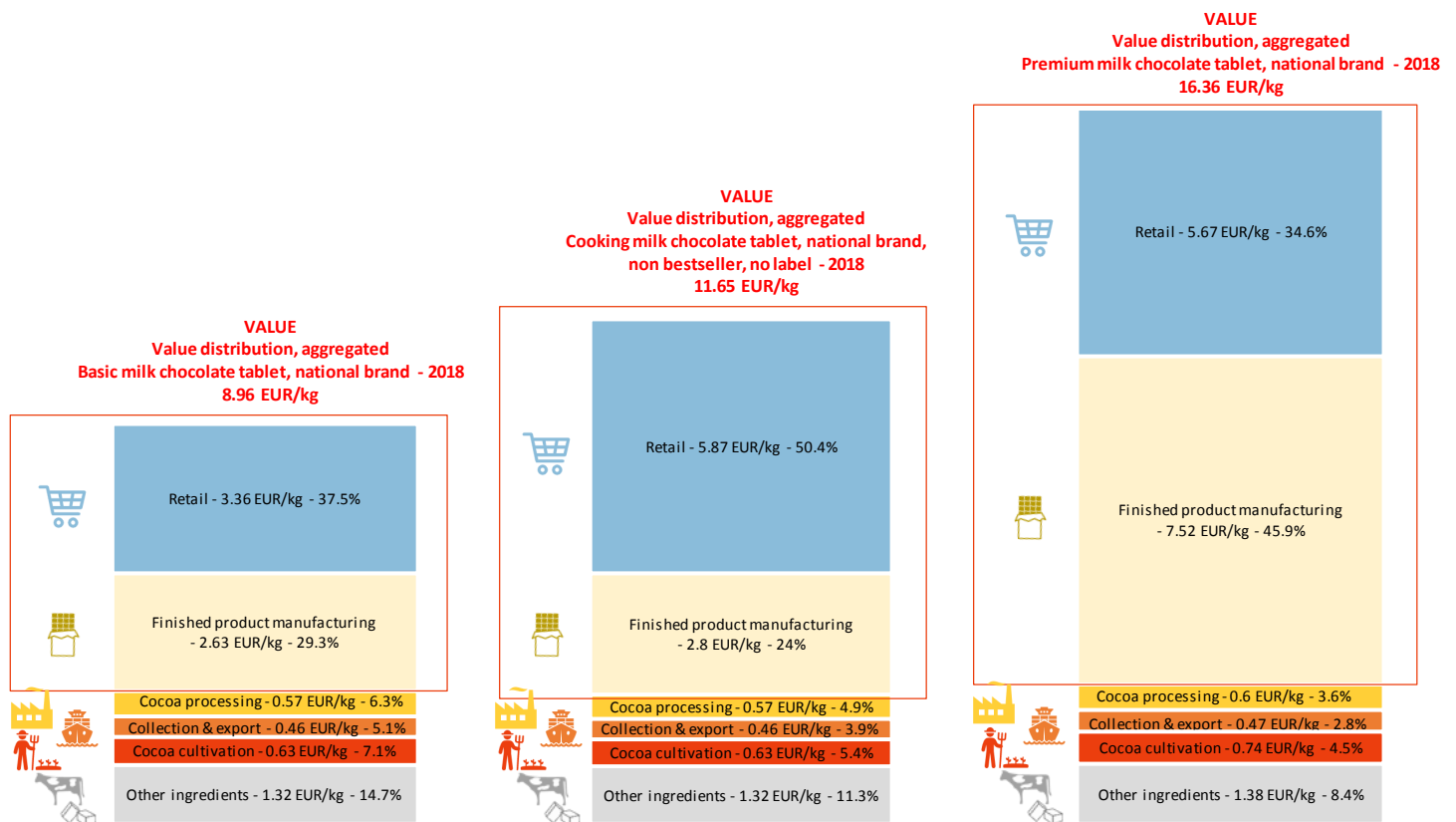


Figure 69. Distribution of value for 'basic', 'cooking' & 'premium' milk chocolate tablets of National Brands. Source: BASIC

The results of our estimates for **National Brands** are quite aligned with the results obtained for plain dark chocolate, showing that for plain milk chocolate too there are **significant consumer price differentials among the 3 segments** (somehow less amplified than for dark tablets):

- whereas the average final price of 'Basic' milk chocolate tablets is 8.96 euros/kg,
- the 'Cooking' tablets have an average price of 11.65 euros/kg,
- and 'Premium' milk chocolate tablets reach an average price as high as 16.36 euros/kg

As for plain dark chocolate, **this price difference at the end of the chain, has very little connection with the share of value dedicated to chocolate making.**

It appears that **the greater value paid by consumers for 'Premium' milk tablets is not related to additional costs/value upstream for chocolate manufacturing, but mainly to the intangible value attached to these 'Premium' brands**, as described in details in the earlier section on brand type, and confirmed by our interviews. As for dark chocolate, the main leverage **for value creation in the 'Premium' segment lies in the reputation of the brand and its attraction towards consumers.**

These intangible leverages downstream are combined with **industrial leverages upstream** which enable cocoa processors and chocolate manufacturers to **offer of a wide variety of qualities of semi-processed products while keeping low costs per kg thanks to high economies of scale** (a key feature/asset of the sector and a result of its long history of industrialisation since the 19th century):

- for 'Basic' and 'Cooking' tablets of National Brands, the value associated with all upstream stages from cocoa farmers to chocolate couverture manufacturing amounts to 1.66 euros/kg,

- for 'Premium' tablets, this value is almost similar, amounting to 1.81 euros/kg, to be compared with the much higher price differential of 7.4 euros/kg at the level of end consumers (from 8.96 euros/kg for 'Basic' tablets up to 16.36 euros/kg for 'Premium' tablets).

The high additional value generated by 'Premium' milk tablets seems to be mostly - and quite evenly - distributed between the two last actors in the chains, 'National Brands' and retailers, as shown by their respective share of value per market segment, expressed in percentage:

- for 'Basic' milk chocolate tablets: 29.3% for the National Brand Vs 37.5% for the retailer
- for 'Cooking' milk tablets: 24% for the National Brand Vs 50.4% for the retailer
- for 'Premium' milk tablets: 46.2% for the National Brand Vs 34.6% for the retailer

These trends are further reflected in the distribution of costs and net margins, as illustrated below:

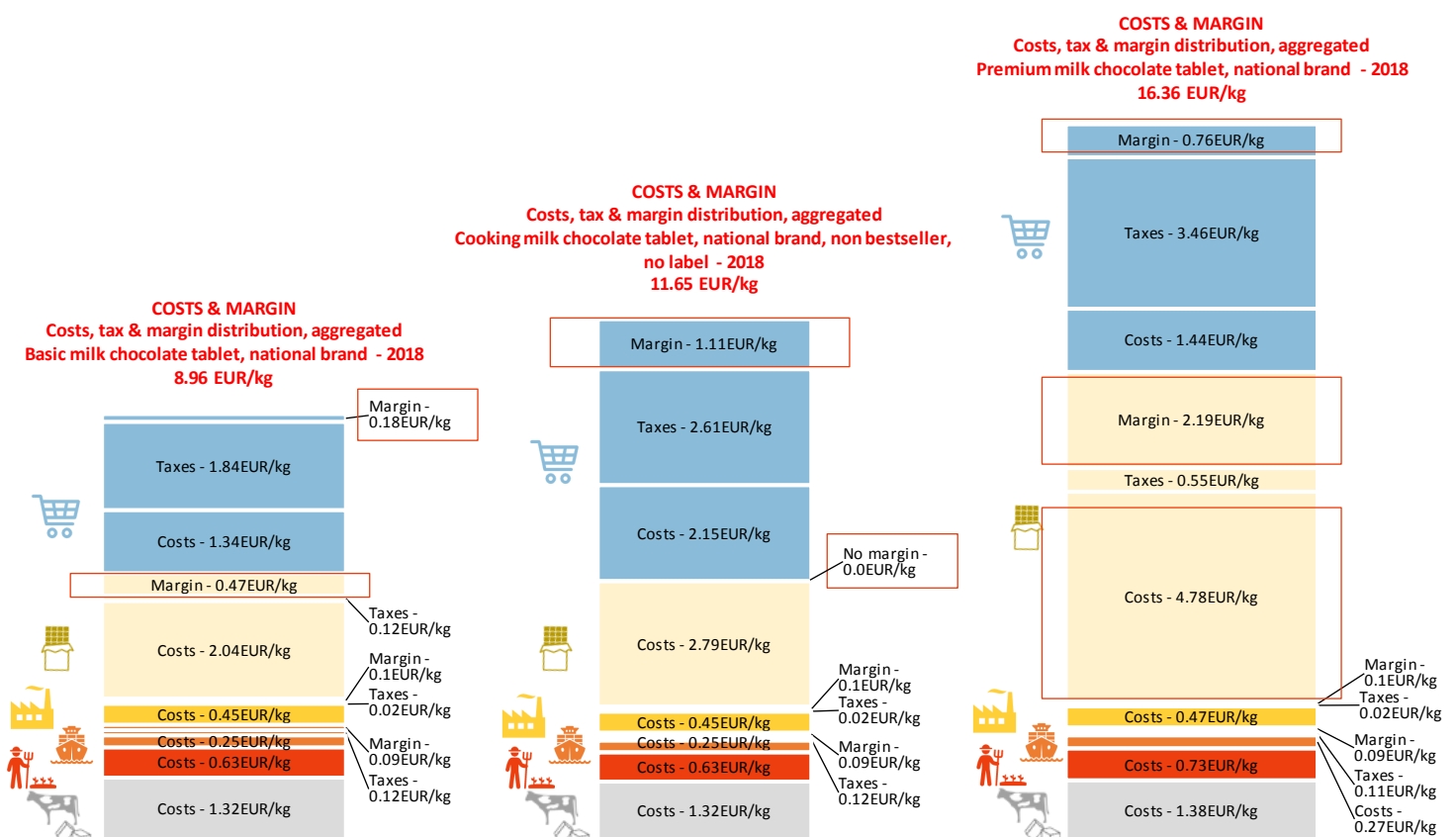


Figure 70. Costs & margins for 'basic', 'cooking' & 'premium' milk chocolate tablets of National Brands. Source: BASIC

As illustrated above, the downstream price differentials of National Brands and retailers between the 3 segments of plain milk chocolate is associated with an amplified differential in net margins:

- 'Basic' milk chocolate tablets are associated with an average 0.47 euros/kg of net margin for 'National brands' and 0.18 euros/kg for retailers (very close to the results for dark chocolate),
- 'Premium' milk tablets are associated with average net margins of 2.19 euros/kg of net margin for 'National Brands' and 0.76 euros/kg for retailers (4.7 times higher than 'Basic' tablets for National Brands, and 4.2 times higher for retailers). The lower amplification of retailers' margins for milk chocolate than for dark chocolate can be explained by its high level of VAT (20% for milk compared to 5.5% for dark) and the relatively low level of consumer price of milk chocolate (because of the competition between retailers)

The case of 'Cooking' milk chocolate tablet is specific and cannot be directly compared to 'Basic' and 'Premium' milk tablets as there is no best-seller and the sales level is quite low.

In addition, the previous diagrams clearly illustrate that the **greater value created by higher quality segments are associated with limited additional costs (especially for retailers)**, with the exception of higher investments in advertisement for 'Premium' tablets, according to the interviews we have conducted (which explain the doubling of finished goods' operational costs (from 2.04 euros/kg in the case of 'Basic' tablets to 4.78 euros/kg for 'Premium' ones, similar figures as the ones obtained for plain dark chocolate).

This is further reflected in our detailed estimates of operational costs for both types of actors, as shown below in the example of a 'Basic' Versus 'Premium' milk chocolate tablet:

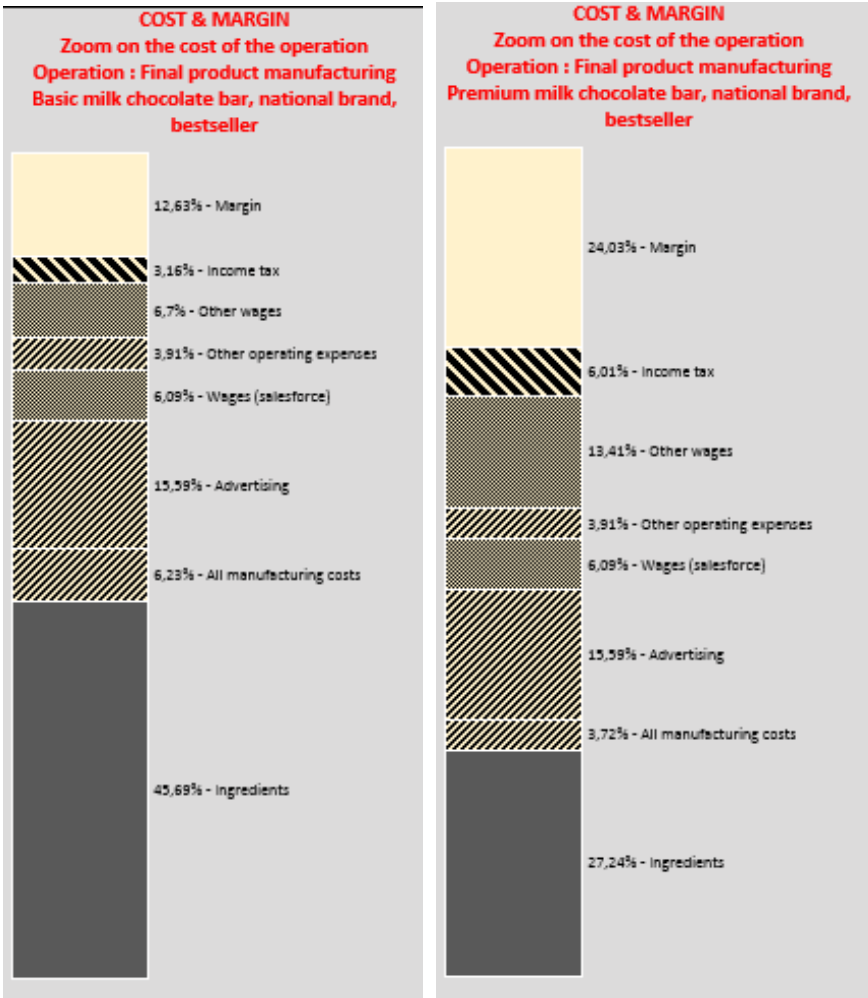


Figure 71. Detailed costs & margins for 'National brands' for 'basic' and 'premium' dark chocolate tablets. Source: BASIC

Similar overall findings, amplified to a certain degree, are observed in the case of 'Private labels' as illustrated below with estimates for the 2 segments: 'Basic' and 'Premium' (in particular regarding the margin of the retail stage which is apparently much higher for 'Premium' than for 'Basic' tablets, while the margin of the final product manufacturing stage is very similar across the 2 segments).

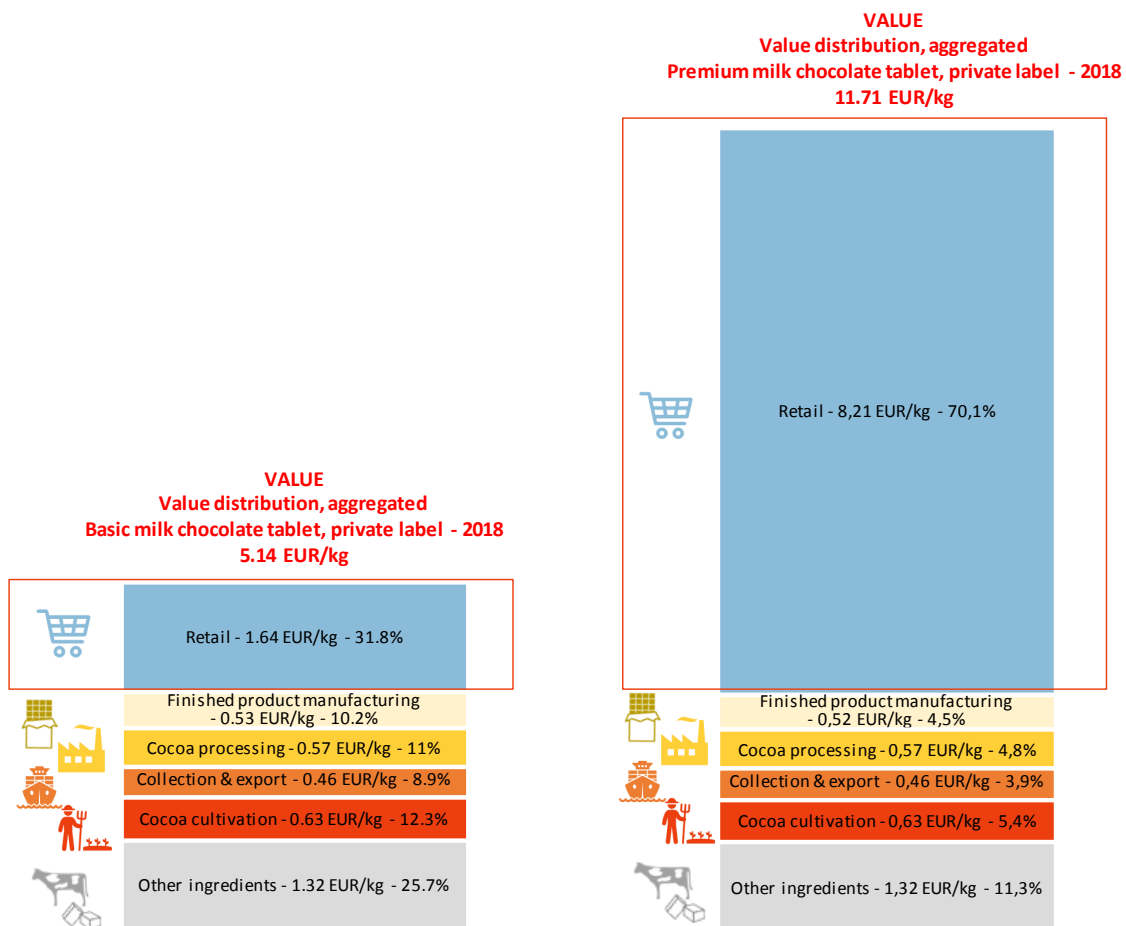


Figure 72. Distribution of value for 'basic' and 'premium' milk chocolate tablets of Private Labels. Source: BASIC

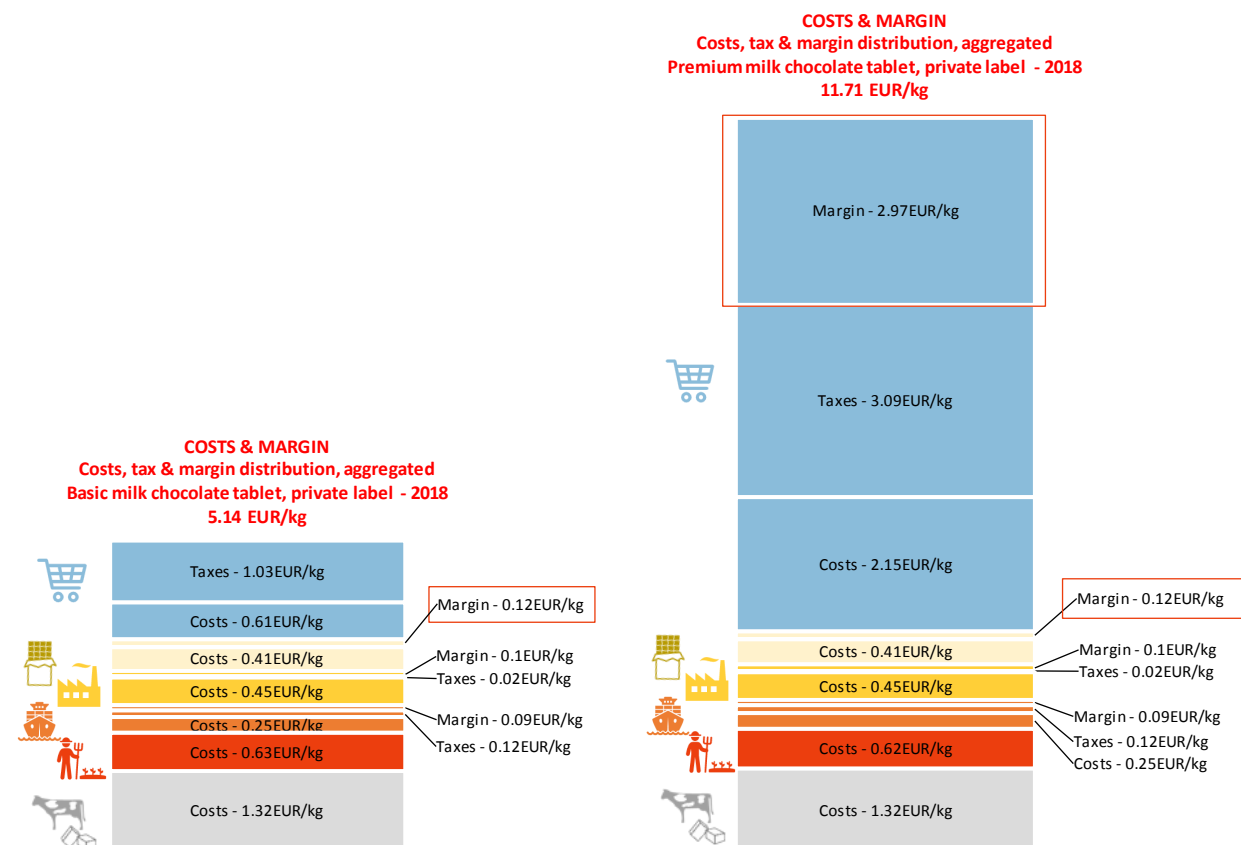


Figure 73. Costs & margins for 'basic' and 'premium' milk chocolate tablets of Private Labels. Source: BASIC

Product performance : Best-sellers Vs other products (in the case of National Brands)

The last main downstream variable analysed is linked to the commercial performance of products, through the differentiation of ‘best-seller’ products from other products, which respective characteristics are described in the section 2.3.2.3. on plain dark chocolate tablets.

Our estimates for the distribution of value, costs and margins of ‘Basic’ plain milk tablets are as follows:

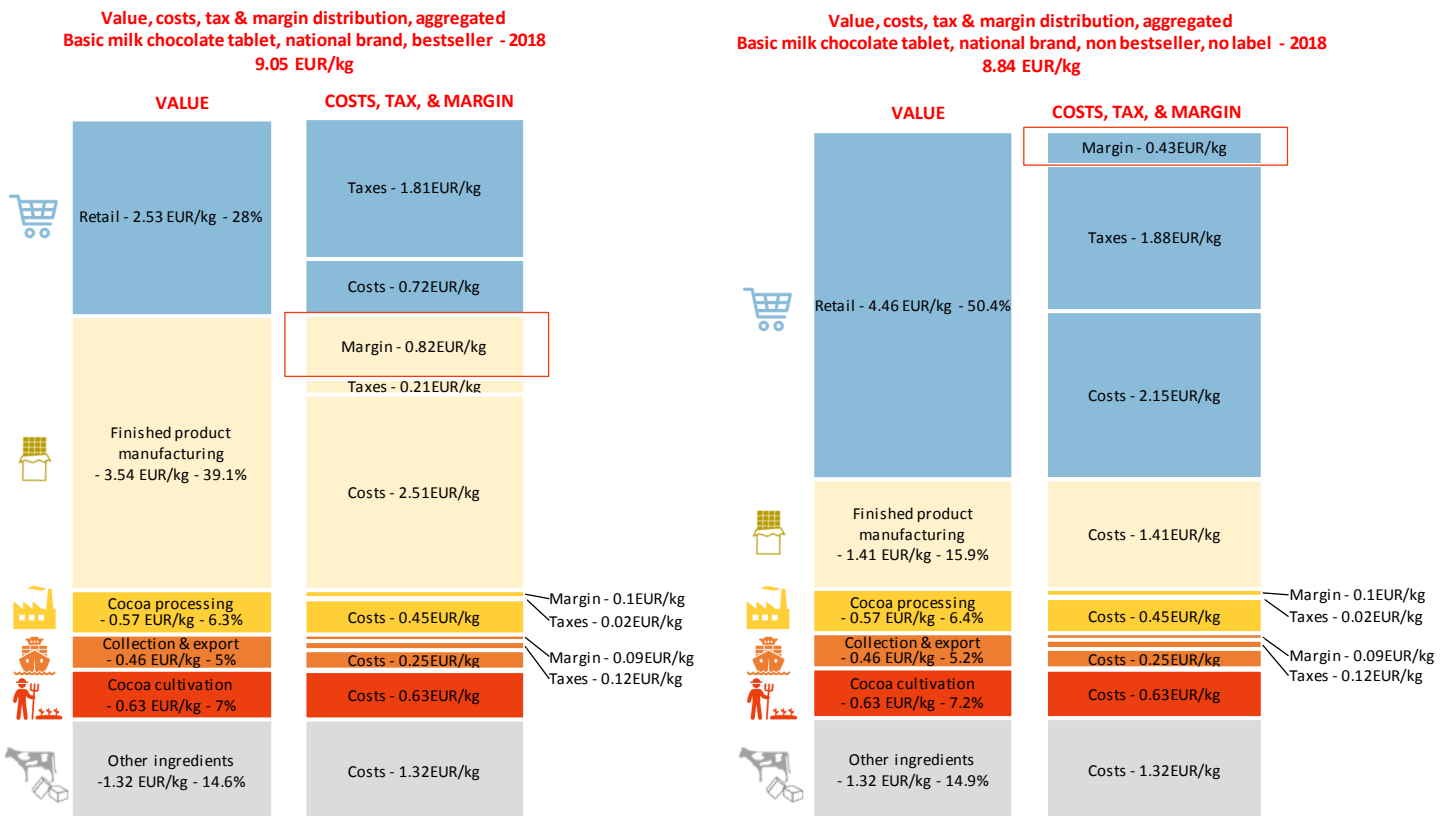


Figure 74. Distribution of value, costs & margins of ‘best-seller’ Vs other ‘basic’ plain milk chocolate tablets. Source: BASIC

As for plain dark chocolate tablets, our estimates show the **significant differences of value share associated with the two last stages of the chain** (brands and retailers) between the two categories of products:

- whereas for the ‘Best-seller’ product, the majority of the share of value accrues to the ‘National Brand’ (39.1%) as opposed to the retailer (28%),
- the situation is the opposite across other products for which the retailers manage to generate the biggest share of value (50.4%) compared to ‘National brands’ (15.9%)

This differential is not impacted by the final price to consumers, as both product groups have roughly the same price: 9.05 euros/kg for the ‘Best seller’ vs. 8.84 euros/kg for other products.

These variations **can be explained by the differences in competitive environment between the two groups of products** (see section 2.3.2.3. for further details).

The differences are even more visible when analysing the distribution of costs and margins in the two cases for ‘basic’ milk chocolate tablets:

- For the 'Best-seller' product, retailers appear to make no net profit, barely managing to cover their costs (of employees, real estate, energy, logistics...) whereas the 'National brand' apparently manages to make a profit of 0.82 euros/kg (accounting for 9.1% of the final price).
- In comparison, for other products, it is the 'National Brand' which appears to make no profit and to barely cover its costs of production, whereas the retailer apparently generates a significant net margin of 0.43 euros/kg (i.e. 4.9% of the final price).

This situation is mirrored in the case of 'Premium' milk chocolate tablets, as illustrated below:

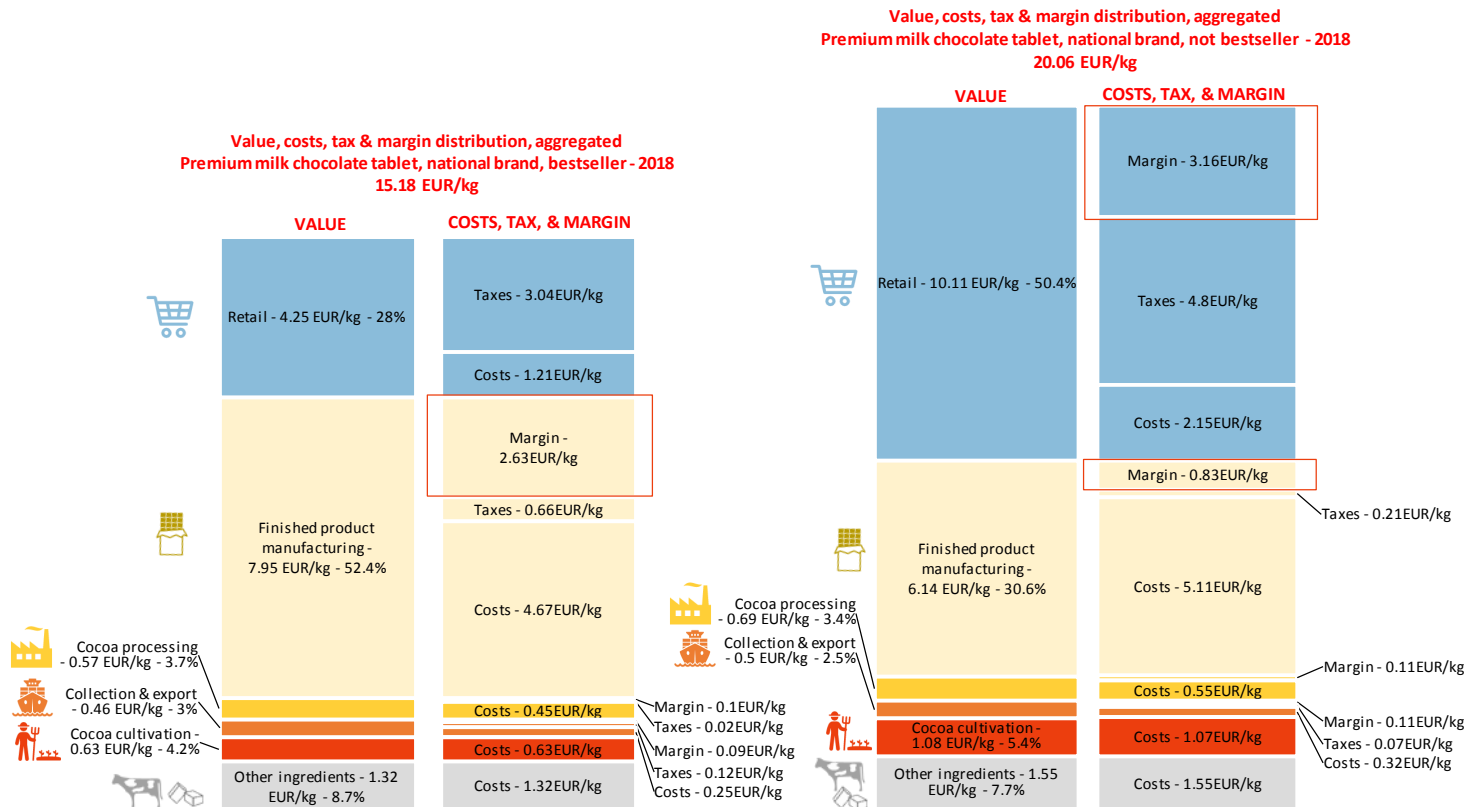


Figure 75. Distribution of value, costs & margins of 'best-seller' Vs other 'Premium' milk chocolate tablets. Source: BASIC

The case of 'Best-seller' in the plain milk chocolate 'Premium' segment is quite similar to the 'Basic' segment, with some specificities linked to its high price to consumers:

- In the case of the 'best-seller' plain milk chocolate tablet, the 'National Brand' has the upper hand and seems to achieve a high level of net margin: 2.63 euros/kg corresponding to 17.3% of the final price (a similar level as for the best-seller plain dark chocolate premium tablet). One specificity though is the relatively lower price of the 'Best seller' compared to other products, which can be explained by the high level of competition among retailers to offer this product at the lowest possible price.
- In the case of other products, the retailers are on top of the negotiation and apparently generate a level of net margin of 3.16 euros/kg, amounting to 15.7% of the final price (to be compared with "only" 0.83 euros/kg of net margin for 'National Brands').

These different estimates illustrate the **difficult situation of smaller brands which do not possess a 'Best-seller' in their portfolio, even more for milk chocolate than for dark chocolate**: pressured by the highly competitive environment in the 'Basic' segment, they can only sustain their business model (and their lower economies of scale) if they manage to enter and remain in the 'Premium' segment.

Regarding the rest of the chain upstream (from cocoa cultivation to chocolate making), there is apparently almost no difference between ‘Best-sellers’ and other products across the 3 segments - ‘Basic’ as well as ‘Cooking’ and ‘Premium’ - whether in terms of share of value acquired, or costs, taxes and net margins.

2.3.3.4. Investigation of upstream factors influencing the distribution of value, costs & margins

Contrary to plain dark chocolate tablets, **we have not analysed upstream factors in the case of plain milk chocolate tablets, as most of them were almost not applicable or provide the same results:**

- Regarding the cocoa content, there is a much smaller range of variation in plain milk chocolate tablets than in plain dark chocolate tablets; as a result, this factor was deemed as not being instrumental to our research.
- The same consideration applies to the country of origin which is almost never put forward on the packaging of plain milk chocolate tablets (except in the case of certain labelled products which are analysed in section 2.4).
- Regarding the country of 1st processing, the results are the same as for plain dark chocolate tablets, in direct proportion of the difference in cocoa content between milk and dark chocolate products.
- Finally, regarding the consequences of the evolution of world prices of cocoa, the impact is also the same for plain milk chocolate as for plain dark chocolate tablets.



2.3.3.5. Main learnings on plain milk chocolate tablets

Plain milk chocolate tablets are sold to French consumers at a slightly lower price than plain dark chocolate tablets, although the milk ingredient is as costly as cocoa, and the level of Value Added Tax in France is much higher (20% instead of 5.5% for dark chocolate). This results in a stronger pressure/squeeze of all stages of the chain, including retailers and brands (but to a lesser extent than the other upstream actors).

The last 2 stages of the chain (retailing and final product manufacturing) are associated with the highest margins (albeit lower than for plain dark chocolate tablets):

- Their combined share of **the total value reaches 65% for plain milk chocolate tablets**, while all other upstream stages (farmers, transporters, traders, cocoa processors and chocolate couverture manufacturers) are associated with 20% of the total value – if sugar is not counted in - for almost all types of milk chocolate tablets analysed.
- When combined, they **account for 80% of all margins generated along the chain of plain milk chocolate tablets**.

The 3 major downstream factors that can influence the distribution of value and costs all seem to exert the same significant impacts as in the case of plain dark chocolate tablets, whether it is:

- the type of brand (national brand Vs private label),
- the marketing mix (basic, cooking, premium),
- the products' sales performance (best-sellers Vs other products),

Indeed:

- the **value and margins of plain milk chocolate tablets can vary strongly downstream for retailers as well as National Brands**, depending on the previous variables,
- in contrast, **the distribution of value and margins remains globally the same for upstream actors** (producers, transporters, traders, cocoa processors and chocolate couverture manufacturers).

The type and level of variations observed are the same for plain milk as for plain dark chocolate tablets, with some specificities in the case of the 'Premium' segment, mainly because of the (much) higher level of VAT in France on milk chocolate compared to dark chocolate.

In the same way as for plain dark chocolate tablets, these results seem to be mostly explained by 2 main drivers:

- the main leverages **for value creation in the cocoa/chocolate chain are apparently the intangible assets developed by brands, and to a lesser extent retailers. They enable these two actors to achieve higher selling prices** to final consumers, thanks to heavy investments in advertisement and R&D that strengthen their brand and product reputation, which is in the end what consumers seem to value more than the intrinsic features of the chocolate they eat.
- the capacity of upstream cocoa processors and chocolate manufacturers to **offer a wide variety of qualities of semi-processed products while keeping low costs per kg, thanks to their large industrial capacity and high economies of scale, which have enabled to democratise quite largely the world consumption of chocolate over the past decades**.

2.3.4. Case study of chocolate confectionery (countlines)

Modelling of a case study of chocolate confectionery bar (countlines)

In comparison with plain dark and milk chocolate tablets, **the analysis of confectionery bars (countlines) has been limited to building estimates for one best-seller product**, because of the wide diversity of confectionery bars and the complexity of this segment of the market.

As for the other products, the estimates have been based on:

- the **modelling of the reference recipe and value chains associated** with this best-seller confectionery bar (including the additional ingredients such as wheat flour and palm oil), and in full coherency with the rest of the model developed for plain dark and milk chocolate tablets.
- the modelling of all value and costs components for each stage of the chain (full transparency on assumptions made, ratios used, calculation formulae, sources of information collected and limitations are provided in the 'Cocoa Value Chain Calculator' released together with this study).
- **The collection and use of publicly available data** related to the modelled products (in particular IRI consumer purchase data...).

Key results and learnings

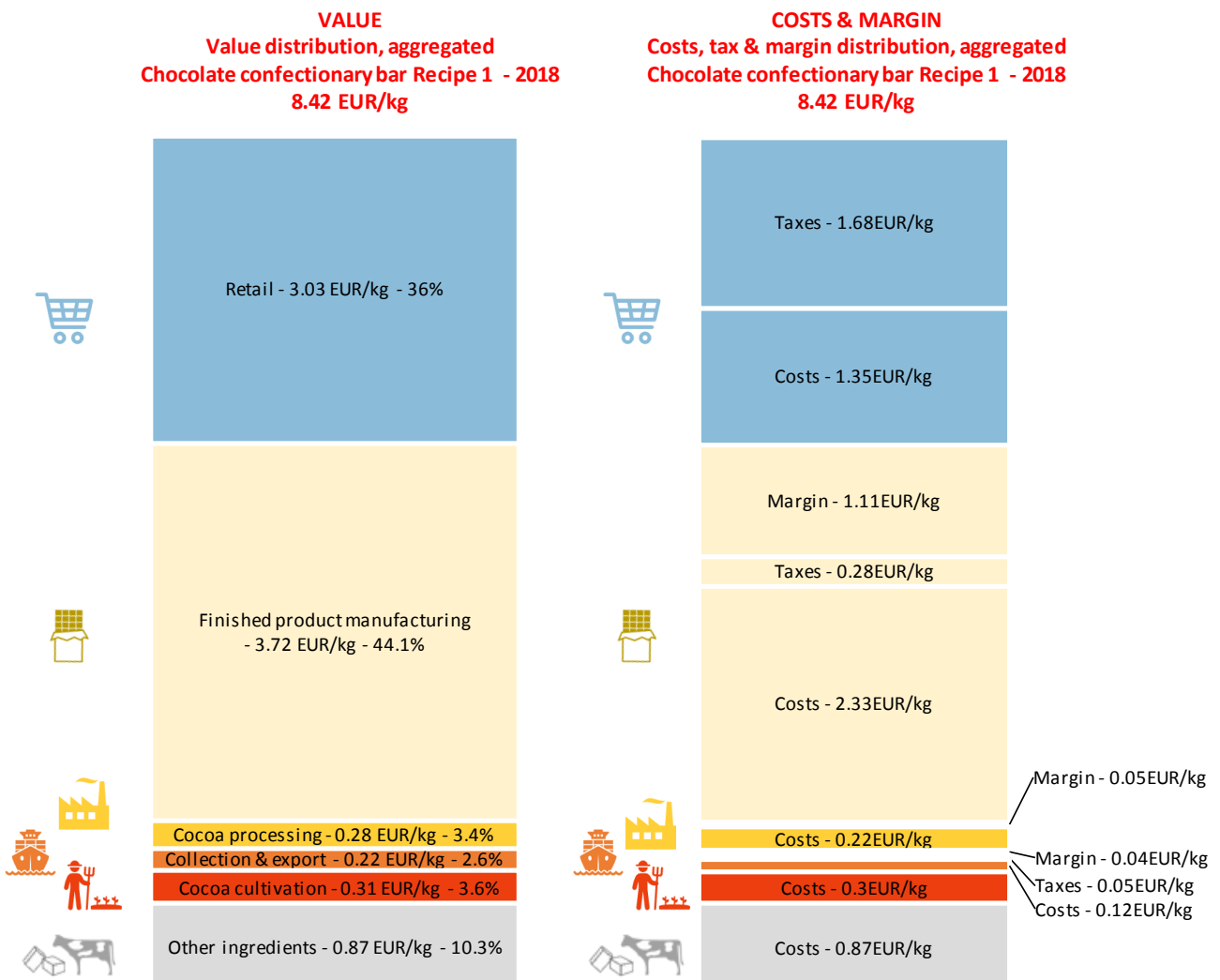


Figure 76. Distribution of value, costs & margins of a 'Best-seller' confectionery bar. Source: BASIC

The results of our estimations of value, costs and margins from cocoa farmers to end consumers for a **'Best-seller' confectionery bar (countlines) sold in French supermarkets** are shown in the above diagram.

As for plain dark and milk chocolate tablets, the estimates are organised in two separate bar charts:

- **The bar chart on the left displays the distribution of the value** generated by each stage along the chain (from agricultural production to retailing)
- **The bar chart on the right provides a consolidated view of the costs and margin** related to each stage along the chain, aggregating these different components in 4 groups: costs of operations, taxes and net margins.

Interestingly, the main components on these estimates are quite similar to the results obtained for the 'averaged' plain milk chocolate tablet, but with a greater proportion of non-cocoa ingredients :

- The **Value Added Tax (VAT) is the same as for milk chocolate (20%)**
- **The share of value accruing to cocoa farmers** (used to cover their costs of production and living) is **around 3.6%** of the total value and represents 0.44 euros/kg due to the lower cocoa content in confectionery bars compared to milk tablets.
- **The share of value dedicated to the 3 first stages** of the **cocoa chain**, up to the manufacturing of chocolate couverture in Europe is **approximately 9.6%** of the total value (0.81 euros/kg).
- **The share of value dedicated to the 2 last stages** of the chain – final product manufacturing and retailing – accrues mainly to the former (44.1%) in comparison with retailers (16%) **when VAT is not taken into account.**
- The **total amount of tax paid** along the chain amounts to **23.9% of the total value** (approximately 2 euros/kg).
- The **total amount of net margins** generated along the chain accounts for 14.3% of the total value (around 1.21 euros/kg), which is slightly higher than for plain milk chocolate, the vast majority (90%) being generated by final product manufacturers (as it is a best-seller product).

2.3.5. Case studies of breakfast cocoa powder

Modelling of two case studies of cocoa breakfast powder

As for confectionery bars, **the analysis of breakfast cocoa powder has been limited to building estimates for two case studies:**

- A 'Basic' 'Best-seller' breakfast powder made of cocoa and sugar
- A 'Premium' 'non Best-seller' breakfast powder made of 100% cocoa

As for the other products, the estimates have been based on:

- the **modelling of cocoa value chains** developed for the rest of the model to build estimates for plain dark and milk chocolate tablets.
- the modelling of all value and costs components for each stage of the chain (full transparency on assumptions made, ratios used, calculation formulae, sources of information collected and limitations are provided in the ‘Cocoa Value Chain Calculator’ released together with this study).
- **The collection and use of publicly available data** related to the modelled products (in particular IRI consumer purchase data...).

Key results and learnings

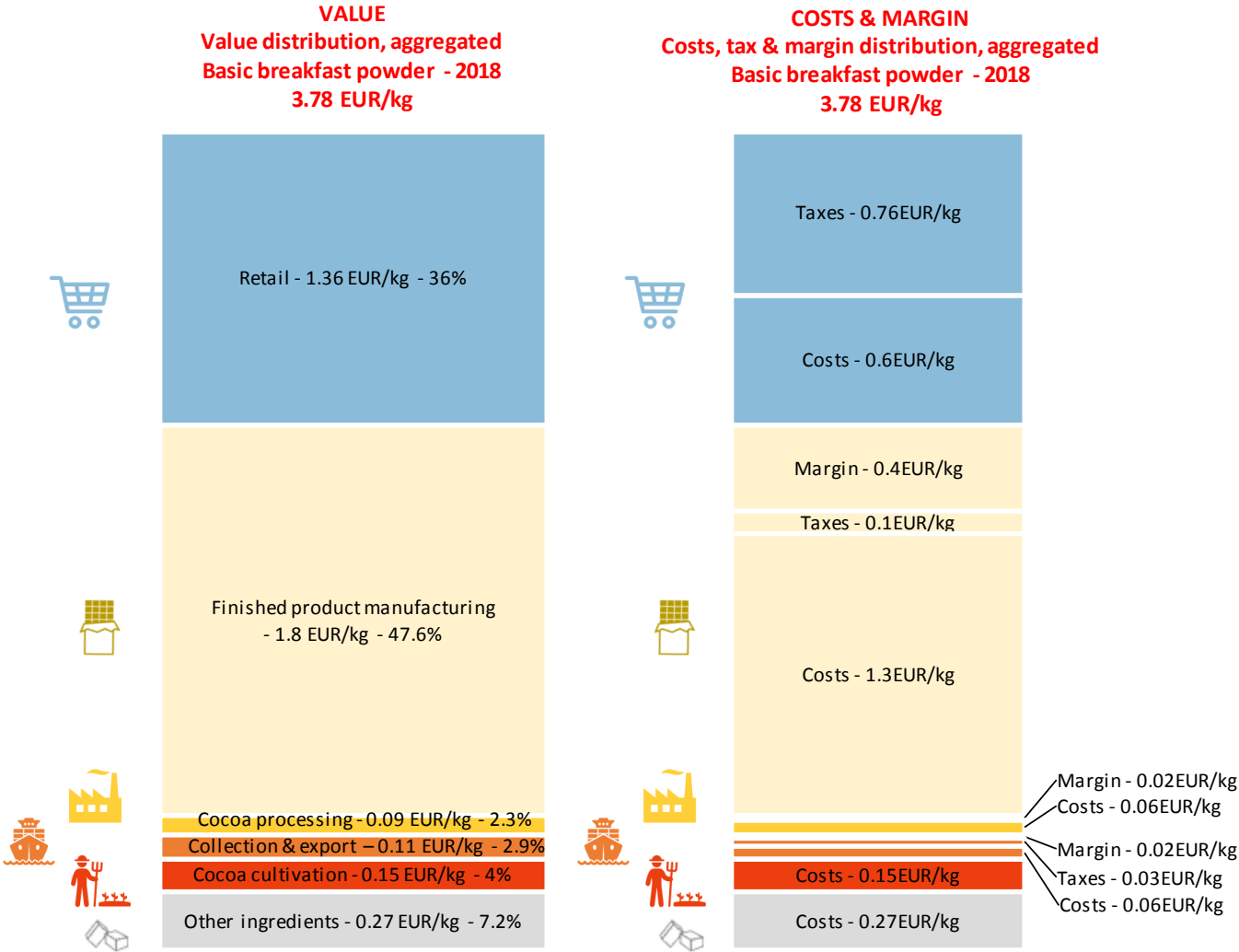


Figure 77. Distribution of value, costs & margins of a ‘Basic’ ‘Best-seller’ breakfast powder. Source: BASIC

The results of our estimations of value, costs and margins from cocoa farmers to end consumers for a ‘Basic’ ‘Best-seller’ breakfast powder made up of cocoa and sugar are shown in the above diagram.

As for the case study of confectionery bar analysed earlier, the main results appear to be quite similar, **when expressed in percentages**, to the estimates obtained for the ‘averaged’ plain milk chocolate tablet, but with a greater proportion of non-cocoa ingredients :

- The **Value Added Tax (VAT)** is the same as for milk chocolate (20%)
- **The share of value accruing to cocoa farmers** (used to cover their costs of production and living) is **approximately 4%** of the total value and represents 0.15 euros/kg, due to the lower cocoa content in this Basic breakfast powder compared to milk tablets.
- **The share of value dedicated to the 3 first stages of the cocoa chain**, up to the manufacturing of the cocoa powder in Europe is **approximately 9.2%** of the total value (0.35 euros/kg).
- **The share of value dedicated to the 2 last stages of the chain** – final product manufacturing and retailing – accrues mainly to the former (47.6%) in comparison with retailers (16%) **when VAT is not taken into account**
- The **total amount of tax paid** along the chain amounts to **23.4% of the total value** (approximately 0.89 euros/kg).
- The **total amount of net margins** generated along the chain accounts for 11.6% of the total value (around 0.44 euros/kg), which is almost the same as for plain milk chocolate, the vast majority (90%) being generated by final product manufacturers (there is apparently no margin at the level of retail - as a result of our modelling - which can be largely explained by the fact that it is a ‘best-seller’ product).

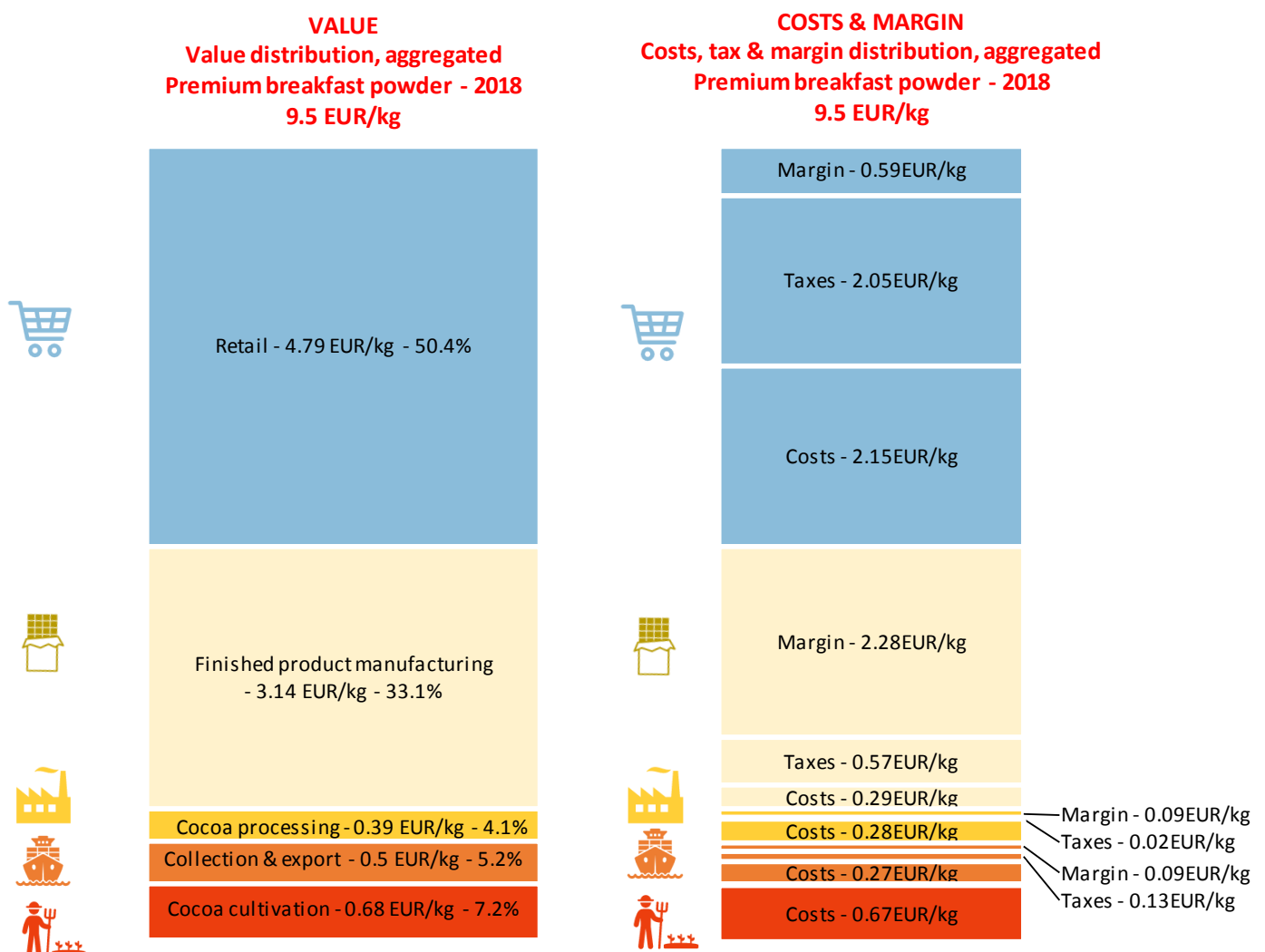


Figure 78. Distribution of value, costs & margins of a ‘Premium ‘non Best-seller’ breakfast cocoa powder. Source: BASIC

The results of our estimations of value, costs and margins from cocoa farmers to end consumers for a **'Premium' 'non Best-seller' breakfast powder made up of cocoa** are shown in the above diagram.

In contrast to the previous case study of 'Basic' breakfast cocoa powder, the main results appear to be much more similar, **when expressed in percentages**, to the estimates obtained for the plain dark 'Premium' chocolate tablets, but with a greater albeit for the final product manufacturing stage :

- The **Value Added Tax (VAT) is the same as for dark chocolate** (5.5%)
- **The share of value accruing to cocoa farmers** (used to cover their costs of production and living) is **approximately 7%** of the total value and represents 0.68 euros/kg, due to the much higher cocoa content in this Premium breakfast powder, compared with the Basic one.
- **The share of value dedicated to the 3 first stages of the cocoa chain**, up to the manufacturing of the cocoa powder in Europe **is approximately 16.5%** of the total value (1.57 euros/kg).
- **The share of value dedicated to the 2 last stages of the chain** – final product manufacturing and retailing – accrues mainly to the latter (45%) in comparison with brands (33%) **when VAT is not taken into account.**
- The **total amount of tax paid** along the chain amounts to **28% of the total value** (approximately 2.70 euros/kg).
- The **total amount of net margins** generated along the chain accounts for 32% of the total value (around 3.05 euros/kg), the vast majority (95%) being generated by retailers and final product manufacturers. The high level of margin generated by the final product manufacturer is mainly due to the fact that the cocoa powder is actually a by-product of the cocoa processing industry which is essentially packaged, branded and sold to consumers (hence the very low costs of manufacturing of this Premium powder).



2.3.6. Main learnings on the 4 product categories analysed (dark & milk chocolate tablets, confectionery bars, breakfast powder)

The first main result of our research on conventional products is the **asymmetry of value creation along the cocoa/chocolate chain**.

In the case of plain dark chocolate tablets, 70% of the total value and 90% of the total margins from cocoa farmers to end consumers are associated on average with the two last actors in the chain, brands and retailers. Upstream, only 18.6% of the total value and less than 7.5% of the total margin are generated by actors in cocoa producing countries (from cocoa cultivation up to bean exports), and cocoa farmers only receive on average 11% of the final price.

The results are similar for plain milk chocolate tablets and confectionery bars. The only major differences are the higher level of Value Added Tax applied in France (20% instead of 5.5% for plain dark chocolate) and higher value of other ingredients (milk being as expensive as cocoa), which create a stronger pressure/squeeze of all stages of the chain, as plain milk chocolate tablets and confectionery bars are sold to French consumers at a slightly lower price per kilo than dark tablets..

In this context, our research shows that the **3 main factors linked to “downstream” actors (retailers and brands) have a very significant impact** on this distribution of value and costs i.e.:

- the **type of brand** (national brand Vs private label),
- the **marketing mix** (basic, cooking, gourmet),
- the **products’ performance** (best-sellers Vs other products).

In contrast, all upstream factors analysed have a quite limited impact, if any, on the distribution of value and costs from cocoa farmers to end consumers, whether it is:

- the **country of origin** (even when highlighted on the packaging of the finished good),
- the **percentage of cocoa** in the final product (for the same marketing mix),
- the **country of first processing**.

These findings can be largely explained by fact that the **majority of value creation in the chain is linked to intangible leverages** (marketing segmentation, brand reputation...) which are essentially managed by brands and retailers and largely prevail over the origin/terroir and the specific work of farmers which are rarely valued at the consumer end of the chain.

This is further amplified by:

- the **complexity of the cocoa/chocolate chain** which is associated with a **high level of industrialisation and large economies of scale at the processing stage which have enabled to largely democratise the consumption of chocolate** thanks to the (relatively) low price level achieved at the consumer level, but which hampers the capacity of cocoa farmers and producer countries to get recognition and value for their specificities (terroir, flavours...).
- the **consumers**, because of the marketing and advertisement made by major brands, **consider that the percentage of cocoa is what matters most and defines the quality of chocolate tablets sold by retailers** (especially in the premium segment) **and not the terroir or the work of farmers**.

2.4. Influence of cocoa certifications on the distribution of value, costs & margins

2.4.1. The French consumer market and actors associated with cocoa certifications

In keeping with international consumption trends, the French are buying more and more products labelled as fair trade.

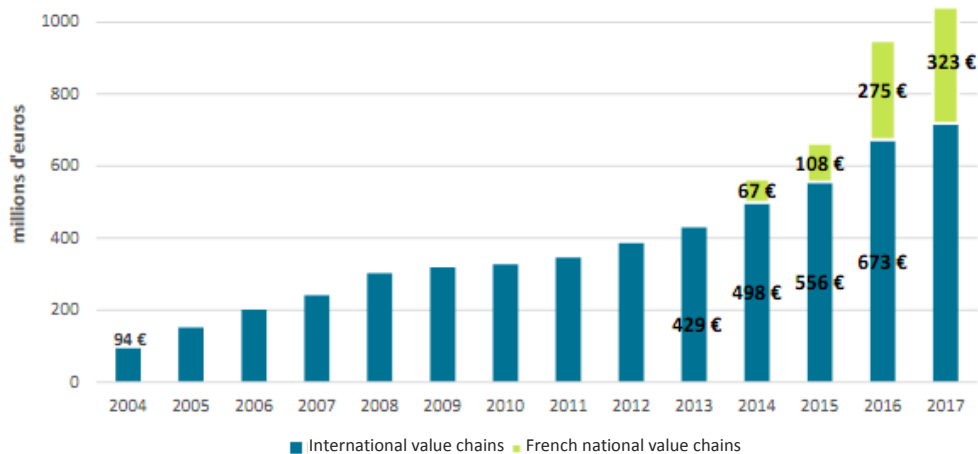


Figure 79. Developments in sales of fair trade products between 2004 and 2017. Source: CEF (2017)

In France, sales of these products reached a turnover of 1 billion euros in 2017, representing a 10% increase compared with the previous year (which drops to 7% if we only consider products from international sectors)¹⁷³.

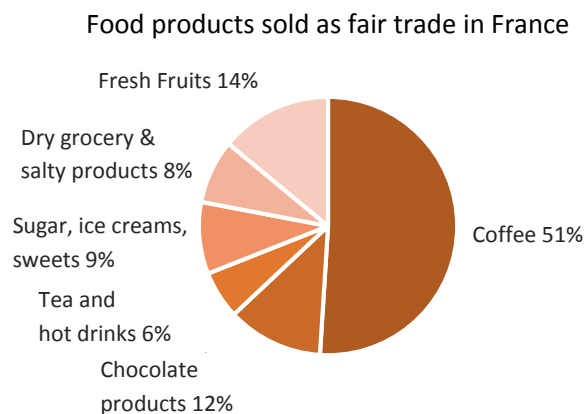


Figure 80. Breakdown by food product, of sales of products from international fair trade sectors. Source: BASIC, according to CEF (2017) data

Of this total, **cocoa was the second best-selling fair trade product in France, with 12% of sales in value of international sectors in 2017**¹⁷⁴.

¹⁷³ Commerce équitable France, *Les chiffres clefs du commerce équitable en France*, 2017

¹⁷⁴ Commerce équitable France, op. cit.

Four fair trade labels are seen on the chocolate products marketed in France: 'Fairtrade/Max Havelaar' (the principal), 'Fair for Life' (used by Ecocert, the leader in organic certification), the 'Símbolo de los Pequeños Productores [Small Producers Symbol]' (SPP), and World Fair Trade Organization (WFTO).

The market for fair trade chocolate tablets (the main segment of fair trade chocolate products in the country) **was estimated at roughly 25 million euros in 2018**, representing about 1% of the total French chocolate tablets market. **90% of all fair trade chocolate tablets in France are also organic certified** (whereas globally, only 15% of the cocoa sold under fair trade conditions is also certified organic).

More globally, **the French chocolate market is singled out by its high proportion of organic products, which can be estimated at 50 million euros in 2018, 50% being sold as Private Label chocolate tablets.**

UTZ Certified and Rainforest Alliance are also present in the French market, although very little consolidated information on them exists. Their market which comprises mainly dark chocolate tablets and can be estimated at **approximately 20 million euros in 2018, slightly less than the fair trade market.**

2.4.2. Modelling of certifications

The modelling of the 3 certifications – Rainforest Alliance (RFA, which we considered as merged with UTZ), Fair Trade (both the Fairtrade International label and other Fair Trade labels on the French market), organic, and the combination of the two latter – has been integrated in the more global modelling developed for chocolate tablets (because on the French market, these certifications are almost non present on confectionery bars or breakfast powder).

This integration of certifications into the model is more particularly based on:

- Publicly available information published by these certification systems, complemented with interviews with experts of these systems, on :
 - o the **premium paid either to the cocoa farmers** (mainly RFA and Fair Trade) **or to the cooperative they adhere to** (in the case of Fair Trade: both the social premium and the organic premium),
 - o **the minimum price guaranteed to farmers' cooperatives** (in the case of Fair Trade)
- Existing economic studies and impact assessment studies in the different countries under investigation, complemented with interviews with experts in the different countries analysed, regarding the influence of the different certifications on the price received by certified cocoa farmers.
- In terms of costs, publicly available information published by these certification systems, complemented with interviews with experts of these systems on:
 - o the certification costs at all stages of the cocoa/chocolate chain,
 - o the licence fee (royalties) paid by the brands (in the case of Fair Trade)
 - o the additional internal costs for operators along the cocoa/chocolate chain induced by the standards requirements of each certification (especially organic).

2.4.3. Results for certified plain dark chocolate tablets

Results and analysis of the certified National Brand-Premium plain dark chocolate tablets

The first product category analysed are the certified National Brand-Premium plain dark chocolate tablets, as they represent the majority of certified chocolate tablet sales, **amounting to more than 8% of the total sales of plain dark chocolate tablets in France in 2018.**

In this segment, based on the IRI data we have collected and processed, it appears that the **organic-certified dark chocolate tablets and the Fair Trade & organic-certified dark tablets are associated with some of the strongest sales growth of the chocolate retail market in France:**

- the sales of organic-certified dark tablets have increased by 313% between 2014 and 2018
- the sales of Fair Trade & organic-certified dark tablets have increased by 142% over the same period

In comparison, the Rainforest certification and label has been mainly used by one of the leading chocolate brand on the French market (Mondelez), first on the front of chocolate packs of its products at the beginning of the 2010s, and since 2016/17, progressively removed or displaced at the back of packaging. This certification is related to decreasing sales which have fallen by 80% since 2014.

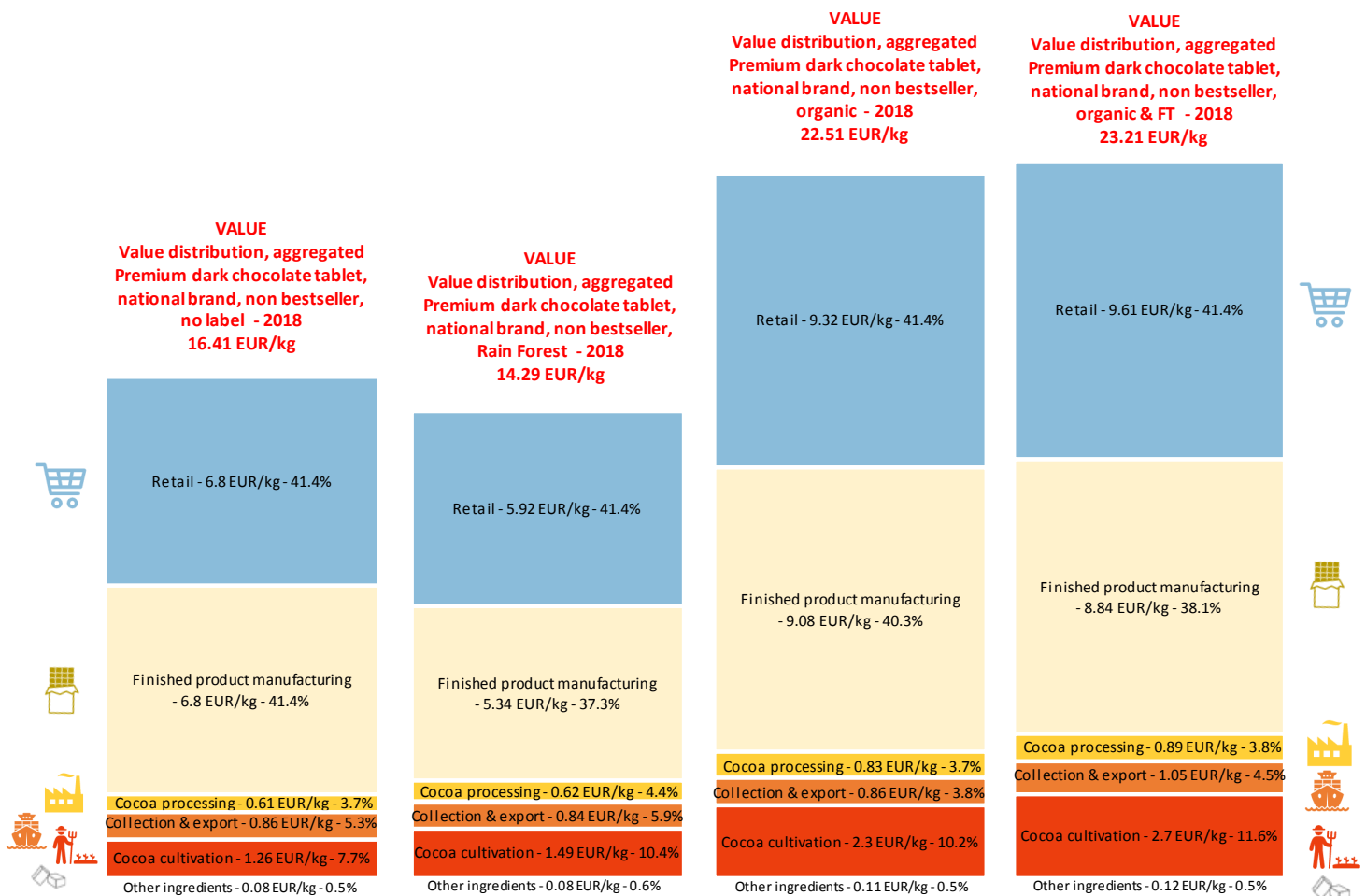


Figure 81. Distribution of value, for certified 'Premium' 'National Brand' plain dark chocolate tablets. Source: BASIC

To conduct the analysis, the **results have been calculated for Rainforest-certified, organic-certified as well as Fair Trade & organic-certified tablets and then compared with the estimates already obtained for non-certified Premium non-Best seller dark chocolate tablets**, as none of the certified tablets are Best-sellers on the French retail market (see above).

The first main results relates to **the end consumer prices which varies quite strongly across the analysed products:**

- **from 14.29 euros/kg for the Rainforest-certified tablet** (a slightly lower price than the non-certified equivalent tablet, which is correlated to the fact that the label is attached to products with lower commercial performances and greater discounts based on the data from the IRI database we have collected and processed),
- **up to 22.51 euros/kg and 23.21 euros/kg respectively for organic-certified and Fair Trade & organic-certified tablets**, thereby showing the greater capacity of these products to create value and appeal towards consumers (and the related higher willingness to pay of the latter).

At the end of the chain:

- The share of value of retailers is the same across all products because it is built in our modelling (gross margin of retailers for non Best-seller products is fixed at 41.4%).
- The **share of value accruing to the National Brands** is a result of our estimates and **seems quite stable across all products**: from 37.3% in the case of Rainforest-certified tablets up to 40.3% in the case of organic-certified tablets

The **more significant differences** between the products investigated **are situated in the upstream part of cocoa chains, especially when the share of value is expressed in euros/kg:**

- **the Rainforest-certified tablet is correlated with a limited increase of the share of value accruing to farmers compared to non-certified tablets** (1.49 euros/kg compared to 1.26 euros/kg, i.e. an increase by 18%) and a quite similar share of value associated with the whole upstream operations from cocoa cultivation to chocolate couverture manufacturing (2.97 euros/kg compared to 2.73 euros/kg for the non-certified tablet).
- **A more substantial increase of value upstream, especially for farming, can be observed in the case of organic-certified tablets, and particularly Fair Trade & organic-certified tablets:**
 - o **The share of value accruing to cocoa cultivation in the case of the organic certification amounts to 2.30 euros/kg (an increase of 80% compared to non-certified tablets)** while the whole upstream operations are associated with a share of 3.99 euros (an increase by 68% compared to conventional tablets)
 - o **In the case of Fair trade & organic certified products, the share of value of cocoa cultivation reaches 2.70 euros/kg (i.e. 114% more than in the equivalent conventional tablet)** and the whole upstream operations amount to 4.64 euros/kg, an increase of 70% compared to non-certified products.

It should be noted that **in most of the cases analysed, the origin of the cocoa beans used in certified products is quite distinct from the non-certified tablets**. In particular, the organic as well as Fair Trade-organic products are only made up of Ecuadorian cocoa in our modelling, whereas West African cocoa accounts for the majority of the cocoa in the non-certified and Fairtrade-certified tablets. As a result, the differences observed in our estimates of the upstream share of value do not necessarily translate into higher revenues for the same cocoa farmers, but rather a shift in sourcing.

If expressing the distribution of value in percentages, the differences are less pronounced, but still appreciable; to illustrate, the share of value accruing to cocoa cultivation ranges from:

- 7.7% for non-certified tablets
- 10.4% for Rainforest-certified tablets
- 10.2% for organic-certified tablets
- 11.6% for organic & Fair Trade-certified tablets

Even if the overall pattern of the value distribution does not change profoundly with the use of the certifications analysed, the organic certification even more when it is combined with Fair Trade enable to create significantly more value at the consumer end, and transmit part of this increased value down to the cocoa cultivation which receives respectively 80% and 114% more value in euros/kg.

As confirmed though the interviews we have conducted, **this relative success is in great part related to the strategies of National Brands and retailers which have mainly used the Fair Trade and Organic certifications on pure origin dark chocolate tablets**, thereby promoting also the ‘terroir’ dimension and quality work of farmers, and creating an increased value at the agricultural level linked to differentiated products, and transmitting it up to the final consumers.

In doing so, **they have met the increasing appetite of a growing proportion of consumers for quality, “green and fair” chocolate products**, as demonstrated by the impressive growth rate of the related sales on the French market.

One of the **key success factors** of these approaches, as it emerges from our interviews, goes much beyond the social & environmental standards used, and **lies in closer connexions and greater partnership and collaboration between all actors in the chain**, from farmers’ organisations down to French retailers.

However, the majority of the price differential at the level of consumers (6.10 euros/kg in the case of organic when compared to conventional equivalent tablet, and 6.80 euros/kg in the case of Fair Trade & organic) **remains in the downstream part of the chain** and is not transmitted to cocoa cultivation (which is related to 1.04 euros/kg more in organic, and 1.44 euros/kg more for Fair Trade & organic)..

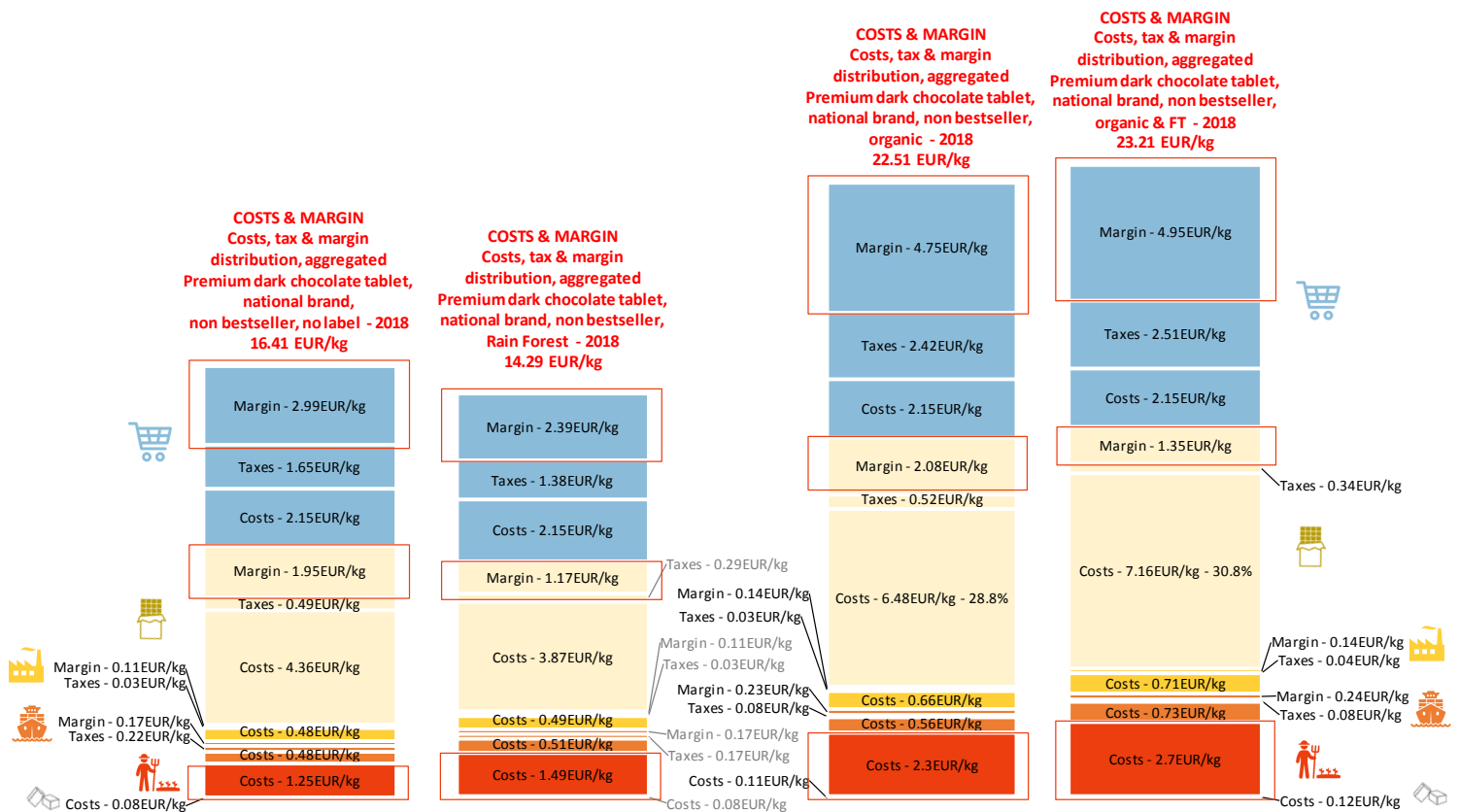


Figure 82. Distribution of costs & margin, for certified Premium National Brand plain dark chocolate tablets. Source: BASIC

This discrepancy, between the increase of prices at the levels of consumers on one side and the farmer on the other side, can be explained by higher operational costs in the case of Fair Trade & organic-certified tablets, as shown in the above diagram. Indeed, the business actors involved in these chains are essentially small and middle size companies which do not benefit from the economies of scale achieved by the large conventional processors and manufacturers (as confirmed also by our interviews with experts). As a result, they seem to make a smaller margin than conventional brands (1.35 euros/kg compared to 1.95 euros per kg for non-certified products).

This contrasts with the case of organic-certified products which are mostly related to leading international chocolate brands that manage to generate higher margins thanks to their streamlined operations (2.08 euros/kg for organic-certified products compared to 1.95 euros/kg for equivalent conventional products).

In both cases (organic as well as Fairtrade & organic), it is mostly the retailer that seem to gain the more profitability through the sales of certified products as its margin increases from 2.99 euros/kg for conventional Premium tablets to 4.75 euros/kg for organic-certified tablets (i.e. an increase of 59%) and 4.95 euros/kg in the case of Fair Trade & organic-certified tablets (i.e. an increase of 66%). The case of Rainforest-certified dark chocolate tablets seems specific, its lower estimated margins being potentially correlated with the decreasing sales of labelled products monitored on the market.

Results and analysis of the certified Cooking–National Brand plain dark chocolate tablets

The second product category analysed are the **certified National Brand-Cooking plain dark chocolate tablets**, which represents a much smaller, but noticeable, proportion of the market **that amounts to less than 1% of the total sales of plain dark chocolate tablets in France in 2018**. It is mainly composed of **organic-certified dark chocolate tablets and the Fair Trade & organic-certified dark chocolate tablets** which sales have grown by 15% to 18% between 2014 and 2018, in line with the wider plain dark chocolate category which has increased by 17% over the same period.

We have not been able to identify (significant) sales of Rainforest-certified cooking dark chocolate tablets on the French market in 2018.

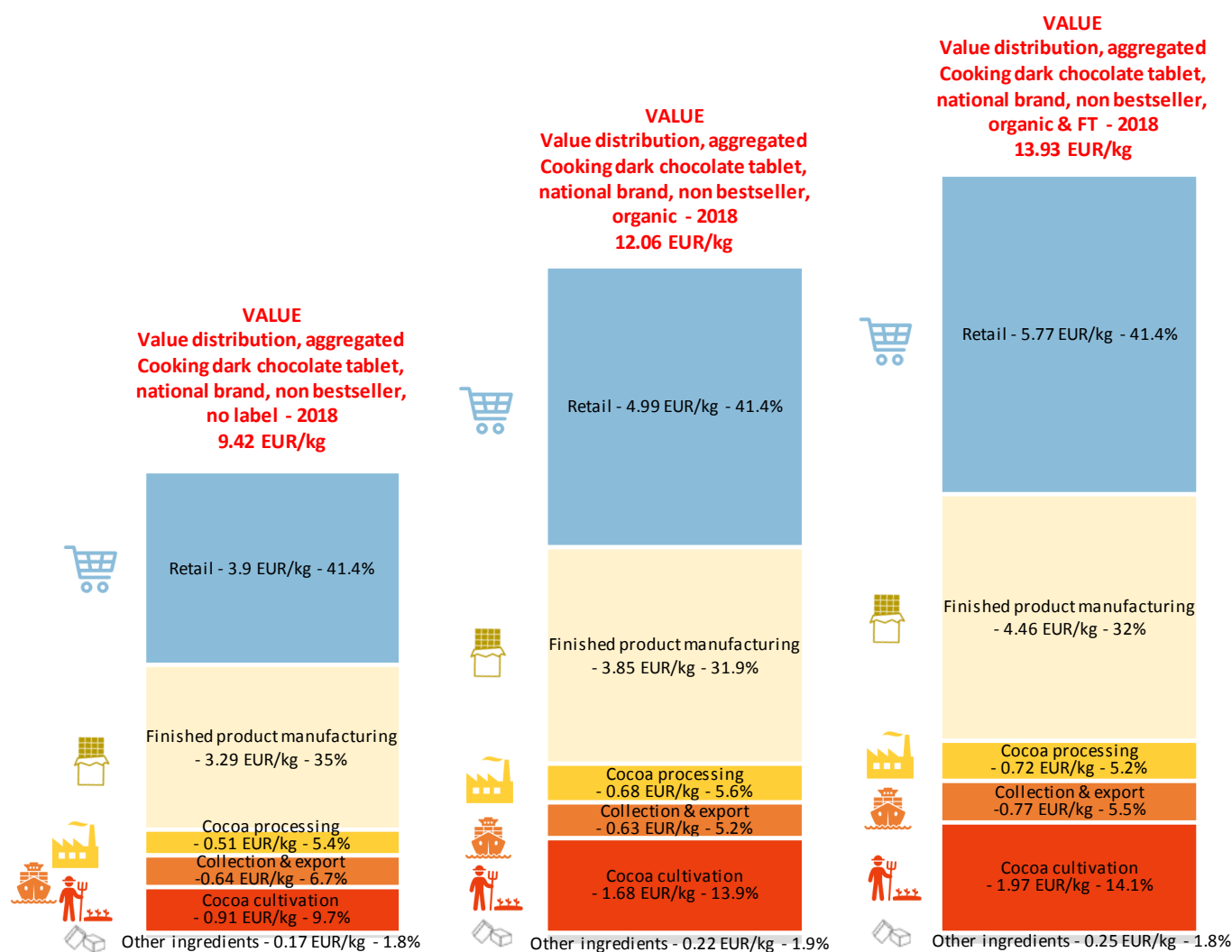


Figure 83. Distribution of value, for certified 'Cooking' 'National Brand' plain dark chocolate tablets. Source: BASIC

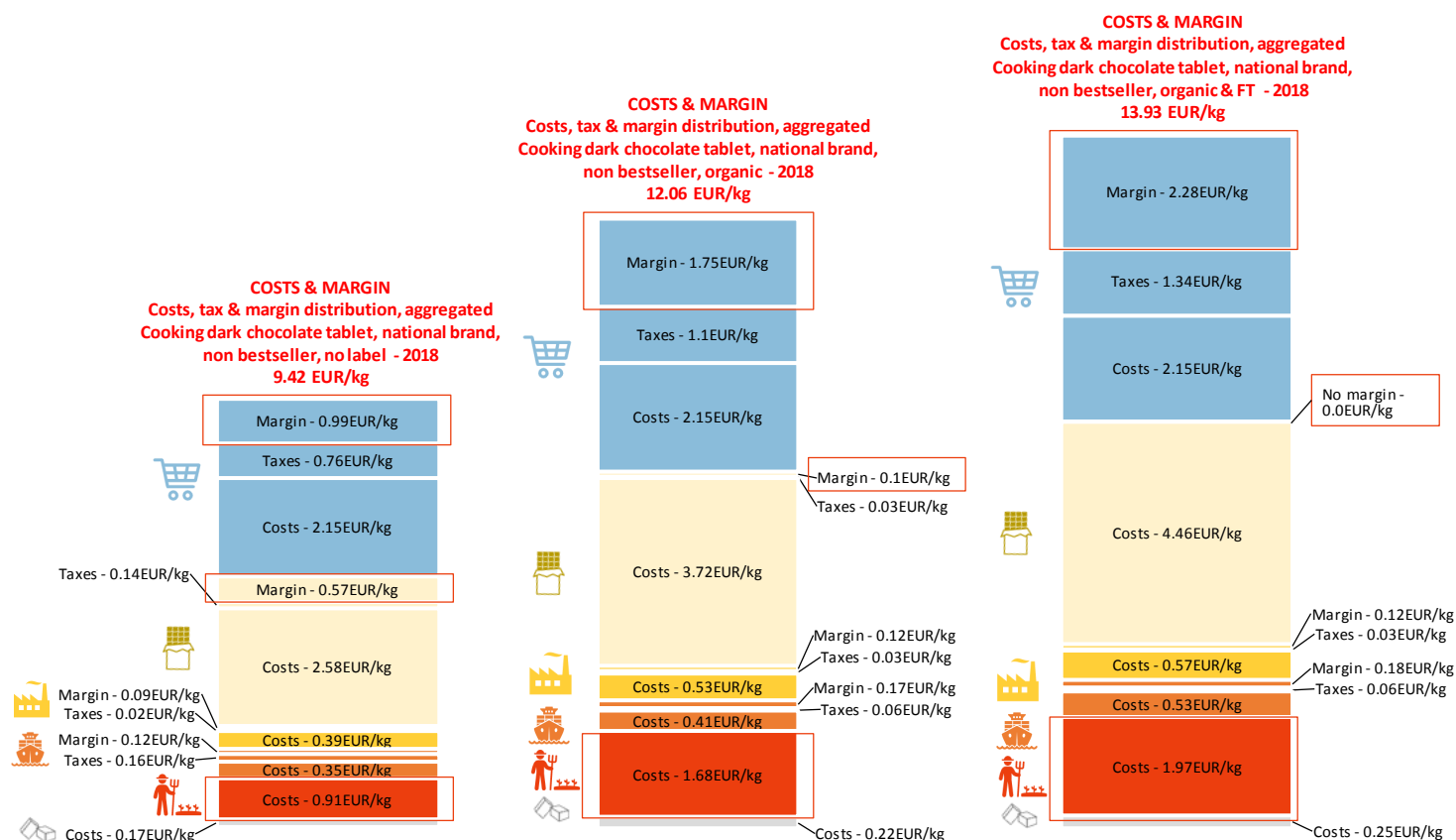


Figure 84. Distribution of costs & margin, for certified 'Cooking' National Brand plain dark chocolate tablets. Source: BASIC

As illustrated in our above diagrams, **this product category is associated with much lower prices to consumers (40% to 45% cheaper than Premium products on average) and generates smaller margins for all actors in the chain compared to the Premium certified tablets analysed earlier, whatever the certification considered (organic as well as Fair Trade & organic).**

Apart from this specificity, the rest of the analysis detailed in the previous section on Premium certified dark chocolate is applicable to Cooking certified tablets (in proportion to their relatively lower price to consumers).

Results and analysis of the certified Private Label-Premium plain dark chocolate tablets

The third product category investigated represent a much bigger part of the dark chocolate market. It corresponds to **certified Private Label-Premium plain dark chocolate tablets which amount to approximately 7% of the total sales of plain dark chocolate tablets in France in 2018** (as much as the National Brand category).

It is mainly composed of **organic-certified, Fairtrade certified, and Fair Trade & organic-certified dark chocolate tablets**. As for the National Brand equivalent products, these Private Label tablets are associated with strong growth in sales of more than 300% for organic-certified as well as Fair Trade & organic certified products in the period 2014-2018.

In comparison, Fairtrade-certified dark chocolate tablets are much less dynamics as their sales seem to remain flat over the same period.

We have not been able to identify and make estimates for Rainforest-certified tablets in the Private Label category (although some products may be sold on the market under the UTZ label, they were not identifiable in our IRI data).

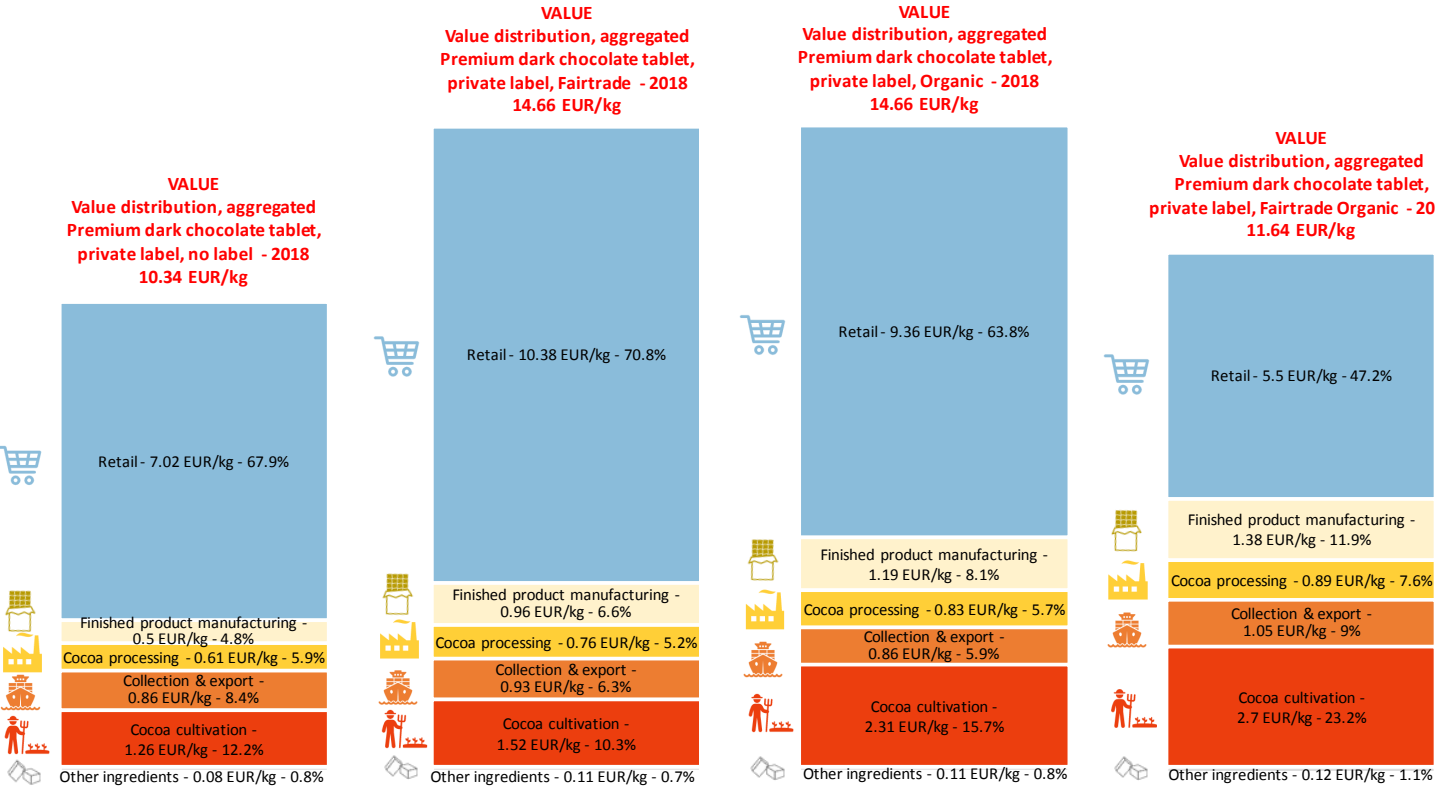


Figure 85. Distribution of value, for certified 'Premium' 'Private Label' plain dark chocolate tablets. Source: BASIC

As for National Brand products, we have compared the results obtained for organic-certified, Fairtrade certified as well as Fairtrade & organic-certified tablets with the estimates already obtained for non-certified Private Label Premium dark chocolate tablets (see above).

The first main result is that the end consumer prices varies much less in the case of Private Label than for the National Brand equivalent products analysed earlier. When compared with the non-certified Private Label tablet, the organic or Fairtrade certified ones are on average sold 40% higher to the consumer (compared to 70%-80% price difference for National Brand equivalent products).

In this context, the Fairtrade & organic certified tablet sold by Private Labels is a very specific case, due to the importance taken by one of the leading discounters in this category. This discounter has achieved a great commercial success by selling a plain dark chocolate tablet under its own brand and with the 2 labels (Fairtrade & organic). This tablet is manufactured in its own factory in Germany and sold throughout Europe at almost the same consumer price as conventional equivalent products.

This tablet has become the reference of the Private Label premium dark chocolate tablets' market in France, and has driven down the prices even among its retailing competitors in their search to attract consumers. This explains the very low price difference in our estimates between the non-certified Premium tablet (10.34 euros/kg) and the Fairtrade & organic-certified one (11.64 euros/kg).

Looking at the end of the chain:

- The **share of value of retailers appears to be higher (in both euros/kg or percentages) for certified than for non-certified products**, at the exception of the Fairtrade & organic-certified products, because of the marketing strategy of discounters detailed previously (which apparently pushes other retailers to decrease their gross margin on these tablets).
- The **share of value accruing to the Final Product Manufacturer appears to increase slightly in proportion to the prices of upstream products** (from cocoa beans to paste, butter and chocolate couverture), based on the results of the interviews we have conducted. The corresponding share of value ranges from 0.96 euros/kg in the case of Fairtrade-certified tablets up to 1.38 euros/kg for Fairtrade & organic-certified products.

The **more significant differences** between the products investigated **are situated in the upstream part of cocoa chains, especially when the share of value is expressed in euros/kg:**

A gradual increase of the value share dedicated to upstream operations, can be observed in the case of Fairtrade, organic as well as Fairtrade & organic-certified tablets, **especially for farming:**

- **From 1.52 euros/kg** in the case of Fairtrade certified tablets (**an increase of 20%** compared to non-certified tablets)
- **Up to 2.31 euros/kg** for organic-certified tablets (i.e. an increase of 80% compared to conventional) and 2.7 euros/kg for Fairtrade & organic (i.e. a doubling of the share dedicated to cocoa cultivation).

It should be noted that **in most of the cases analysed, the origin of the cocoa beans used in certified products is quite distinct from the non-certified tablets**. In particular, the organic as well as Fairtrade-organic products are only made up of Ecuadorian cocoa in our modelling, whereas West African cocoa accounts for the majority of the cocoa in the non-certified and Fairtrade-certified tablets. As a result, the differences observed in our estimates of the upstream share of value do not necessarily translate into higher revenues for the same cocoa farmers, but rather a shift in sourcing.

If expressing the distribution of value in percentages, the differences are less pronounced, but still appreciable; to illustrate, the share of value accruing to cocoa cultivation ranges from:

- 12.2% for non-certified tablets
- 10.3% for Fairtrade-certified tablets
- 15.7% for organic-certified tablets
- 23.2% for organic & Fair Trade-certified tablets

As in the case of National Brands, even if the overall pattern of the value distribution does not change dramatically with the use of the certifications analysed (with the exception of the Fairtrade & organic-certified tablets, essentially because of the low pricing strategy of discounters) , **the organic certification even more when it is combined with Fairtrade enable to create significantly more value at the consumer end, and transmit part of this increased value down to cocoa farmers.**

Like for National Brands, the majority of the price differential at the level of consumers (approximately 4.32 euros/kg in the case of organic as well as Fair Trade certifications) remains in the downstream part of the chain and is not transmitted to cocoa cultivation (which is associated with 0.26 euros/kg more in Fairtrade, and 1.05 euros/kg more in the case of organic).

Once again, the case of Fairtrade & organic-certified products sits apart, mainly because of the impact of the low-pricing strategy of discounters.

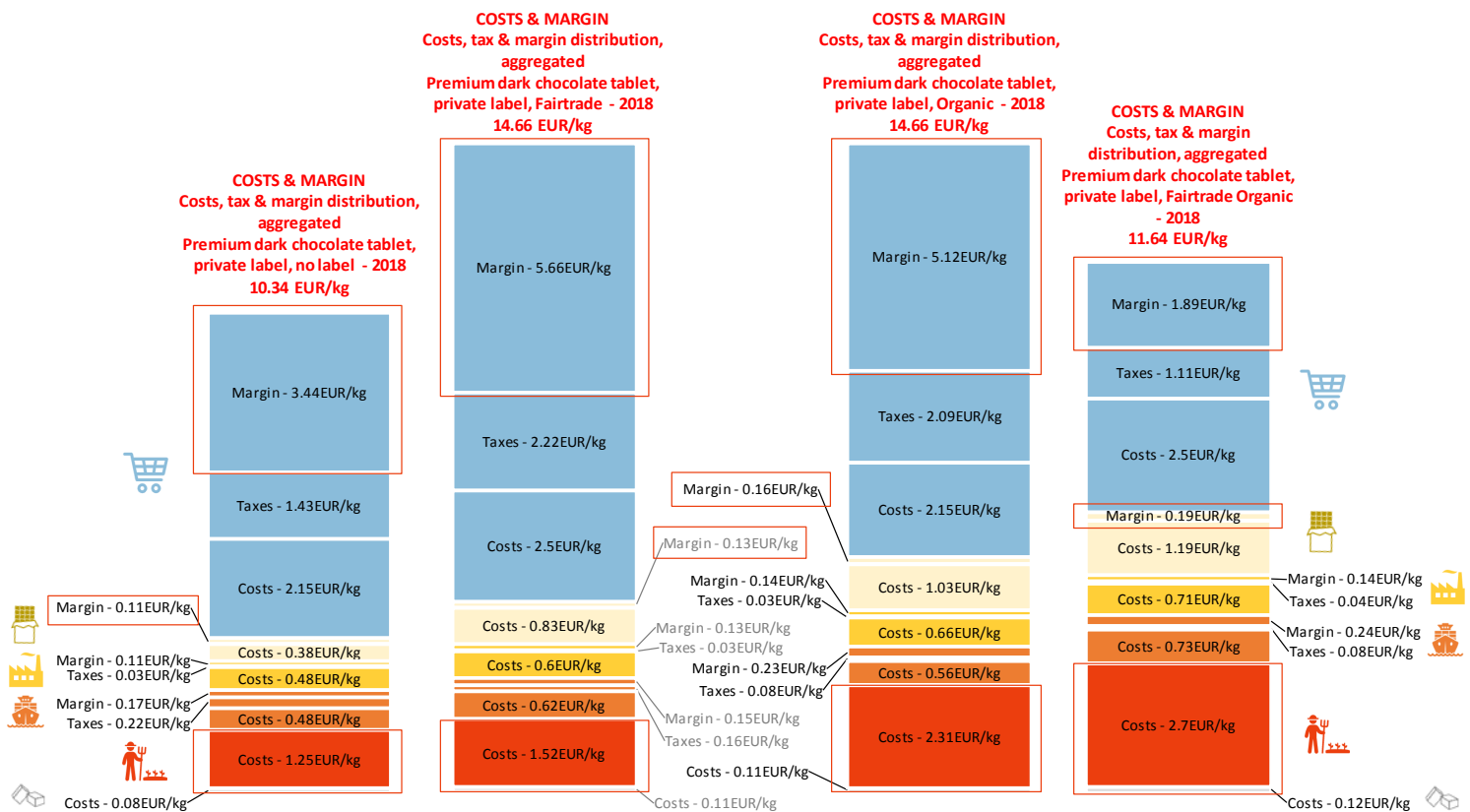


Figure 86. Distribution of costs & margin, for certified 'Premium' 'Private Label' plain dark chocolate tablets. Source: BASIC

This discrepancy, between the increase of prices at the levels of consumers on one side and the farmer on the other side, can be explained by slightly higher operational costs in the cocoa processing, chocolate making and final product manufacturing, as shown in the above diagram.

However, the differences in costs are much less pronounced in the case of certified Private Label products than for National Brand equivalent products as it is the same set of industrial actors that are involved in the processing and manufacturing (as opposed to the situation especially of National Brands Fair Trade & organic certified tablets).

In most cases, it is mostly the retailer that seem to gain the more profitability through the sales of certified products as its margin increases from 3.44 euros/kg for conventional Premium tablets to 5.12 euros/kg for organic-certified tablets (i.e. an increase of 49%) and 5.66 euros/kg in the case of Fairtrade & organic-certified tablets (i.e. an increase of 65%). The Fairtrade & organic tablet is a case apart, resulting for the pricing strategy of discounters, which show that retailers can limit their margins and still be profitable (although to a more limited extend than usual).

Regarding the final product manufacturing, the margins are very thin for all the certified 'Private Label' products analysed, as for their non-certified equivalent.

2.4.4. Results for certified plain milk chocolate tablets

Results and analysis of the certified Premium–National Brand plain milk chocolate tablets

As for certified plain dark chocolate tablets, the first product category analysed are the certified National Brand-Premium plain milk chocolate tablets, **amounting to approximately 2% of the total sales of plain milk chocolate tablets in France in 2018.**

In this segment too, the **organic-certified and the Fair Trade & organic-certified milk tablets are associated with some of the strongest sales growth in France**, with 70% increase between 2014 and 2018 whereas the value of the plain milk chocolate tablet category has only increased by 5% over the same period.

We have not been able to identify (significant) sales of Rainforest-certified ‘Premium’ plain milk tablets on the French market in 2018.

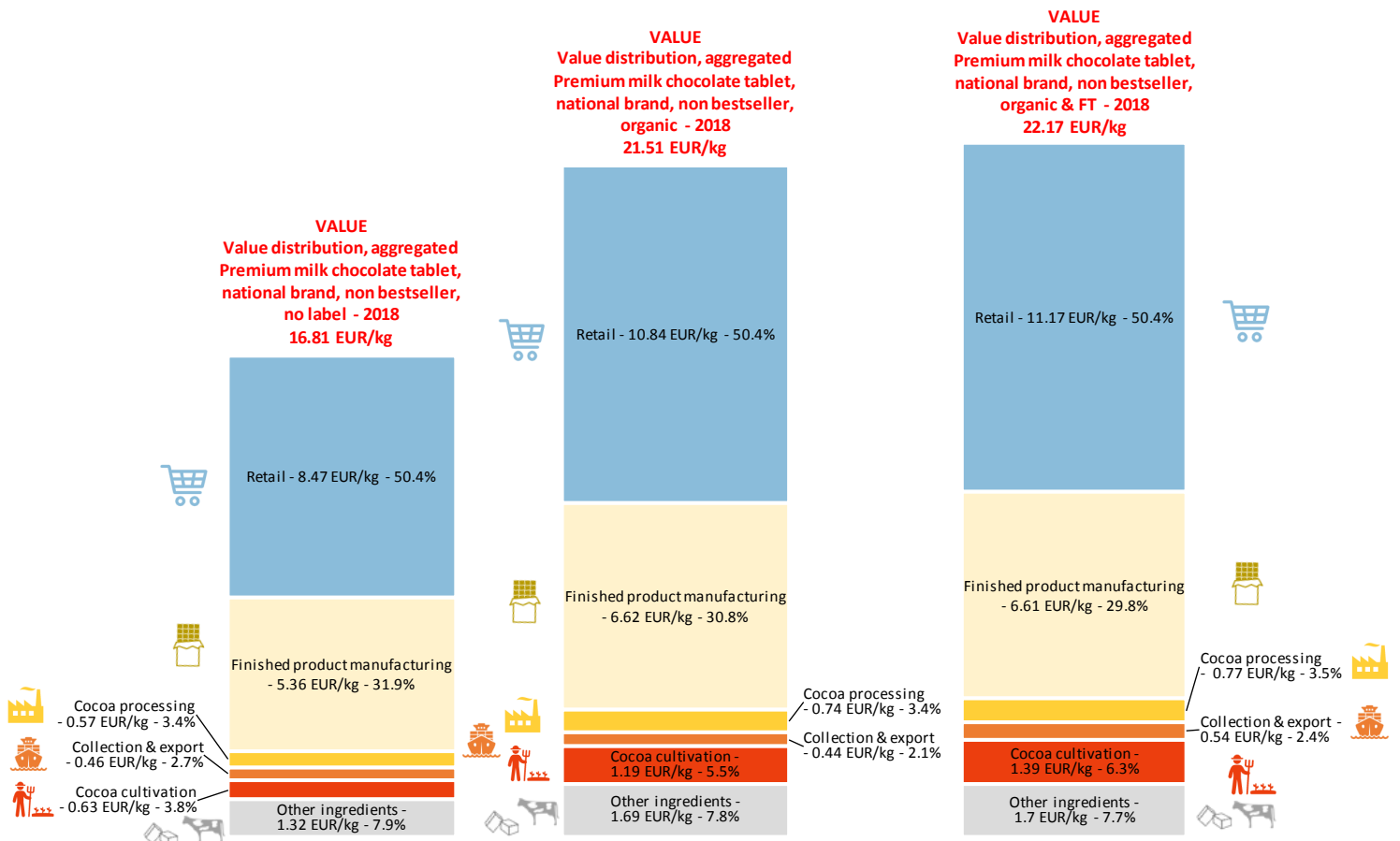


Figure 87. Distribution of value, for certified ‘Premium’ ‘National Brand’ plain milk chocolate tablets. Source: BASIC

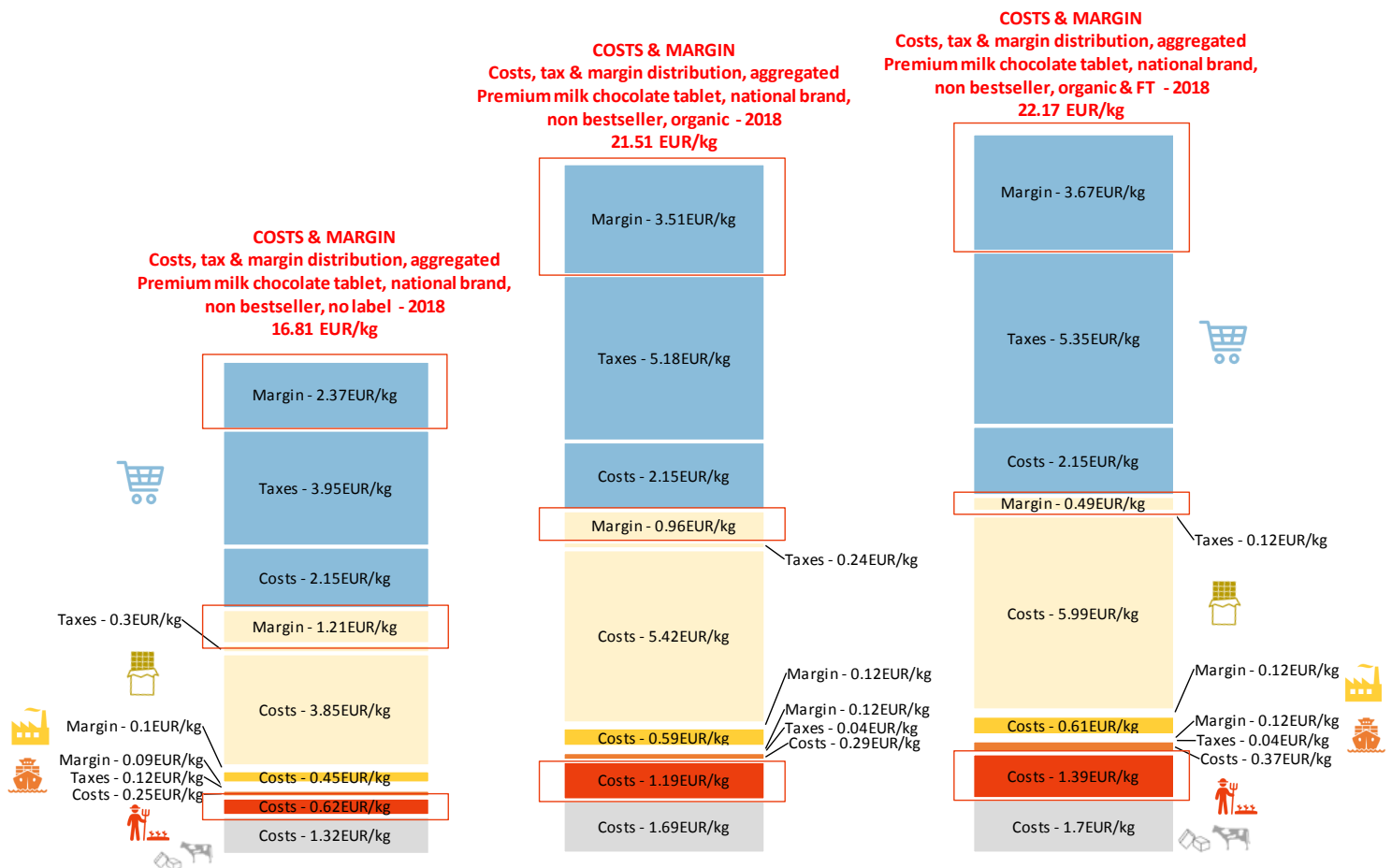


Figure 88. Distribution of costs & margin, for certified Premium National Brand plain milk chocolate tablets. Source: BASIC

As illustrated in our above diagrams, **all the main elements of analysis detailed in the previous section on National Brands' Premium certified dark chocolate are applicable to milk chocolate certified tablets** (see section 2.4.3 above for more details), whether in terms of:

- price differentials at the consumer end,
- differences in share of value dedicated to upstream operations, particularly cocoa cultivation,
- differences in costs in the middle of the chain,
- impact on the profitability of downstream actors (retailers and National Brands).

Results and analysis of the certified Premium–Private Label plain milk chocolate tablets

The other product category analysed are the certified Private Label-Premium plain milk chocolate tablets, **which amount to a much lower share of less than 0.3% of the total sales of plain milk chocolate tablets in France in 2018.**

In this segment too, the **organic-certified and the Fair Trade & organic-certified milk tablets are on the rise**, with 50% to 70% increase between 2014 and 2018 whereas the value of the plain milk chocolate tablet category has only increased by 5% over the same period.

We have not been able to identify (significant) sales of Rainforest-certified 'Premium' plain milk tablets on the French market in 2018.

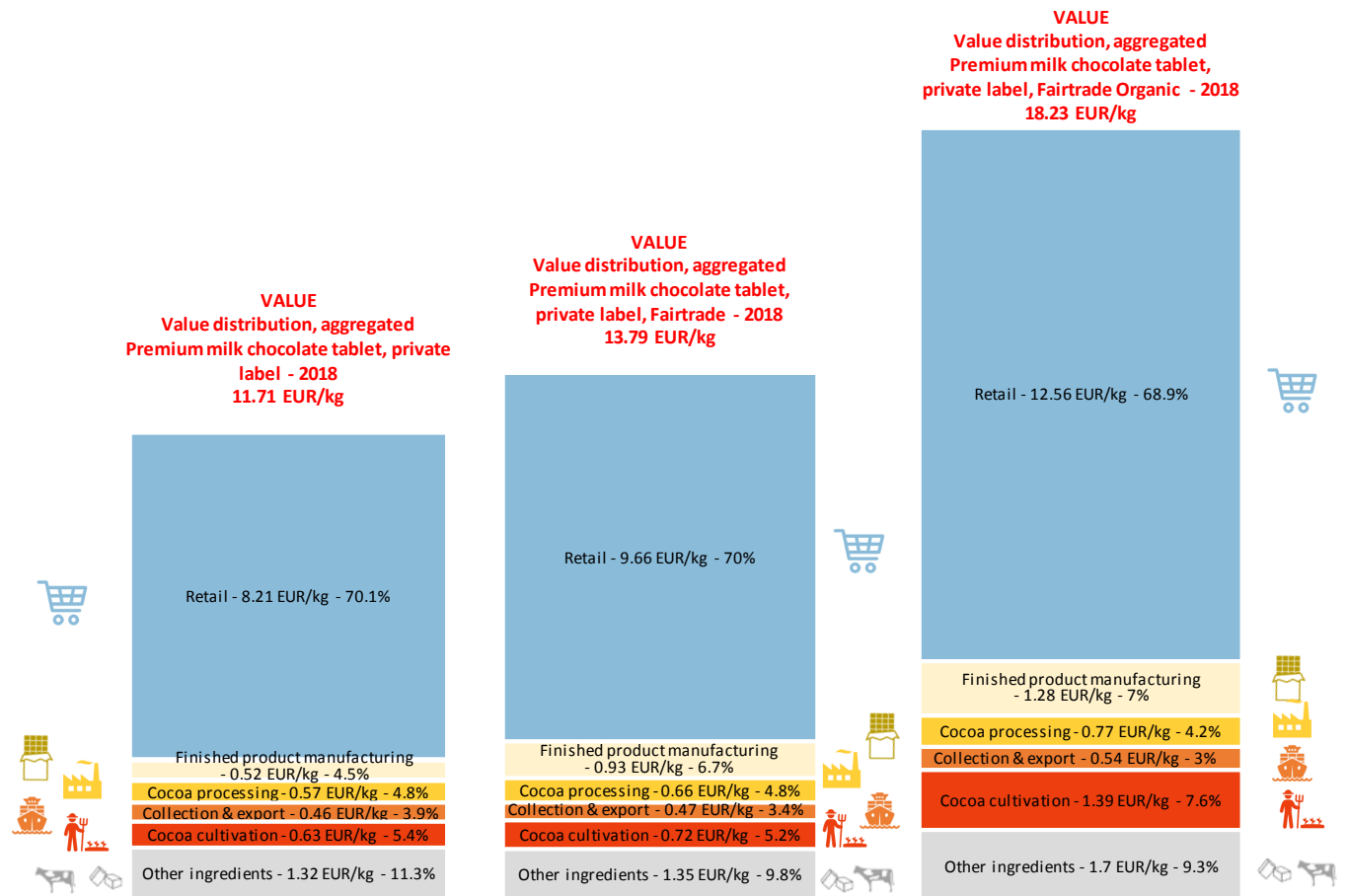


Figure 89. Distribution of value, for certified 'Premium' 'Private Label' plain milk chocolate tablets. Source: BASIC

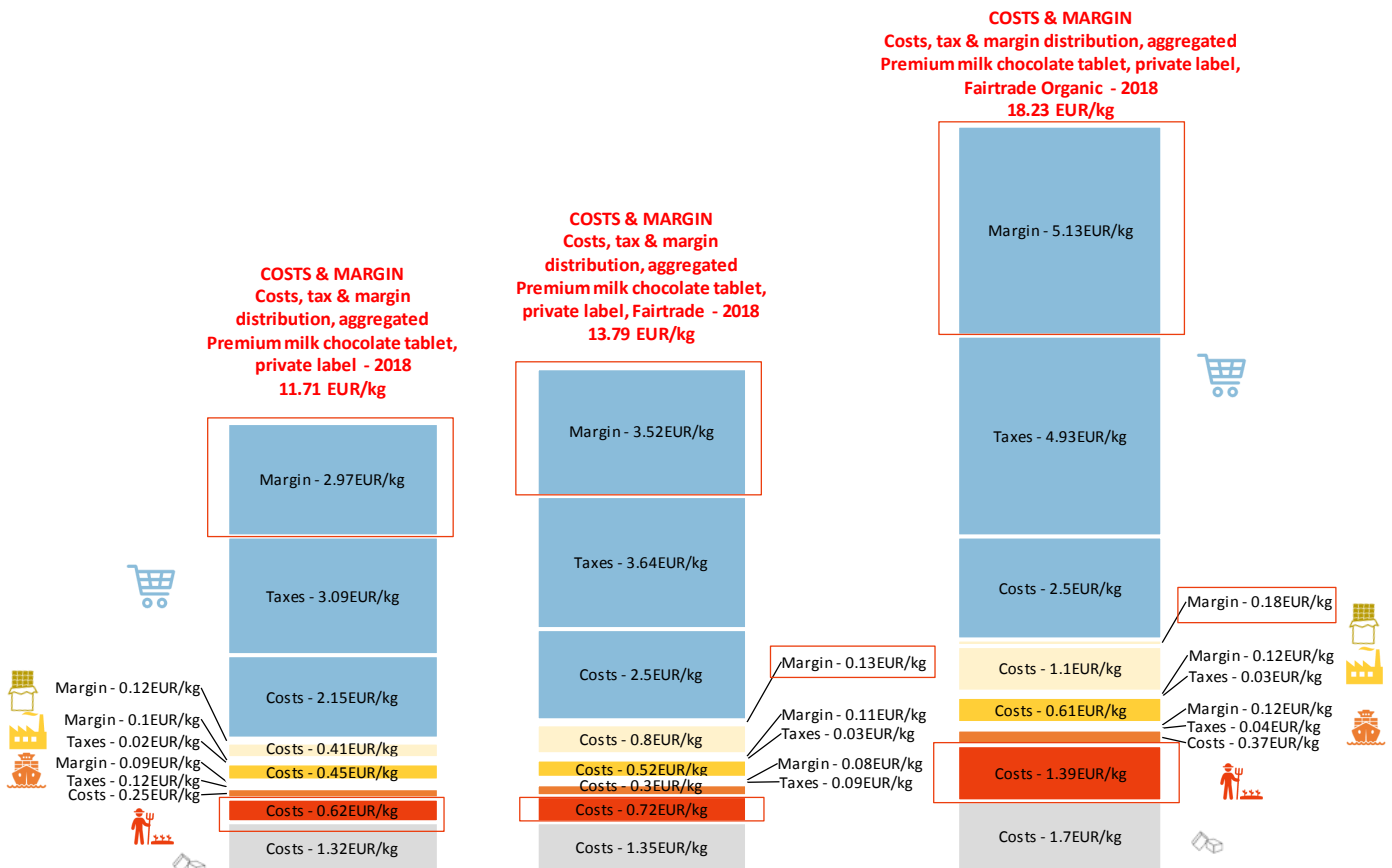


Figure 90. Distribution of costs & margins, for certified 'Premium' Private Label plain milk chocolate tablets. Source: BASIC

As for the previous case of National Brands' milk chocolate tablets (cf. above diagrams), **all the main elements of analysis detailed in the section on the Private Label Premium certified dark chocolate are applicable to milk chocolate** certified tablets (see section 2.4.3 above for more details), whether in terms of:

- price differentials at the consumer end,
- differences in share of value dedicated to upstream operations, particularly cocoa cultivation
- differences in costs in the middle of the chain
- impact on the profitability of downstream actors (retailers and National Brands)



2.4.5. Main learnings on the influence of certifications

In order to address the social and environmental challenges linked to the situation of cocoa farmers, certification systems have emerged and developed over the past 20 to 30 years.

As demonstrated in several studies¹⁷⁵, these challenges – especially deforestation and child labour – are strongly related to the price received by the majority of small cocoa growers which appears to be insufficient to enable them to cover their costs of production and the basic needs of their families, regardless of fluctuations on the world cocoa markets¹⁷⁶.

As shown by our estimates, **the leading certifications analysed are associated with mixed results regarding the distribution of value and costs from farmers to consumers:**

- **The organic label, especially in combination with Fair Trade, is associated with a higher valuation of the work of farmers and of the terroir of cocoa 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 made from cocoa of identified origins. However, only a minority of cocoa farmers are able to enter these demanding certification systems.
- In comparison, **the UTZ/Rainforest certification, as well as the Fairtrade certification, when they are not combined with organic, 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 while ensuring productivity (for UTZ/Rainforest), with difficulties in most cases to translate these commitments into higher prices to consumers when these certifications are not combined with organic.

More globally, even in the case of organic when combined with Fair Trade, **the overall value distribution from raw material to end consumption is not profoundly changed, even though the share of value dedicated to cocoa cultivation is significantly higher when organic and fair trade certifications are combined.** For example, in the case of dark ‘Premium’ chocolate tablets, farmers reached an estimated 2.7 euros/kg which is 87% more than in the case of non-certified tablets, which can be partly explained by the shift in cocoa origins (from Western Africa to Latin America).

Beyond the respective requirements of the different certifications analysed, and based on the interviews we have conducted, the observed changes in value distribution seem to be linked to:

- greater partnership relationships between actors all along the chain (farmers, cooperatives, processors, brands, retailers),
- greater value creation associated with the growing demand from certain consumers who are ready to pay more for “green and fair” chocolate made from cocoa of identified origins.

These findings are in line with the main outputs of the qualitative research we conducted in 2016 on cocoa value chains from Côte d’Ivoire and Peru¹⁷⁷.

175 Oxfam International, “Ripe for change: Ending human suffering in supermarket supply chains”, 2018
BASIC, “The Dark side of Chocolate”, 2016

176 BASIC, The Dark side of chocolate, 2016

177 BASIC, The Dark side of chocolate, 2016

2.5. Transversal analysis of each stage of the chain, across the products analysed

In order to contextualise and complement the analysis of product categories presented in the previous sections (2.3 and 2.4), it is **essential to take a transversal perspective and investigate the more global business models of actors at each stage of the cocoa/chocolate chain.**

The main results of our research are described below.

2.5.1. Retailing

According to studies of the “French Observatory on Prices and Margins of Food Products”¹⁷⁸ on French retailers, their overall business model is mainly characterised by their very low profitability, their **total net benefits at a Group level only reaches on average 0.8% of their total turnover** (regardless of the diversity of supermarket chains set ups, from integrated groups public listed on the stock exchange, to family-owned integrated groups and network of independent stores).

These benefits are not generated by the sales of products in their stores, but thanks to other activities, in particular the **rental of store space** in shopping malls, as well as their **real estate and financial activities** (the turnover generated by product sales is on average not sufficient to cover the retailers’ total operational costs).

In this context, **the chocolate & confectionery section of retailers’ stores is among the only profitable business units**, together with coffee and delicatessen, and to a lesser extent fruits and vegetable.

This is explained by the fact that **the other sections of retailers’ stores, in particular seafood, fresh meat, and bread/bakery, are associated with high (labour) costs which cannot be covered** by the turnover generated because of the strong competition on prices between supermarket chains (**retailers nonetheless feel the need to keep these sections in order to maintain their attractiveness** and not to lose customers to their competitors who still offer these products).

As a result, **chocolate products generate “an island” of profitability in “an ocean” of losses** (according to the experts we interviewed) and represent a **key leverage for retailers to compensate for deficits of several other product categories.**

This is best illustrated by the **comparison between our estimates of the share of value (gross margin) and net margins (after income tax)** of retailers for plain dark and milk chocolate tablets, **and the equivalent estimates of the French Observatory on Prices and Margins of Food Products** for other sections of the retailers’ stores.

¹⁷⁸ <https://observatoire-prixmarges.franceagrimer.fr>

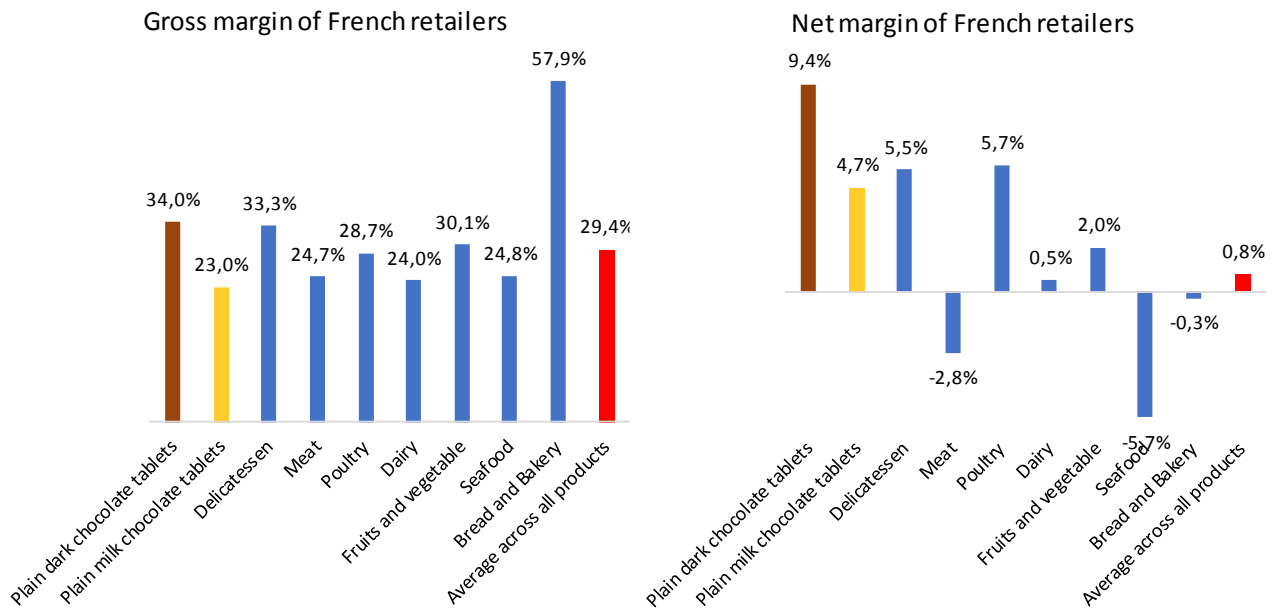


Figure 91. Comparison of gross and net margins of French retailers for different product categories in 2018. Source: BASIC

These estimates clearly show that **while the gross margins associated with plain dark and milk chocolate tablets are in the average of other food sections of supermarkets (and just above the average across all products). Their profitability, i.e. the net margins after income tax they generate, is (apparently) the highest of all product categories.** As a result, **plain dark and milk chocolate tablets appear to partially cross-subsidise losses in other sections of the retailers' stores.**

In order to better understand the perspective of retailers for chocolate products, **we have used our model to reconstruct a detailed vision of the total market of plain dark and milk chocolate tablets (expressed in million euros).**

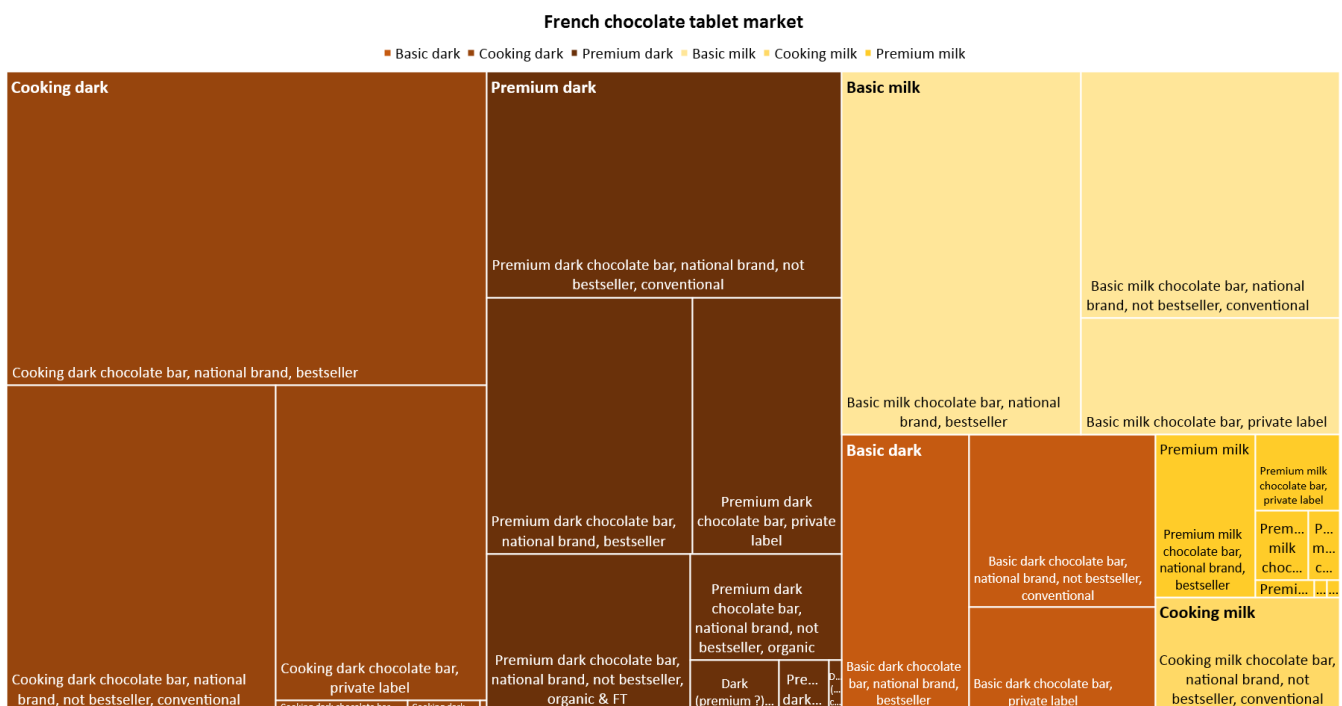


Figure 92. Global breakdown of the French market of plain dark and milk chocolate tablets in 2018. Source: BASIC

As illustrated above, **the main part of the total size of the market analysed is made up of plain dark chocolate tablets** (approximately 70% of total retail sales), the rest being associated with plain milk chocolate tablets.

This **focus towards plain dark chocolate is increasing over the years**, as demonstrated by the 18% sales growth of this category between 2014 and 2018, to be compared with an increase of only 5% for milk chocolate tablets.

Another noticeable point is the **importance of best-sellers (basic, cooking and premium altogether) in the total sales generated** amounting to:

- 38% of the total turnover of plain dark chocolate tablets
- 44% of the total turnover of plain milk chocolate tablets

In dynamic terms, according to the IRI data we have collected and processed, these best sellers tend to take an increasing importance in the Premium category since 2014 (whether dark or milk), with sales growth that are 2 to 3 times higher than the rest of the segment (+175% for dark Premium Best-seller and +95% for milk Premium Best-seller).

The tendency is the same but with much smaller growth rated for the Basic tablets segment (dark and milk) and reverse for the dark Cooking segment where the Best-seller is losing grounds.

In this context, **we have reconstructed the total share of value (gross margin) of all French retailers, broken down by product category.**

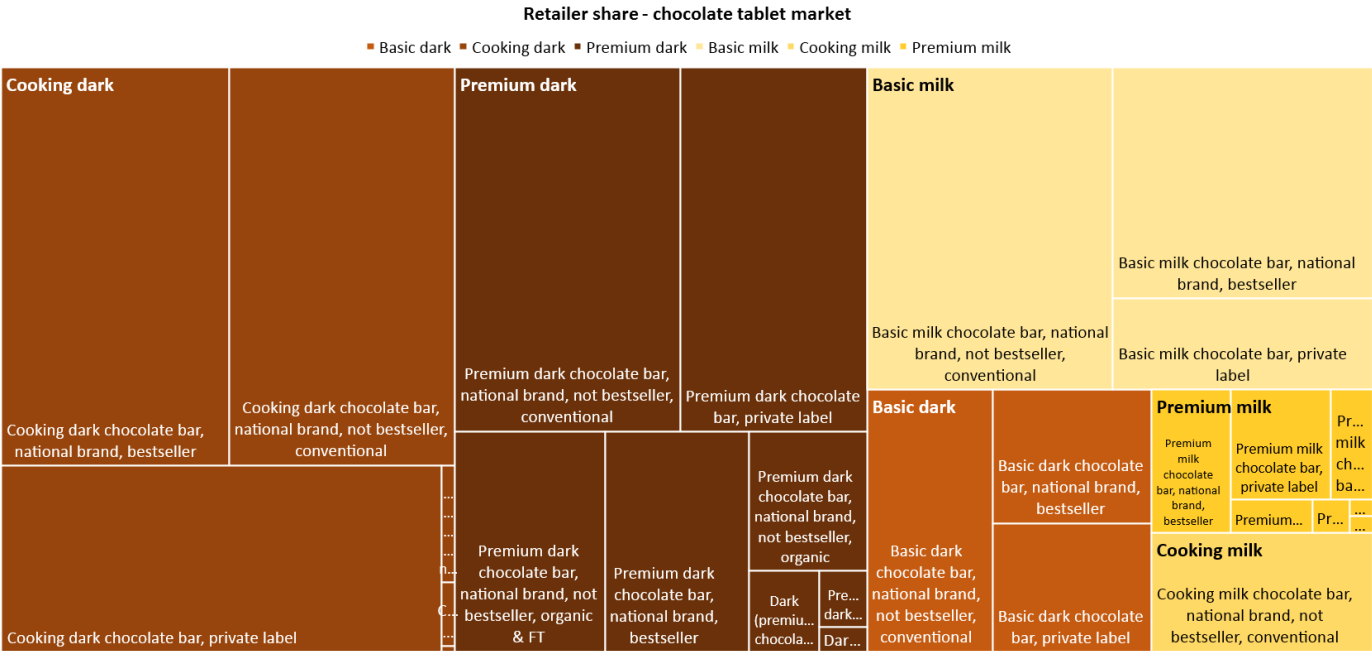


Figure 93. Total share of value of French retailers broken down by category of plain dark & milk chocolate tablets in 2018. Source: BASIC

Our calculations show that the **retailers' share of value is in line with the breakdown of market value** presented previously:

- Plain dark chocolate tablet account for 71% of retailers' share of value (and have grown since 2014)
- Plain milk chocolate tablet account for 29% of retailers' share of value (and have grown since 2014)

In addition, we can observe that the Premium category (both in plain dark and milk chocolate tablets) is slightly more important for the share of value of retailers than in terms of market sales, and the Cooking category is slightly less important.

In order to investigate further the profitability model of French retailers with regards to plain dark and milk chocolate tablets, we have then reconstructed **an estimation of the total (net) margins/benefits they generate, broken down by product category.**

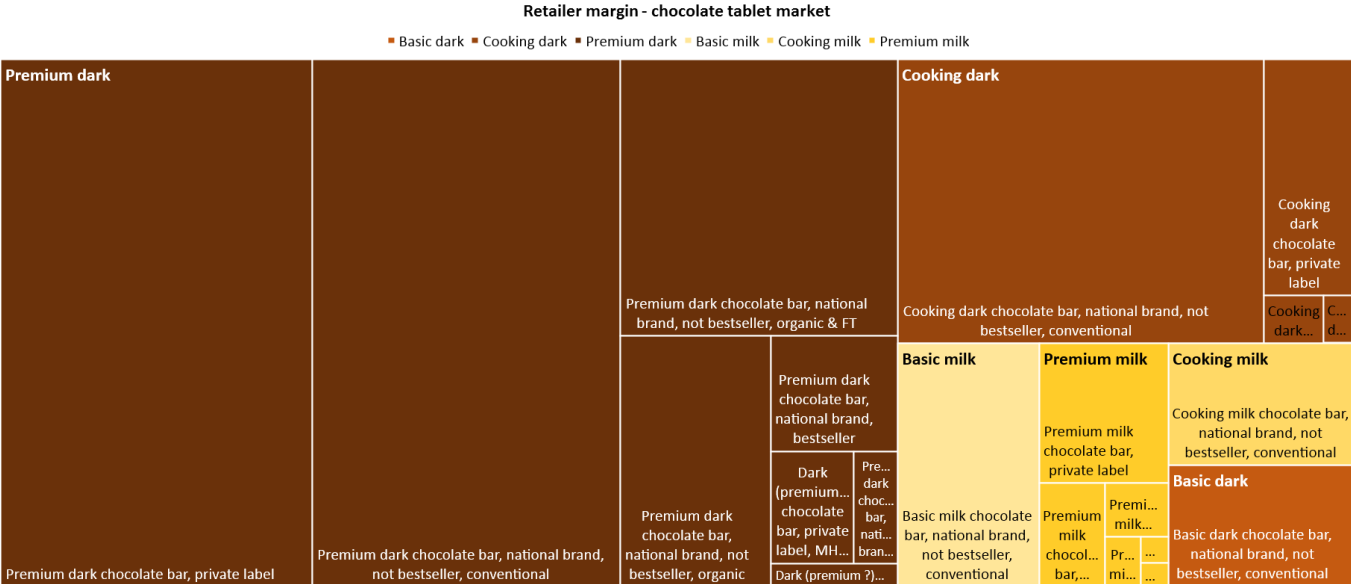


Figure 94. Total share of value of French retailers broken down by category of dark & milk chocolate tablets in 2018. Source: BASIC

Our estimates provide a very different picture regarding the **retailers’ total net margins, as most of it is generated by Premium plain dark chocolate tablets which account for 2/3 of retailers’ net margins on plain chocolate tablets, with an increase of 35% between 2014 and 2018.**

In contrast, Cooking tablets (especially for dark chocolate) only represent a minority of the retailers’ net margins (17%) although they account for the biggest part of their turnover and share of value (approximately 32%).

Finally, the **Basic plain dark and milk chocolate tablets segment seems to be the one with the lowest profitability** – mainly because of the strong competition on prices between retailers for this category of products:

- Basic plain dark chocolate tablets account for 3% of retailers’ net margins Vs 9% of their share of value
- Basic plain milk chocolate tablets account for 4.7% of retailers’ margins Vs 22% of their share of value (for the latter, mainly because of the importance of the ‘National Brand’ best-seller in this category).

These estimates clearly show that **retailers manage their chocolate products sections so that the higher profitability of plain dark chocolate tablets compensate the lesser profitability, and sometimes losses they make, on Basic tablets** (plain dark and milk) and to a lesser extent Cooking chocolate tablets.

The retailers' chocolate section managers, as confirmed by the interviews we have conducted, **also compensate between the very low net margins make on best-sellers (even zero for Basic and Cooking tablets),** which they nonetheless absolutely need in their product portfolio to attract consumers, **and the high(er) profitability of other plain dark and milk chocolate tablets, especially the Premium tablets.**

Within this profitability model developed by French retailers for plain dark and milk chocolate tablets, **Private Labels' chocolate tablets** (both plain dark and milk) appear to be an **important tool for retailers to maintain negotiation pressure on brands by offering competitive products at almost half the price.**

In Private Labels too, the Premium segment (for both plain dark and milk chocolate tablets) appears to be highly profitable for retailers, even though the barrier to entry is higher due to the powerful image of premium National Brands, hence the strategy of retailers to invest in certified product lines (mainly organic & Fairtrade) in order to differentiate from their branded competitors and attract consumers.

A last point of interest in the **analysis of retailers' business model relates to their capital employed and their level of commercial risks.**

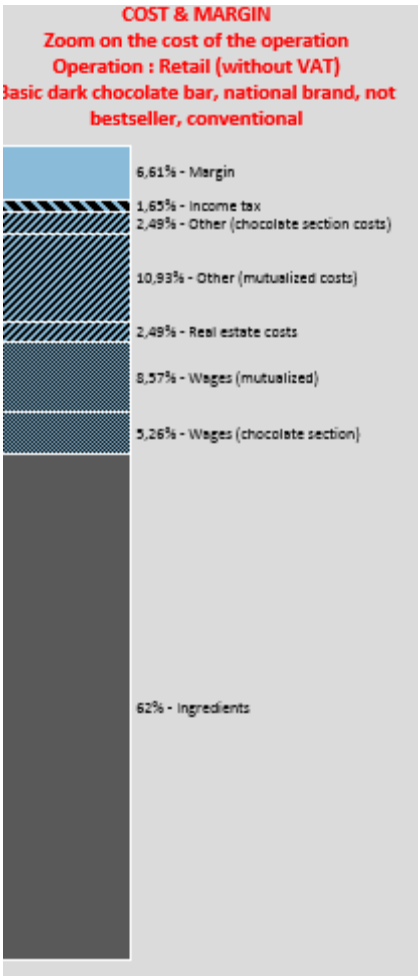


Figure 95. Breakdown of costs and margins of French retailers (on Basic National Brand non-Best-seller plain dark chocolate tablets) in 2018. Source: BASIC

First of all, our estimates of the retailers' costs and margins breakdown show that **one of the only fixed costs corresponds to their real estates, which only amounts to 2.49%**¹⁷⁹ of their overall revenue.

In addition, looking at the available data on public listed French retailers¹⁸⁰, it appears that their capital employed represents a bit less than 50% of their balance sheet, while their net benefits after income tax only amounts to 1% of their turnover.

These orders of magnitude tend to show that their **return on capital employed is quite low, potentially close to 2% per year.**

Regarding their level of commercial risks, we were not able to investigate the issue apart from looking at the evolution in recent years of their turnover, which seems to be quite stable, and of their benefits which also feature low variations (between zero and 2%) in proportion to their total sales. These two elements (capital employed and risks), which were not included in the Terms of References of the current study, would be interesting to investigate further in the light of our other estimates and findings provided that we can get access to data on the sole chocolate business of retailers.

2.5.2. Final product manufacturing

Regarding the final product manufacturing stage, it is important to differentiate between 3 different types of actors, at least on the French market, and associated business models:

- **International Brands**, either owned by a company specialised in chocolate products or possessing a wide diversity of food products beyond chocolate, which appear to have a mainly value-driven business model which operates at large scale.
- **Final product manufacturers** working for retailers' Private Labels, which appear to have a mainly volume-driven business model.
- **Small independent brands** specialised in chocolate which have a value-driven business model (operating at low volumes) which can apparently be sustained if they manage to enter and maintain themselves in the Premium category.

International Brands

Investigating International brands, one of their main characteristics is that they possess at least one Best-seller product in one of the segments of plain chocolate tablets (dark or milk).

According to the interviews we have conducted, **International Brands tend to use this (these) Best-seller(s) in close relationship with the other chocolate products of their portfolio, both acting as 'connected vessels'** to ensure the global profitability of their business model:

- Best-seller products are at the core of brands' capacity to generate margins (even though they are associated with higher costs of advertisement, thanks to the economies of scale they manage to achieve), while the other products are important to maintain innovation, avoid being out-competed, build an image "on the edge" and hopefully create new segments or best-sellers.
- The margins made through Best seller tablets enable the company to invest in research & development on other products and to cover its amortisation costs (factories, machines...)

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

180 <https://www.marketwatch.com/investing/stock/crrfy/financials>

As all other suppliers, **International Brands are subject to intense pressure from French retailers during annual negotiations until one agrees to reduce its selling prices** and then all others have to follow, as described in the current investigation of the French Parliament on the commercial practices of supermarkets. However, the fact that they possess at least one best-seller provides them with a key leverage to at least partially the negotiation pressure of retailers (the latter often using its Private Label to try to undermine the position of negotiation of International Brands).

In order to investigate further the profitability model of International Brands on the French market with regards to plain dark and milk chocolate tablets, we have reconstructed **an estimation of the total share of value and of the total (net) margins/benefits they generate, broken down by product category.**

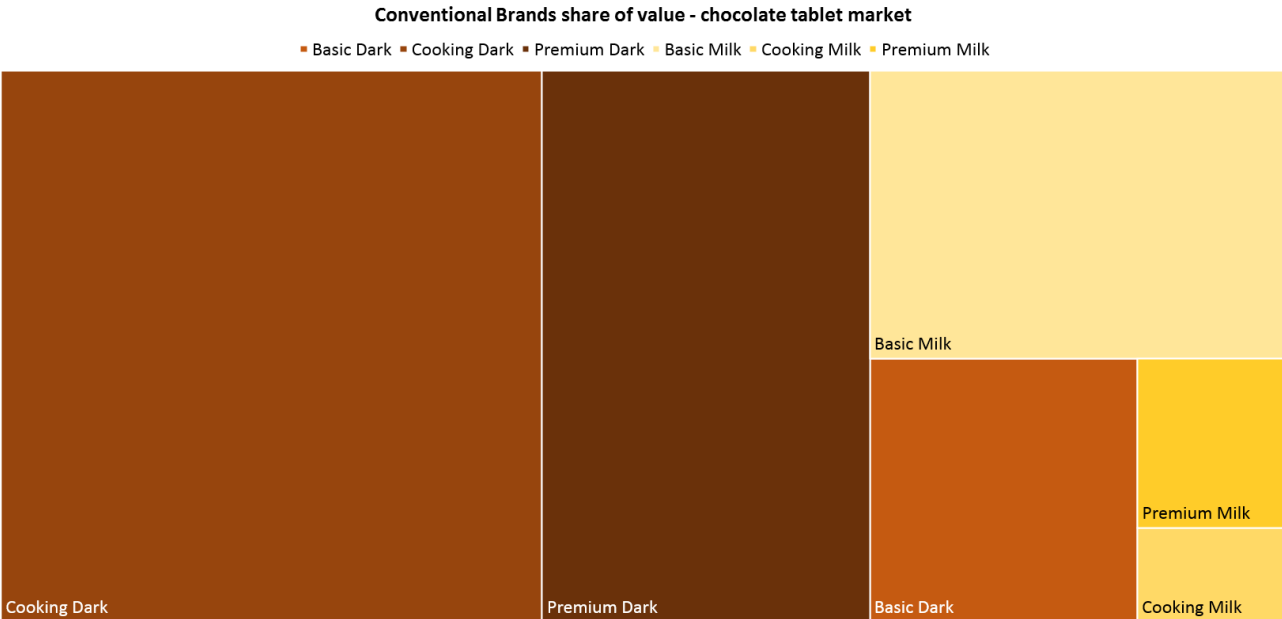


Figure 96. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC

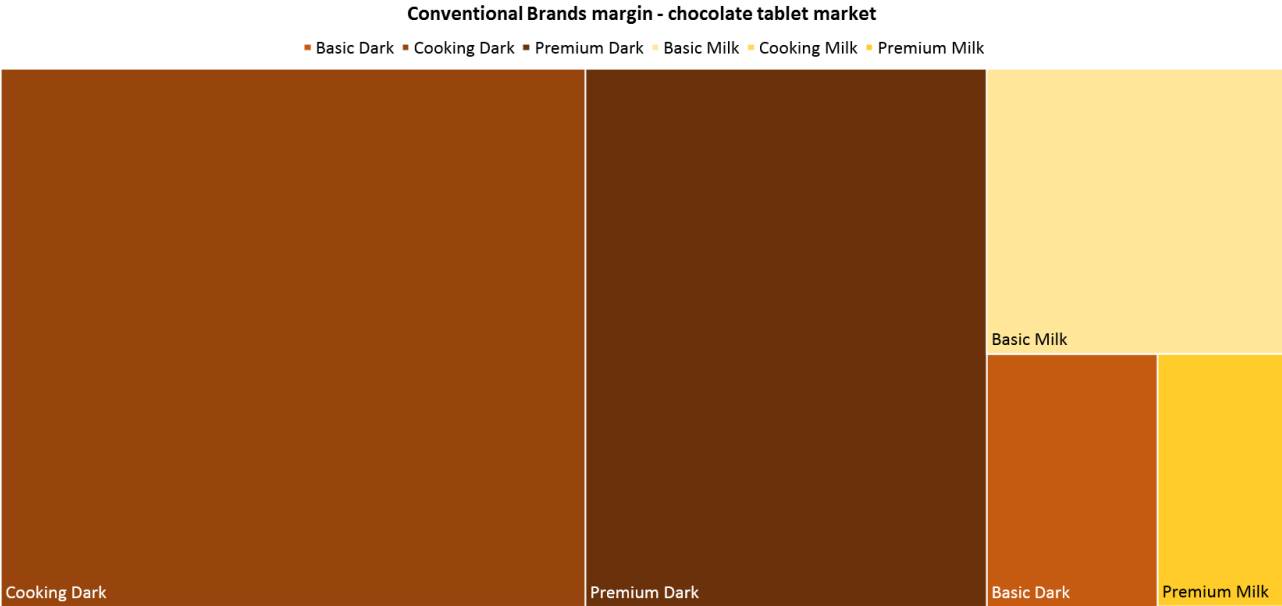


Figure 97. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC

Our calculations show that:

- **Cooking dark chocolate tablets** are correlated with the highest share of value of International Brands, and even more their net margins.
- **Premium plain dark chocolate tablets** appear to generate a greater proportion of their total net margins than of their total share of value, thereby showing **their key role with regards to the profitability of International Brands**.
- **All other products seem to be related to lower profitability performances** but are likely to be must-haves in the portfolio of most International Brands positioned on the chocolate market.

According to the interviews we have conducted, it seems that the **high value and margin creation associated with the Premium plain dark chocolate** segment relates to the **success of the marketing strategy of leading Premium Chocolate Brands** (in particular Lindt) which have persuaded consumers **worldwide** (in both mature and emerging markets) **that the quality of dark chocolate tablets was directly proportionate to the percentages of cocoa in their recipe**, which is strongly put forward on their packaging (this market segment has become structured around these percentages, from 70% up to 99%).

This has created a barrier for the promotion of regional specificities and terroirs in the cocoa sector (as opposed to the evolutions of the coffee sector over the past 20 years) as most consumers are essentially looking for the content of cocoa and rarely accustomed with the high potential differences in cocoa tastes depending on cocoa varieties, pedoclimatic conditions as well as the type of fermentation work conducted by farmers and cooperatives).

This phenomenon has been amplified by the fact that **the majority of chocolate tablets, including in the Premium segment, are the result of an important work at the chocolate manufacturing level** (especially through conching) to flatten regional specificities, standardise processes and develop a stable mix of origins **that enable the Brands to sell chocolate tablets that have a consistent and 'elaborated' taste throughout consumer countries and over the years** (according to the interviews we have conducted).

More recently, **this trend has even entered the milk chocolate category** as one the leading Premium Brand Lindt has begun to launch in France a new series of Premium milk chocolate tablets (plain) with a set of higher percentages of cocoa in order to attract new customers towards this segment.

Beyond the chocolate products category, there is a possibility that the wider portfolio of some of the International Brands (e.g. Mondelez or Nestlé) might enable them to cross-subsidise between categories and use the margins generated on the chocolate segments to invest in other products, or reverse. We did not find sufficient basis of information to investigate and document this hypothesis.

A last point of interest is the **analysis of the capital employed and level of commercial risks of International Brands**.

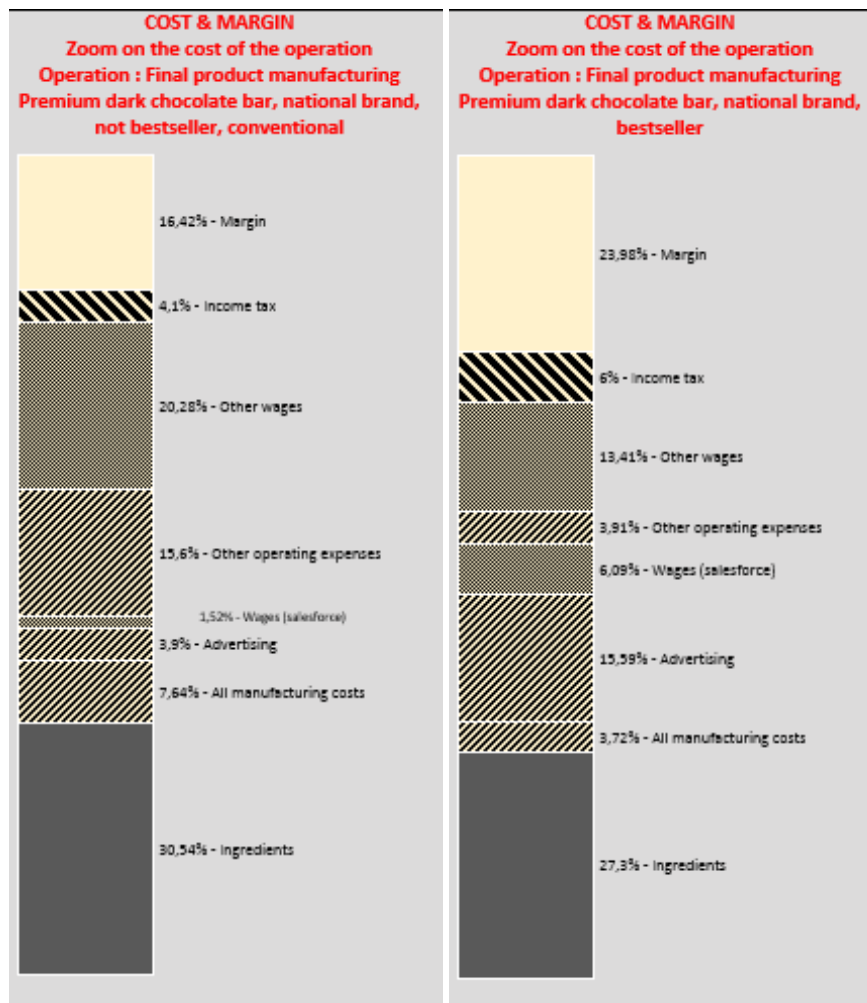


Figure 98. Breakdown of costs and margins of International Brands (Premium Best-seller and non-Best-seller plain dark chocolate tablet) in 2018. Source: BASIC

First of all, our estimates of the brands' costs and margins breakdown show that they have **very little fixed costs, except for advertisement costs which can be considered as compulsory expenses to maintain the attractiveness of the brand: they amount, according to our estimates, to approximately 15.59% of their total sales for Best-sellers, and only 3.9% for Best-sellers.**

Looking further at the available data on public listed Brands specialised in chocolate¹⁸¹, it appears that their capital employed represents approximately 30% of their total balance sheet, while their net benefits after income tax only amounts to 10%-12% of their total turnover.

These orders of magnitude tend to show that their **return on capital employed is quite high, potentially close to 30% per year.**

More broadly, this high level of return apparently **reflects the high expectations of return on investment from the shareholders of these International Brands**, as illustrated by the regular reports of financial analysts for whom **an annual net benefit amounting to at least 10% of the total sales is the benchmark for these companies.**

181 <https://www.marketwatch.com/investing/stock/lisn/financials>

Regarding their level of commercial risks, we were not able to investigate the issue apart from looking at the evolution in recent years of their turnover, which seems to be quite stable, and of their benefits which also features low variations in proportion to their total sales (between 10% and 12%).

These two elements (capital employed and risks), which were not included in the Terms of References of the current study, would be interesting to investigate further in the light of our other estimates and findings, provided that we can get access to information on the sole chocolate business of International Brands.

Manufacturers of Private Label products

In contrast with International Brands, the Manufacturers of Private Label chocolate tablets appear to be based on a primarily volume-based business model, i.e. low(er) profits made on high(er) volumes.

As for international Brands, we have reconstructed an estimation of the total share of value and of the total (net) margins/benefits they generate, broken down by product category.

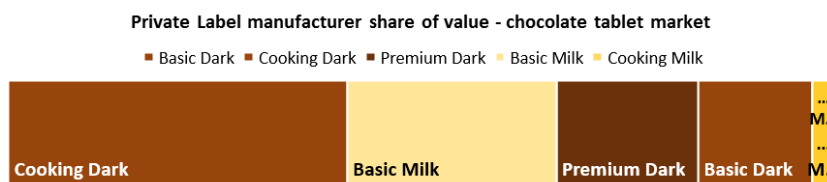


Figure 99. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC

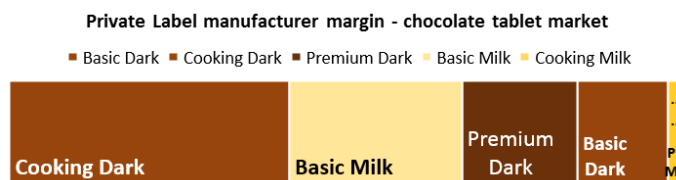


Figure 100. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC

Our calculations show that, like for International Brands, the Dark Cooking segment, and to a lesser extend the Milk Basic one, have an important place in their share of value (due to the high volumes sold), but also in their total margins (as they are quite the same across product segments).

The Premium segment apparently has a more limited role for Manufacturers than for International Brands, especially regarding the margins generated. This probably is a consequence of the difficulty of Private Labels to compete with International Brands on this segment which is highly dependent on the reputation of the brand.

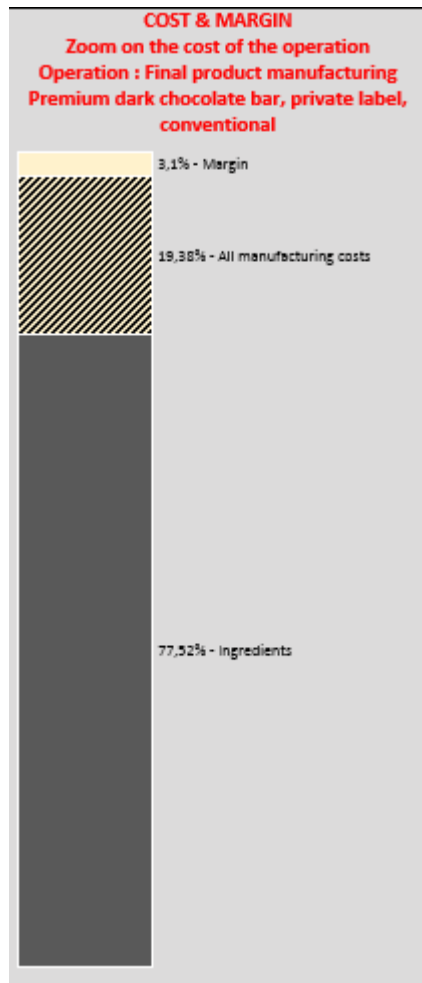


Figure 101. Breakdown of costs and margins of Private Label Manufacturer (Premium dark tablet) in 2018. Source: BASIC

Whatever the product segment, our estimates of the Private Label Manufacturers' costs and margins breakdown clearly illustrates the fact that **their business model is more oriented towards volumes with lower margins than International Brands.**

According to our interviews, **manufacturers tend to value the Private Label model as they are generally 'open-book' and based on greater partnership and proximity** between operational teams, hence apparently creating greater mutual trust than it is the case for International Brands (in particular in times of high cocoa prices rise, because retailers know there is not enough margins to buffer costs increases at the manufacturer's level).

Another benefit for manufacturers is the **greater visibility and relative security of business and profitability over time.** Indeed, they are less subject to uncertainty regarding their margins over time due to the fact that they can transmit the costs increases linked to the world market prices of cocoa on to the retail stage (as opposed to brands).

We have not been able to analyse **the capital employed neither the level of commercial risks of Private Label Manufacturers.**

Small independent brands

In between International Brands and Private Label Manufacturers, the business model of small independent brands appear to mainly value-based, i.e. high (er) profits made on low(er) volumes. As for the previous actors, we have reconstructed **an estimation of the total share of value and of the total (net) margins/benefits they generate, broken down by product category.**

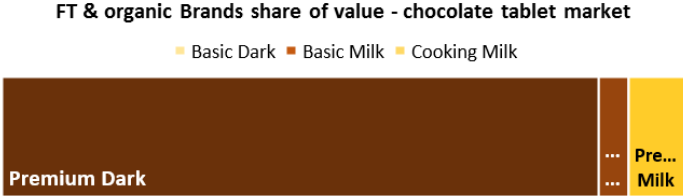


Figure 102. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC



Figure 103. Total share of value of International Brands broken down by category of dark & milk chocolate in 2018. Source: BASIC

Our calculations apparently show **that the business model of small independent brands can only be maintained in the Premium chocolate category**, as confirmed by the interviews we have conducted. More precisely, the Premium plain dark chocolate segment represents the majority of the share of value as well as total net margins generated by these actors (see above).



Figure 104. Breakdown of costs and margins of small independent brands (certified Premium dark tablet) in 2018. Source: BASIC

Furthermore, our results in terms of costs breakdown for these independent brands show that they apparently generate a lower level of margin (and hence profitability) than International Brands. This is explained by their lack of economies of scale which generate higher costs than their bigger competitors (based on our interviews with experts of the sector).

We have not been able to analyse **the capital employed neither the level of commercial risks of small independent brands.**

2.5.3. Cocoa processing (including chocolate manufacturing)

Upstream in the chain, the actors involved in the manufacturing of cocoa mass, butter, powder and chocolate couverture, as well as those involved in cocoa transport, warehousing and trading seem to have a business model that is predominantly volume-based, i.e. small margins on (very) high volumes.

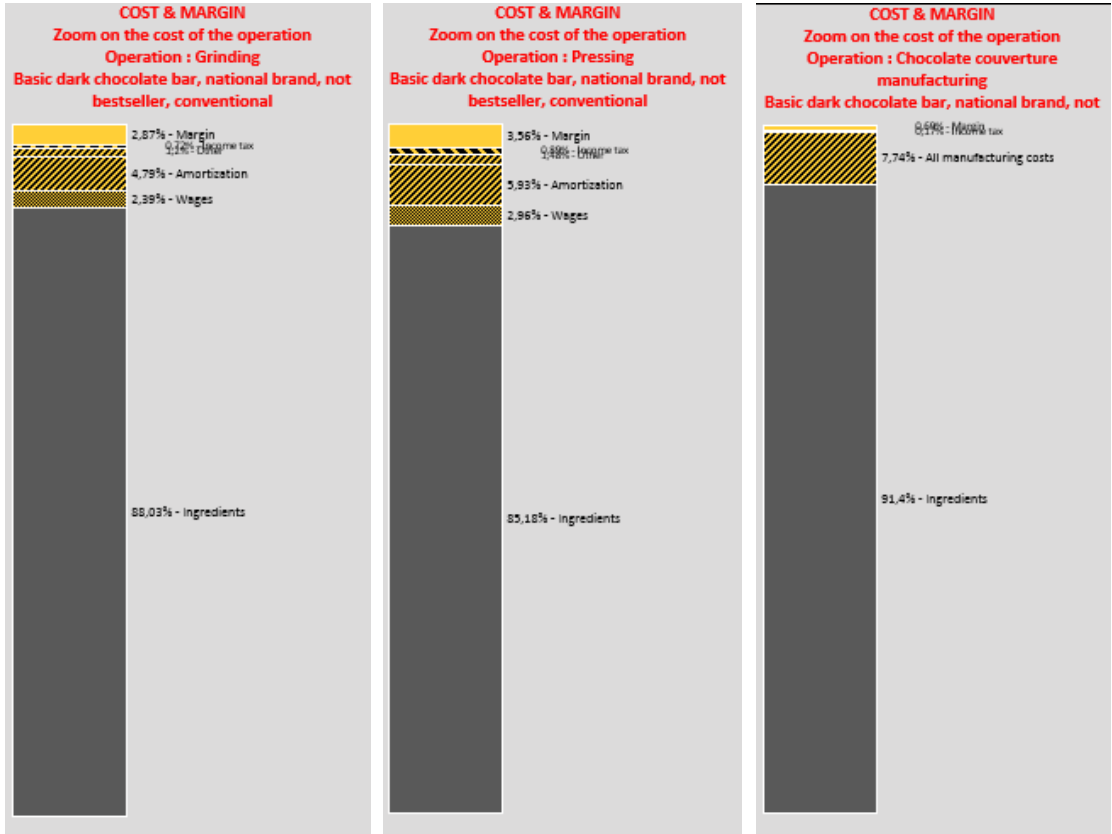


Figure 105. Breakdown of costs and margins of cocoa grinding, pressing and chocolate manufacturing (Basic dark tablet).
Source: BASIC

This situation is best illustrated by our estimates of the costs breakdown for cocoa grinding and pressing as well as chocolate couverture manufacturing, which are based on publicly available data and cross-checking with companies from the sector (see above).

The low level of margins achieved (between 1% and 3.5% on average reflects the strong industrial **capacity of these operators** which are able to **offer of a wide variety of qualities of chocolate couverture and powders (as well as other by-products like butter) while keeping low costs per kg**

thanks to high economies of scale and standardisation, especially at the level of cocoa mass and cocoa butter manufacturing (a key feature/asset of the sector and a result of its long history of industrialisation since the 19th century).

In this case too, we have not been able to analyse the capital employed neither the level of commercial risks of these intermediate actors. However, given the nature of their operations in logistics, trading, and heavy industry, they are likely to be the most capital-intensive actors of the cocoa/chocolate chains, and among the ones that bear the biggest commercial risks. Therefore, it is noticeable to see from our estimates that it is those actors that generate some of the smallest margins among the large companies involved in the chain.

2.5.4. Cocoa cultivation, collection and exports

In producing countries, according to our interviews, the actors 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 climatic risks (the latter being amplified by climate change).

The first category of actors are involved in the collection, transport, warehousing and trading of cocoa, with a business model that seems to be largely volume-based (as in the case of processors).

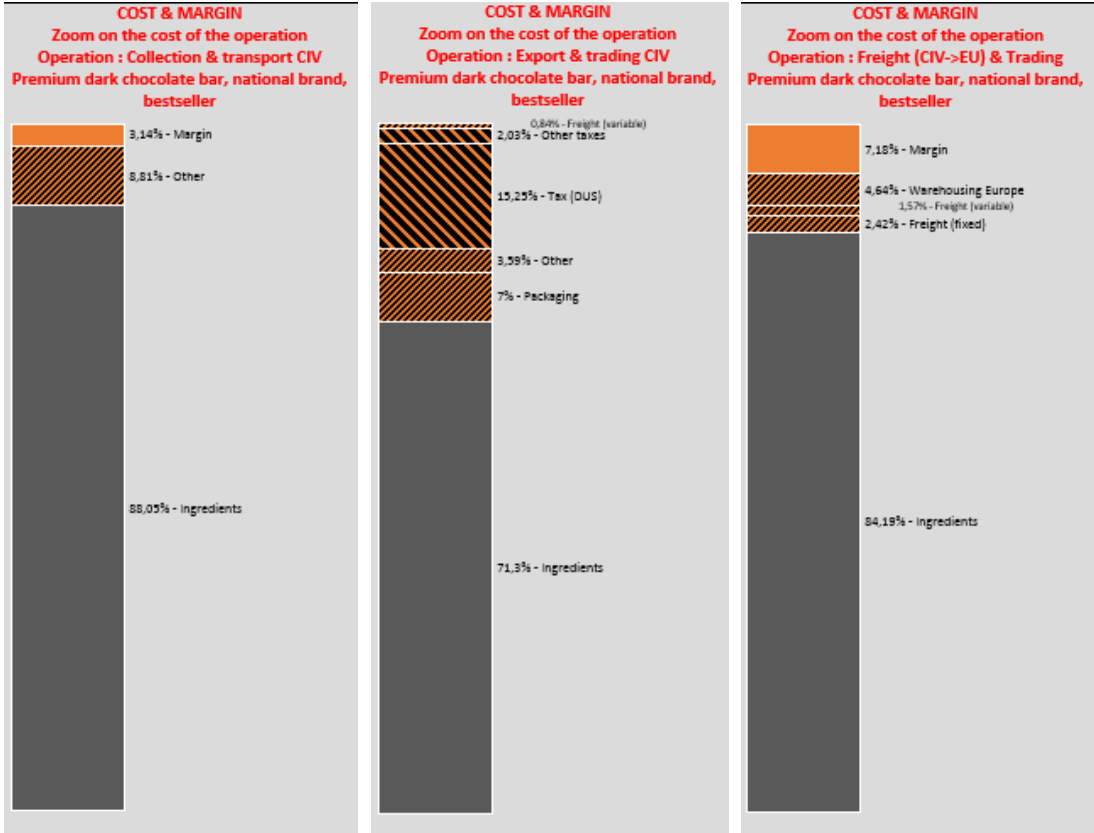


Figure 106. Breakdown of costs and margins of cocoa transport, warehousing and trading (Basic dark tablet). Source: BASIC

The situation is apparently quite similar for transporters and traders in producing countries to the one of cocoa processors, as shown by our estimates of the costs breakdown for these actors, which are based on publicly available data and cross-checking with companies from the sector (see above). In order to investigate further the situation of farmers, we have first compared the average breakdown of value for conventional cocoa in the 4 producer countries analysed that derives from our estimates.

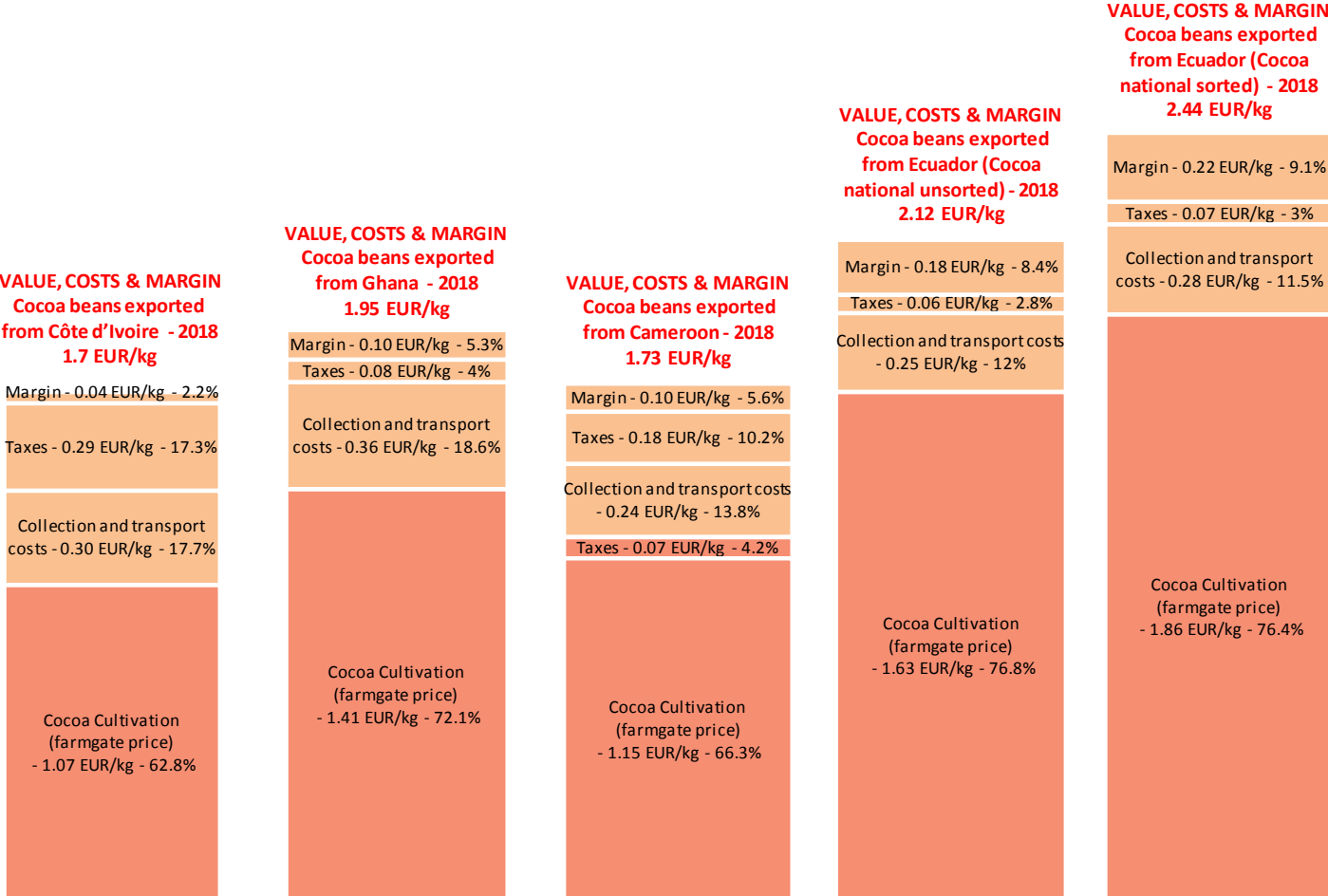


Figure 107. Breakdown of Free on Board value in Côte d'Ivoire, Ghana, Cameroon and Ecuador in 2018 (cocoa harvest 2017/18). Source: BASIC

Based on the official data published by the different countries' public authorities (e.g. barème in Côte d'Ivoire), and the information from their customs authorities, it appears that in 2018:

- The lowest share of value for cocoa cultivation was achieved in Côte d'Ivoire and Cameroon (respectively 1.07 euros/kg and 1.15 euros/kg),
- followed by Ghana which reached a share of value of 1.41 euros/kg,
- and Ecuador for which the cocoa cultivation's share of value reached more than 1.6 euros/kg.

In comparison, the share of value associated with collection, transport and warehousing is much more similar among the 4 countries, from 0.24 euros in Cameroon to 0.36 euros/kg in Ghana.

In order to better understand and analyse these results, they have been further put in the specific context of each producer country – see the details in the following chapter.



2.5.5. Main learnings on the transversal analysis of actors

According to studies on French retailers, their overall business model is mainly characterised by their very low profitability, their total net benefits at a Group level only reaching on average 0.8% of their total turnover. These benefits are not generated by the sales of products in their stores, but thanks to other activities, in particular the rental of store space in shopping malls, as well as their real estate and financial activities (the turnover generated by product sales is on average not sufficient to cover the retailers' total operational costs). In this context, the chocolate & confectionery section of French retailers' stores is among the only profitable ones, together with coffee and delicatessen, and to a lesser extent fruits and vegetable.

Regarding the final product manufacturing stage, it is important to differentiate between 3 different types of actors, at least on the French market, and associated business models:

- International Brands, either owned by a company specialised in chocolate products or possessing a wide diversity of food products beyond chocolate, which appear to have a mainly value-driven business model which operates at large scale. Their business model is structured around the synergies between a handful of 'best-seller' products and the rest of their chocolate products' range.
- Final product manufacturers working for retailers' Private Labels, which appear to have a mainly volume-driven business model. They tend to value the Private Label model which they consider as creating greater partnership relationships and mutual trust, greater visibility and a relative security of business and profitability over time.
- Small independent brands specialised in chocolate which have a value-driven business model (operating at low volumes) which can apparently be sustained if they manage to enter and maintain themselves in the Premium chocolate category.

Upstream in the chain, the actors involved in the manufacturing of cocoa mass, butter, powder and chocolate couverture, as well as those involved in cocoa transport, warehousing and trading seem to have a business model that is predominantly volume-based

In producing countries, the actors (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 climatic risks (the latter being amplified by climate change).

3. Chapter 3: Focus on the distribution of value, costs & margins within producer countries

This chapter analyses in more details the distribution of value, costs, and margins in each of the 4 countries of production included in the scope of the study.

Each country case-study begins with a description of the context of the cocoa sector and value chains, before presenting the main results of our estimates and then analysing the major factors that influence the value & costs distribution.

3.1. Côte d'Ivoire

Leading cocoa producing country since the 1970s, Côte d'Ivoire represented in 2018 40% of the worldwide cocoa production (an estimated 2 million tonnes¹⁸²). These statistics alone explain why Côte d'Ivoire plays such an important role in the cocoa value chain's dynamics.

3.1.1. Conventional cocoa

3.1.1.1. The Ivorian cocoa sector and its main characteristics

Brief introduction to the historical aspects of cocoa-chocolate sector within the country

Cocoa arrived in the South-Eastern region of Côte d'Ivoire at the end of the 19th century and was then encouraged by the French colonial metropole which decided to bring workforce from Upper Volta, develop the road network and favour the development of small farms¹⁸³.

Following the independence in 1960, the Houphouët-Boigny's regime structured the Ivorian economy around export agriculture, especially coffee and cocoa¹⁸⁴, shaping the economic and social context for decades to come¹⁸⁵. To support this development, a Cocoa Stabilisation Fund (also known as "Caistab", see below) was created with a purpose to guarantee a set minimum price to cocoa producers for the entire harvest and leave the internal and external commercialisation to private intermediaries (pisteurs and negotiators)¹⁸⁶. In 1978, Côte d'Ivoire became the first cocoa producer in the world¹⁸⁷ with more than 500 000 tonnes exported each year¹⁸⁸.

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

183 In 1919, Côte d'Ivoire struggles to produce 10 000 tonnes of cocoa while Ghana produces almost 150 000 tonnes.

184 B. Losch, « Coup de cacao en Côte d'Ivoire. Économie politique d'une crise structurelle », Critique internationale 2000/4 n°9

185 B. Losch, « La Côte d'Ivoire en quête d'un nouveau projet national », Politique africaine, 2000/2 n°78

186 N. Harwish, Histoire..., op. cit.

187 Agritrade, « Les réformes du secteur du cacao de la Côte d'Ivoire 2011-2012 », Rapport à la une, décembre 2012

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

But lacking a diversified economy, Côte d'Ivoire was extremely dependent to the liberalising world cocoa market¹⁸⁹ and the situation started to deteriorate during the 1980s. Competition with new exporting countries was fierce, and the Ivorian State then set as a public policy to pay twice the world cocoa price to the Ivorian producers¹⁹⁰. The situation became untenable when the world cocoa price started to decline in 1985¹⁹¹. The Ivorian State tried to suspend external debt repayments and froze the exports. Finally, in 1989, the government was forced to reduce nearly by half the price payed to producers, from 400 FCFA per kg to 250 FCFA per kg¹⁹². The economic recession led to political conflicts which undermined the political and economic system of Côte d'Ivoire and gave rise to a period of profound political and social troubles¹⁹³.

After several years of a liberalisation, the cocoa sector is now back under a State regulation led by the *Conseil Café Cacao* (see below) which nonetheless gives important leeway to private actors (especially if compared to the neighbouring Ghana¹⁹⁴). Cocoa beans continue to represent the major share of the exports (an estimated average of 75% for the 2016/2017) while the exports of semi-transformed products (cocoa butter, powder, cake or mass) fluctuate between 25 and 30%¹⁹⁵.

Key facts on Ivorian cocoa production

The Ivorian cocoa production is almost exclusively undertaken by small producers and their families who own an averaged 5 hectares¹⁹⁶. On their plots, farmers usually grow some subsistence crops (plantain banana of yam for instance) along with cocoa. Nonetheless in agronomic terms, Ivorian cocoa is grown without shade: that seems to back up to the 1960s when these agricultural practices were favoured, including by the chocolate industry itself¹⁹⁷.

The average annual yield in Ivorian cocoa farms is quite low, around 400 kg/ha¹⁹⁸. Most of these cocoa producers ferment and dry the beans themselves before selling and delivering them to their cooperative or selling to the pisteurs. Today, estimates show that cocoa in Côte d'Ivoire is cultivated on 4 to 8 million hectares by roughly 800 000¹⁹⁹ cocoa farmers, with 3.6 million people employed throughout the country²⁰⁰ and almost 8 million people throughout the country who depend on cocoa for their living.

189 B. Losch, « La Côte d'Ivoire... », op. cit.

190 Moreover, the Cocoa Stabilization Fund, created in 1962, does not achieve to fulfil its mandate to stabilize the international prices and fail to mitigate their sharp fall. The « Caistab » fails again when the prices of cocoa and coffee fall in the late 1980s (B. Losch, « La Côte d'Ivoire... », op. cit.).

191 D. Cogneau et R. Jedwab, « Commodity Price Shocks and Childs Outcomes: The 1990 Cocoa Crisis in Côte d'Ivoire », *Economic Development and Cultural Change*, Université de Chicago, 2012

192 D. Cogneau et R. Jedwab, « Commodity Price Shocks... », op. cit.

193 B. Losch, « La Côte d'Ivoire... », op. cit.

194 World Bank, 2017, op. cit.

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

196 8 persons on average in an Ivorian household (AFD/Barry Callebaut, *Cocoa farmers' agricultural practices and livelihoods in Côte d'Ivoire*, 2016).

197 P. Jagoret, O. Deheuvelds et P. Bastide, « S'inspirer de l'agroforesterie », *Perspective*, mai 2014 n°27

198 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

199 Aidenvironment, NewForesight, IIED et IFC, « Cocoa in Côte d'Ivoire », 2015

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

The owners of agricultural farms are mostly men who traditionally do the agricultural work. However, women also contribute a lot to the work in the cocoa plantations along their other activities, in particular seedling raising and post-harvest works. The principal discrimination factor against women in the Ivorian cocoa sector is their limited access to cooperatives, as it is difficult for them to join as a member and even more, to become an elected representative²⁰¹.

The cocoa produced in Côte d'Ivoire is mostly Forastero. The current organisation of the supply chain in the country and the regulation of the cocoa sector do not incentive producers to differentiate their production on quality. Differentiation seems though possible in specific supply chains such as certified or organic for which some small-scale experiments have been implemented and developed since 2016²⁰².

A network of pisteurs and traitants

Once fermented and dried, beans are bought directly to the farmer by a *pisteur*, an intermediary with great local knowledge, skilled in knowing where and when to buy cocoa beans. **Since the implementation of the Ouattara reform in 2011, they are legally obliged to pay the minimum price set for the harvest by the State which correspond to 60% of the FOB price** (see below). A signed document by both parties attest that the minimum price set before the harvest has been paid²⁰³.

Traitants and their networks of *pisteurs* have been considered to be quite unstructured since the liberalisation of the sector. Therefore, large cocoa traders and grinders often offer beforehand fundings to *traitants* and their *pisteurs*²⁰⁴ in order to secure supply as they can pay in cash the cocoa producers upon delivery. This competition is said to weaken the cooperatives which most often cannot pay upon delivery²⁰⁵.

Trading of cocoa beans for exports

For the 2016/2017 harvest, 75% of the national cocoa production was exported as beans²⁰⁶. **The major share of the exports goes to the European Union**, particularly towards the Netherlands, Germany, Belgium and France. Fewer companies are exclusively specialised in exporting cocoa beans as the sector faces tougher competition from the grinders that sometimes manage their own negotiating activities.

201 Oxfam Canada, « Gender inequality in cocoa farming in Côte d'Ivoire », Behind the Brands, 2013

202 Interviews in Côte d'Ivoire performed during the mission in July 2019

203 Itws terrains CI

204 Fold and Nielsen, "Sustaining Supplies in Smallholder-Dominated Value Chains", 2016

205 Interviews with a researcher from CIRAD, 12/21/2015 and 02/12/2016

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

Geographical areas of Ivorian cocoa exports of beans and semi-processed products (shares in % of total exports between 2012/2017)

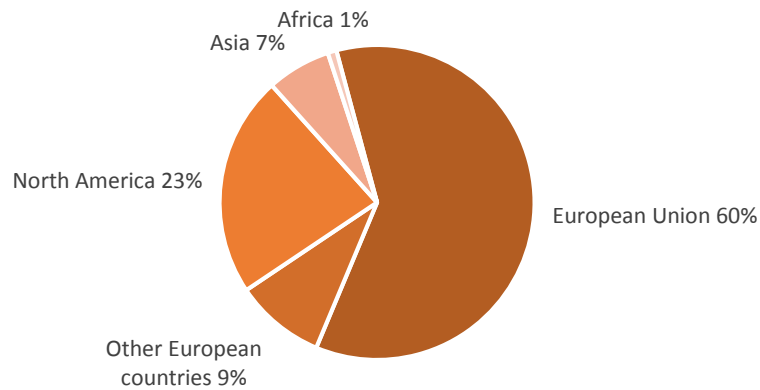


Figure 108. Geographical areas of Ivorian cocoa exports (beans and semi-processed products), as shares of total exports between 2012:2017(e) expressed in %. Source: Conseil Café Cacao 2017

Shares of cocoa beans buyers in Côte d'Ivoire (in % of the total national production in 2012/2013, Ecobank 2014)

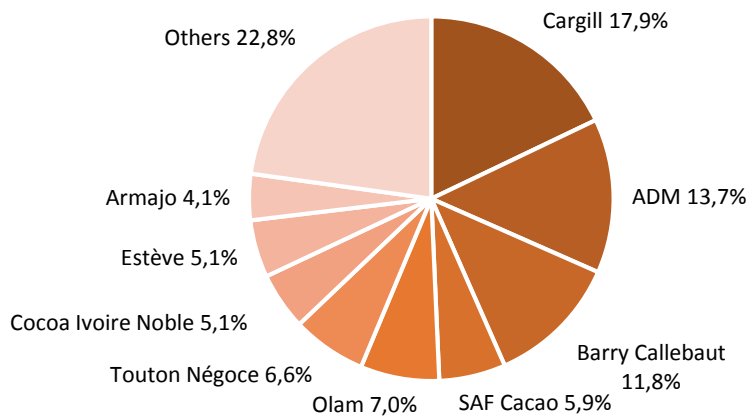


Figure 109. Shares of cocoa beans buyers in Côte d'Ivoire (in % of the total national production in 2012/2013). Source: Ecobank 2014

Grinding activities in Côte d'Ivoire

For the 2016/2017 harvest, 25% of the national cocoa production was grinded before being exported out of the country²⁰⁷. Barry-Callebaut, Cargill, Cémoi²⁰⁸ and Olam are the four main companies among 12²⁰⁹ currently owning grinding facilities in Côte d'Ivoire, turning the country into one of the main competitor of the current leading grinding country, The Netherlands.

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

208 The Cémoi factory also produces chocolate products for the West African market.

209 Reuters, « Côte d'Ivoire cocoa grind up 8.3% to end-September – exporter stats », October 11, 2019

Settling these grinding factories within the leading producing country can be analysed as a strategy for these main actors to secure supply and its processing at a lower cost, even though other costs are generated upon the arrival of the semi-transformed products in Europe (for instance, the melting of the cocoa mass or butter).

In 2014, Barry Callebaut was in the lead with a grinding capacity amounting to nearly 200,000 tonnes, representing a bit less than 30% of the Ivorian grinding cocoa capacity. Cargill was in second position with 120,000 tonnes, around 18% of the market, while ADM and Olam’s grinding capacities respectively amount to 86,000 and 70,000 tonnes of cocoa, 12,8% and 10,4% market share each²¹⁰. Following the buying of ADM’s cocoa grinding capacities during the autumn of 2015²¹¹, Olam doubled its grinding capacity in Côte d’Ivoire.

Cémoi is the only international grinder in Côte d’Ivoire that also produce chocolate to be sold on West African markets (mainly powder and spreads)²¹². With the opening of this new factory, Cémoi achieved in 2014 a grinding and manufacturing capacity of 100 000 tonnes a year amounting to 15% of the country’s total capacity²¹³.

It is estimated that 90% of the Ivorian grinding capacity in Côte d’Ivoire is controlled by five transnational companies (see graphics below).

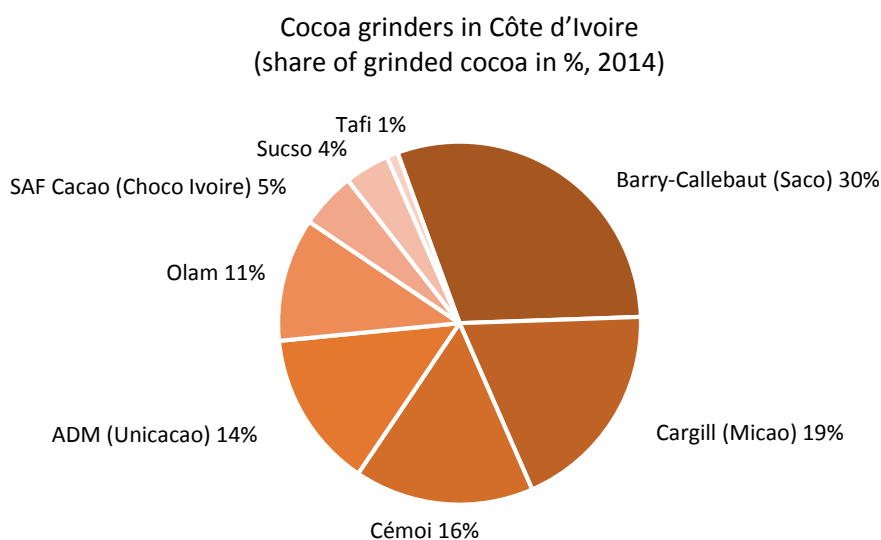


Figure 110. Cocoa grinders in Côte d’Ivoire (share of grinded cocoa in %, 2013). Source: Ecobank and Jeune Afrique, 2014

210 E. George, « The impact of reform on Côte d’Ivoire’s cocoa grinding sector », Ecobank, présentation à Amsterdam le 12 juin 2014 à l’occasion de la World Cocoa Conference

211 Jeune Afrique, « Olam finalise l’acquisition des activités cacao d’ADM », 19 octobre 2015

212 Jeune Afrique, « Côte d’Ivoire : le chocolatier Cémoi inaugure son usine d’Abidjan », 18 mai 2015

213 E. George, « The impact of... », op. cit.

3.1.1.2. Structure of the cocoa-chocolate value chain in Côte d'Ivoire

A public-private collaboration at the core of the Ivorian State's role in the cocoa sector

Ivorian agriculture is concentrated with 5 crops (including cocoa) representing 80% of the production. Analysis show that this concentration leads to a high dependence to world markets and prices' fluctuations, and weakens the state of the Ivorian economy and is aggravated by two other factors: first the difficulty for farmers to access land and bank credits and second, the insufficient infrastructures in roads and warehouses²¹⁴.

Agriculture is still a very important part of the Ivorian economy, representing around 21.5% of the national GDP in 2018 (against 47.9% in 1960) and employing still half (51.2%) of the Ivorian households in 2015²¹⁵. Agriculture is also a major earner of foreign exchange for Côte d'Ivoire (60% in 2018), and cocoa alone represents 68% of the exports in 2016²¹⁶. Cocoa alone represents 14% of the overall national GDP, contributes to a third of the overall revenues from exports and 10% of the State's total revenues²¹⁷.

Given this high importance for the country, the Ivorian State always took a deep interest in the cocoa sector over the past decades. The State encouraged its development and worked to attract foreign capitals by giving an important leeway to private actors, for instance on domestic and international commercialisation, within the boundaries of a public-led frame. This public-private strategy is at the core of the last reform designed and implemented by the Ouattara's government in 2011.

A central part of the reform is the implementation of a new State-regulated quality control system in response to the 2000s crisis (see below). Following the "Quantity, quality, growth" programme (Programme 2QC) set up in 2009, the reform²¹⁸ designed a semi-liberalised model:

- 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,
- An interprofessional organisation, the Conseil Café Cacao, in charge of enforcing a transparent institutional frame in order to reach a more consensual management of the cocoa sector between public and private actors²¹⁹.

214 Ibid

215 Ibid

216 Ibid

217 Ibid

218 Banque Centrale des États de l'Afrique de l'Ouest (BCEAO), « Étude monographique sur la filière cacao dans l'UEMOA », juin 2014

219 World Bank, 2017, op. cit.



Figure 111. Ivorian cocoa supply chain, from production to exports of cocoa beans. Source: BASIC

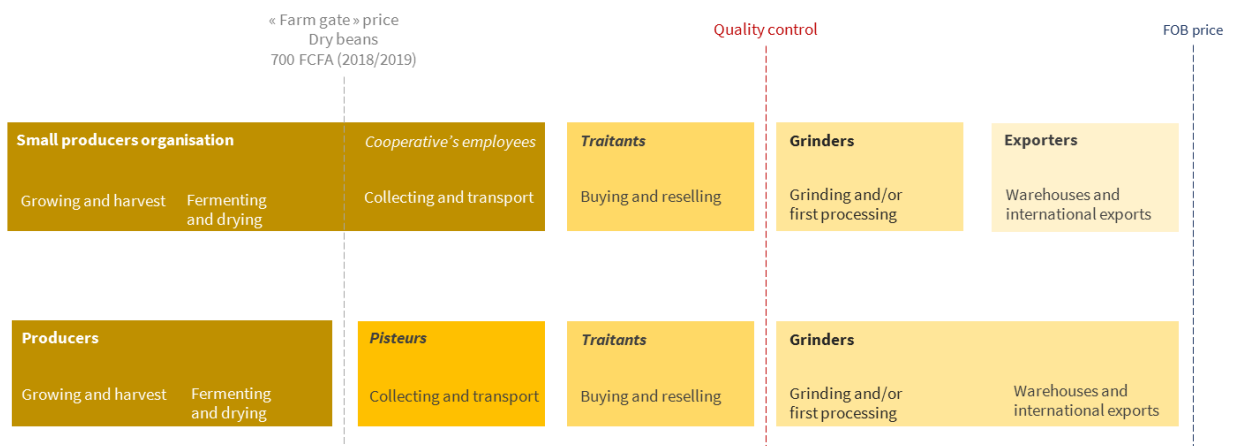


Figure 112. Ivorian cocoa supply chain, from production to exports of semi-finished products (cocoa mass, butter and cake). Source: BASIC

3.1.1.3. Economic strategies and business models of the main actors in the Ivorian cocoa sector

Cocoa producers' economic strategy

To mitigate the impact of fluctuating cocoa prices, Ivorian cocoa producers embraced a diversification strategy regarding their sources of income. 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.)²²⁰.

220 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

Nonetheless, these producers seem to remain highly specialised and therefore dependant on cocoa as a main source of income. The AFD survey conducted in 2013 and 2016 with the help of Barry Callebaut show that on a total annual income of FCFA 1,760,657, more than 97% were being drawn from cash crop which was cocoa for 80% of the core sample²²¹. For the remaining 20%, i.e. cash crops including other crops than cocoa, cocoa still accounted for 88% of income from cash crop²²².

In the meantime, hiring external help and recurring to *aboussan* contracts in order to boost productivity and achieve higher incomes seem to be on the decline²²³. Cocoa producers seem to prefer now to secure land possession and pass it on to the family's relatives rather than non-family members²²⁴.

The Ivorian State's strategy regarding the implementation of grinding activities

An estimated 25% of the cocoa national production in 2016/2017 was grinded in Côte d'Ivoire²²⁵, a small decline from the 2015/2016 and 2014/2015 when 31 to 32% of the volumes were estimated to be grinded in the country²²⁶.

Large companies decided since the late 1990s to develop grinding facilities in Côte d'Ivoire. Under the Ouattara presidency, companies have been encouraged to implement grinding factories, offering them in return a suppression of taxes on cocoa (semi-transformed products) providing that they invested in additional processing capacities²²⁷. **The actual goal set by the Ouattara's government is to achieve 50% of the cocoa national production grinded within the country by 2023²²⁸.**

But the Ivorian State's efforts are mostly directed at the first stage of transformation, which captures less added value than the second and third stages of transformation, as demonstrated in our estimates (see chapter 2 for more details): the 1st stage only represents 8% of the added value whereas the 2nd and 3rd transformations can represent up to 35 and 44%²²⁹.

Moreover, the World Bank estimates that grinding in Côte d'Ivoire costs more or less 80 million dollars per year to the country because of the tax credit offered to companies, meaning that it is currently less financially efficient for the country to export semi-transformed products (mass, butter and powder) rather than raw cocoa beans²³⁰.

In other words, it means that encouraging **the development of first stage transformation such as grinding should only a first step of a more broadly strategy to capture more added value by developing second and third stages of transformation in Côte d'Ivoire.**

221 585 farmers formed part of the core sample (AFD/Barry Callebaut, Cocoa farmers' agricultural and livelihoods in Côte d'Ivoire, 2016)

222 AFD/Barry Callebaut, 2016, op. cit.

223 Itws terrains CI

224 Maxime Assi Tano, 2012, op. cit. ; itws terrains CI

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

226 Ibid

227 Itws terrain CI

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

229 Ibid

230 Ibid

But that would mean to develop an end-consumer market in Côte d'Ivoire and Western Africa as chocolate cannot be transported on long distance. The actual consumption per capita in Côte d'Ivoire is very low (around 100g/capita/year) and definitely as room to grow as the middle class rises, even though it will take time before the domestic consumption turns into a dynamic and economically interesting market for the chocolate industry in Côte d'Ivoire. It is also uncertain if the consumers would tend to favour foreign brands – as Chinese consumers do – over domestic brands or even foreign brands producing in Côte d'Ivoire.

Role played by the State-led regulation: focus on rising quality and farm gate price

At the end of the 1990s, the international funding institutions intervened and imposed economic and final consolidation policies in Côte d'Ivoire²³¹. Liberalising the Ivorian agricultural sector, especially the cocoa sector, was raised as a solution to foster transparency and efficiency within the marketing system and ensure better resources allocation²³². The underlying idea was that liberalisation would enable the development of the rural regions where the poorest populations are located²³³ as it removed the price ceiling to producer and enabled a potential price increase.

After the liquidation of the “Caistab” in 1999, the first two liberalised harvests took place in a very troubled political context²³⁴, that continued throughout the 2000s, while at the same time world cocoa price endlessly declined.

With liberalisation, the quality control of cocoa beans became the responsibility of the private firms and the international reputation of the Ivorian cocoa fell rapidly²³⁵. Known until then as a bean of regular quality but standardised²³⁶, the Ivorian bean was not valued anymore: trackers (*pisteur* in French) were encouraged to optimise their collect and to start buying beans that have not been properly fermented and dried²³⁷. There was no more quality control at the level of the village²³⁸ and quantity clearly prevailed on quality.

The situation became more and more difficult for the cocoa producers who feel the full brunt of the price fall of the Ivorian cocoa bean and the growing uncertainties of the world market fluctuations. Most of the producers finally sunk into poverty and vulnerability while Côte d'Ivoire endured endless political crisis. Lacking alternatives, producers expanded their cocoa production to cope with poverty by deforesting²³⁹.

231 B. Losch, « La Côte d'Ivoire... », op. cit.

232 C. Araujo-Bonjean et G. Chambas, « Impact du mode d'organisation des filières agro-alimentaires sur la pauvreté : la filière cacao en Côte d'Ivoire », Études et documents, septembre 2001

233 C. Araujo-Bonjean et G. Chambas, « Impact du mode d'organisation... », op. cit.

234 Leading to the coup d'État of Christmas 1999. President Bédié is dismissed and replaced by General Gueï. The second liberalised harvest takes place during the legislative and presidential elections in 2000 and Laurent Gbagbo is elected (B. Losch, « La Côte d'Ivoire... », op. cit.).

235 B. Losch, « La Côte d'Ivoire... », op. cit.

236 Ibid

237 N. Fold et M. Nylandsted Larsen, « Globalization and Restructuring of African Commodity Flows », Nordiska Afrikainstitutet, UPPSALA 2008

238 B. Losch, « La Côte d'Ivoire... », op. cit.

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

Since the enforcement of the Ouattara’s reform, the price paid to producers rose regularly until 2017/2018 when the cocoa prices suddenly dropped on world markets, mainly due to an unforeseen overproduction of cocoa in Côte d’Ivoire.

One of the first results of the State regulation enforced by Ouattara’s government in 2011 is the rise in quality of the Ivorian cocoa beans. The share of cocoa beans sold under Grade 1 and 2 (properly fermented and dried) rose from 81% in 2012/2013 to 95% in 2016/2017²⁴⁰. The humidity rate measured upon arrival in the warehouses or the factories lowered from 12% before the reform to 7,6%²⁴¹. These improvement in the overall production of cocoa beans explain why Côte d’Ivoire now benefit from an export premium (30 pound per ton more or less) whereas discounts were applied to this origin prior the reform²⁴².

A second important result of the Ouattara’s reform since its implementation seems to be its impact on the price paid to producers. In 4 years it nearly doubled, rising from 657 FCFA / kg for the 2011/12 harvest to 1000 FCFA / kg for the 2015/16 harvest. This minimum price to producers seems to be enforced on the field: in 2013, 14 buyers were prosecuted for not having respected the guaranteed minimum price to producers²⁴³.

| Harvest | Main harvest | Intermediary harvest |
|-----------|--------------|----------------------|
| 2011-2012 | 657 | 657 |
| 2012-2013 | 725 | 700 |
| 2013-2014 | 750 | 750 |
| 2014-2015 | 850 | 850 |
| 2015-2016 | 1 000 | 1 000 |
| 2016-2017 | 1 100 | 700 |
| 2017-2018 | 700 | 700 |
| 2018-2019 | 750 | 750 |

Figure 113. Evolution of cocoa producers' price (FCFA/kg). Source: Conseil Café Cacao, 2017

However, the impact of the producer price is to be relativised. Firstly, when compared to the situation in 1989, the producers were paid about 1,2 USD per cocoa kg²⁴⁴, about 2000 current FCFA²⁴⁵. In 1989, the producers then earned a price for cocoa beans twice as big as what producers earn for the 2015/2016 harvest. Secondly, if compared to the percentage of the FOB price recurring to cocoa farmers, the 60% set by the Ivorian State is quite low: on average between 2012 and 2017, this percentage was higher or close to 90% in Nigeria or Brazil, around 85% in Cameroon and Ecuador, and around 65% for Ghana²⁴⁶. Finally, as the producers’ price is a share of 60% of the FOB price, as the world cocoa price fell, so did the producers’ price.

240 Conseil Café Cacao, 2017, op. cit.
 241 Ibid
 242 Ibid.
 243 Agritrade, « Cocoa sector », Informed Analysis, Expert Opinions, octobre 2013
 244 C. Araujo-Bonjean and J. F. Brun, « Concentration and Price Transmission... », op. cit.
 245 Based on data from the World Bank with consumption price index in Côte d’Ivoire: 42 in 1989 and 109,5 in 2014.
 246 Gilbert 2018 in World Bank, 2019, op. cit.

This last crisis may have been what triggered the current initiative put forward by Ghana and Côte d'Ivoire. It represented yet another sign of the high dependence to world markets and the absence of trickling effects of cocoa on the social and economic development of both countries²⁴⁷.

This realisation led to the “Déclaration d'Abidjan du 13 juin 2018”, an attempted rapprochement between the two countries to build a joint strategy to harmonise their public policies and optimise the benefits earned from the cocoa value chain²⁴⁸.

Both countries teamed in 2019 to implement on 2019/2020 harvest 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 price²⁴⁹.

3.1.1.4. Key results/figures on value distribution from production to FOB

In order to better understand our estimates of the value and costs breakdown in Côte d'Ivoire in 2018, it is first important to put it in the context of the recent evolutions of both:

- the FOB export price of cocoa beans
- the farmgate price of cocoa beans

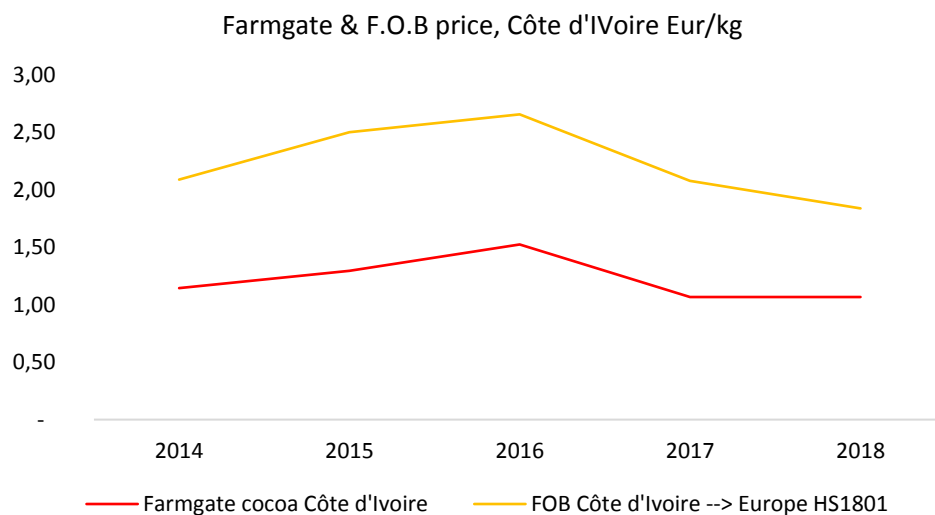


Figure 114. Evolution of the farmgate and FOB export price in Côte d'Ivoire between 2014 & 2018. Source: BASIC

As illustrated in the above diagram, there has been a **clear parallelism between the evolutions of the two prices**, reflecting the implementation of the commitment of the Ivorian government that **60% of the export value of cocoa should be transmitted to the farmers** thanks to public regulation.

In addition, **the graph also shows the drop of 30% that affected both prices in 2017**, illustrating that the Ivorian government had no other choice but to decrease the minimum price for cocoa farmers in the aftermath of the fall in world cocoa prices (in contrast with the gradual increase that had taken place since 2011, in the positive context of increasing cocoa prices on the London and New York stock exchanges).

247 World Bank, 2019, op. cit.

248 Ibid

249 Reuters, « Côte d'Ivoire, Ghana lift threat to cocoa sustainability schemes », October 23, 2019

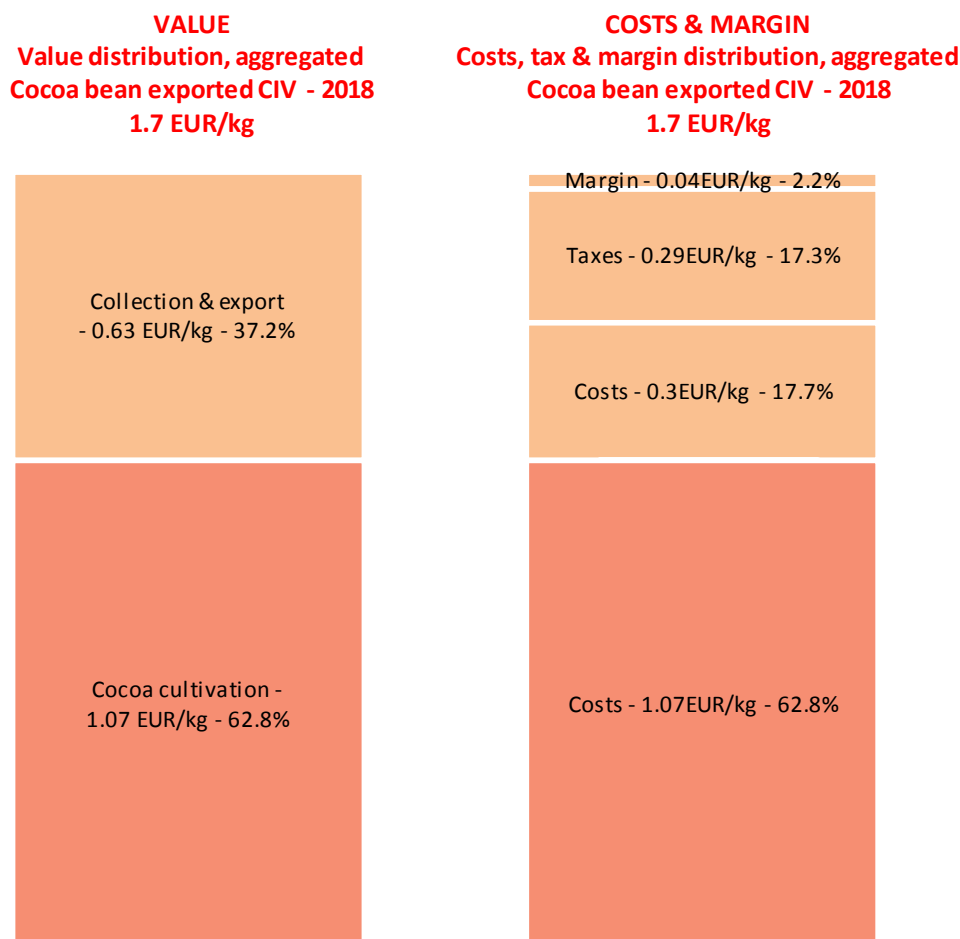


Figure 115. Distribution of value, costs & margins in Côte d'Ivoire (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC

In this context, **our estimates for 2018 first illustrate that the share of value associated with cocoa cultivation is aligned with, and slightly above, the public commitment** of the government to ensure that farmers receive at least **60% of the export price**.

Through the public regulation system in place up until 2019, 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)²⁵⁰. This system thus combines full privatisation with (strong) public control.

250 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).

As a result, the **total aggregated margins realised by these different actors are quite limited, amounting to approximately 2.2% 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 17.7% of the export price (0.3 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’ as well as other 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 17.3% of the export price in 2018** (0.29 euros/kg), the biggest amount among the 4 producer countries analysed.

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 for 2014, 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 Institute in 2015²⁵¹.

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

| <i>Scope: Côte d'Ivoire</i> | <i>Public spending in 2014</i> | <i>Extrapolated public spending in 2014</i> |
|---|--------------------------------|---|
| <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 116. 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).

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

3.1.1.5. Focus on the farmers' share of value

In order to contextualize the results of our estimates for Ivorian cocoa farmers, we have first analysed the cost breakdown of cocoa cultivation (before farmgate).



Figure 117. Breakdown of costs of cocoa cultivation in Côte d'Ivoire in 2018 (cocoa harvest 2017/18). Source: BASIC

The most recent studies on cocoa cultivation in Côte d'Ivoire which we used for our estimates - in particular conducted by the Royal Tropical Institute (KIT) in 2017/2018²⁵² – tend to show that the **cash expenses of cocoa farmers are very low, whether for fertilisers and pesticides** (less than 1% of their cocoa revenue), **or the paid agricultural work they mobilise in their farms** (less than 5% of their total cocoa revenue).

This low level of expenses can be explained by the fact that most work is either conducted by the family or through exchanges of services among farmers, with very low inputs (hence the low productivity achieved on average). This basis of estimation does not include the abussan system

252 KIT, Demystifying the cocoa sector in Ghana and Côte d'Ivoire, 2018

which we have decided not to model as it is apparently less and less common, as confirmed by the interviews we conducted on the ground.

As a result, it appears that 95% of the money received by farmers is used to ensure the living of their family. However, given their low yields and the limited land area they cultivate, the income they earn through cocoa appears to be barely enough for them to reach the poverty line, if not the absolute poverty line (as exemplified by the latest estimates conducted by the World Bank)²⁵³.

Regardless of fluctuations on the world cocoa markets, the price received by the majority of small cocoa growers has not been sufficient for them to cover their costs of production and the basic needs of their families²⁵⁴.

As a result, the majority of cocoa producers live below the poverty line, a precarious condition that leads to 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 revenues²⁵⁵. 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 cocoa²⁵⁶.

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 authorities²⁵⁷.

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 people²⁵⁸.

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**²⁵⁹.

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

254 BASIC, The Dark side of chocolate, 2016

255 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

256 BASIC, The Dark side of chocolate, 2016

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

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

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

3.1.2. Certified cocoa

3.1.2.1. Facts and figures on certifications

Côte d'Ivoire is by far the first origin of certified cocoa for²⁶⁰:

- UTZ (51% of its worldwide certified cocoa area and 56% of its total production)
- Rainforest (63% of its worldwide certified cocoa area and 61% of its total production)
- Fairtrade (63% of its worldwide certified cocoa area and 62% of its total production)

With regards to organic certification, there is hardly any significant area (1347 Ha in 2018) or production (685 tons in 2018) in Côte d'Ivoire²⁶¹.

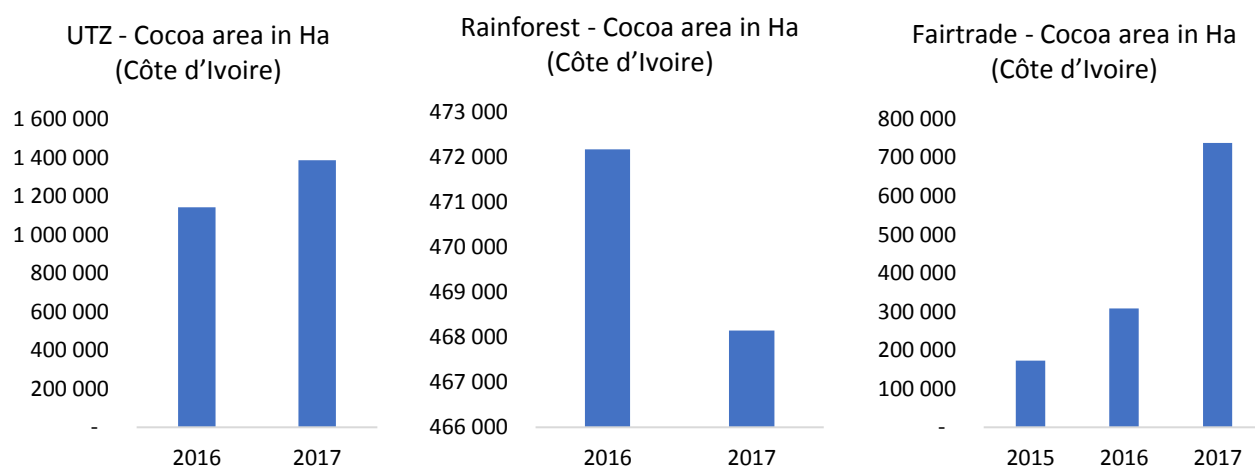


Figure 118. Estimated cocoa area by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

Regarding cultivated area, UTZ is by far the most widespread certification in the country with an estimated 1.38 million ha certified, still increasing in recent years. Fairtrade is the fastest growing scheme and has taken the second place since 2017 with an estimated 738,000 Ha²⁶².

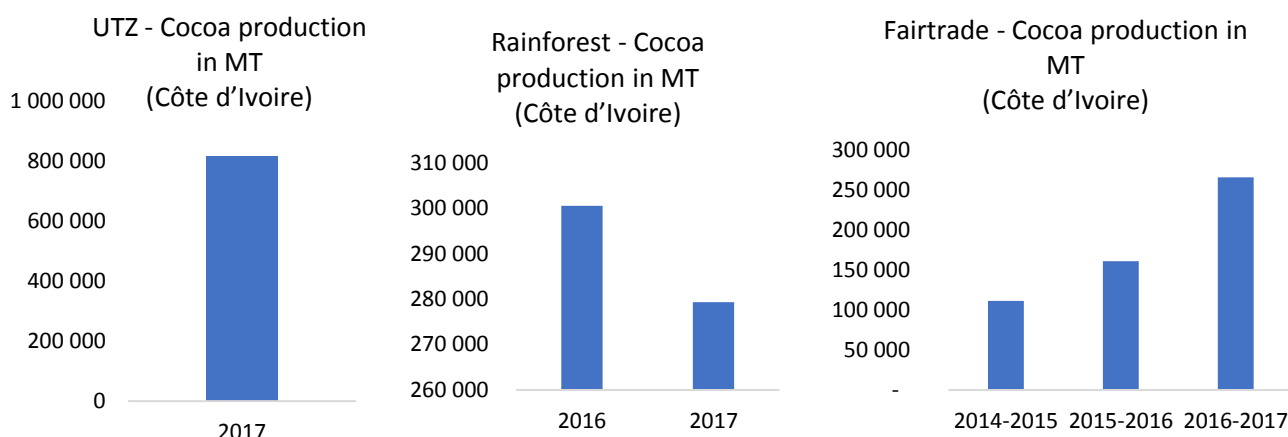


Figure 119. Estimated cocoa production by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

260 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

261 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

262 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

In terms of production volumes, the ranking is the same: UTZ achieved a potential of certified production of more than 817,00 tons in 2017, three times more than Fairtrade with 265,000 tons²⁶³. It is worth noting that the gap is bigger between UTZ and Fairtrade in production volumes than in area, probably indicated the area yields achieved by UTZ-certified producers.

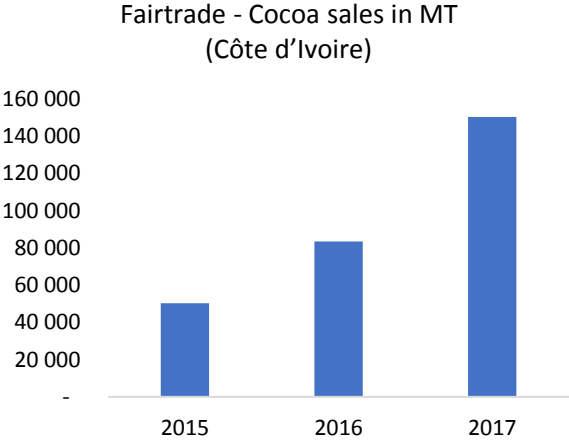


Figure 120. Estimated cocoa sales by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

It is worth noting that the actual sales of certification cocoa are (much) lower than the recorded potential of production, as exemplified by Fairtrade: they amounted to only 150,000 tons in 2017, to be compared with the potential of production of 265,000 tons (no data is published by UTZ and Rainforest for the country)²⁶⁴.

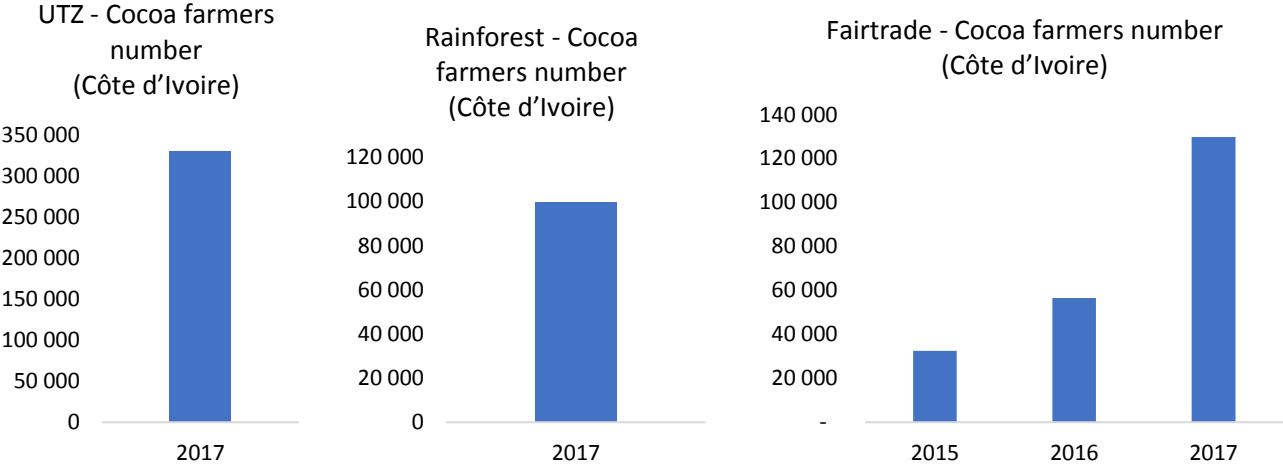


Figure 121. Estimated number of cocoa farmers by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

Finally, regarding the number of cocoa farmers being certified or member of a certified organisation, UTZ reaches almost 330,000 farmers, compared to 130,000 farmers for Fairtrade and 100,000 for Rainforest²⁶⁵.

263 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

264 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

265 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

3.1.2.2. Key results/figures on value distribution from production to FOB

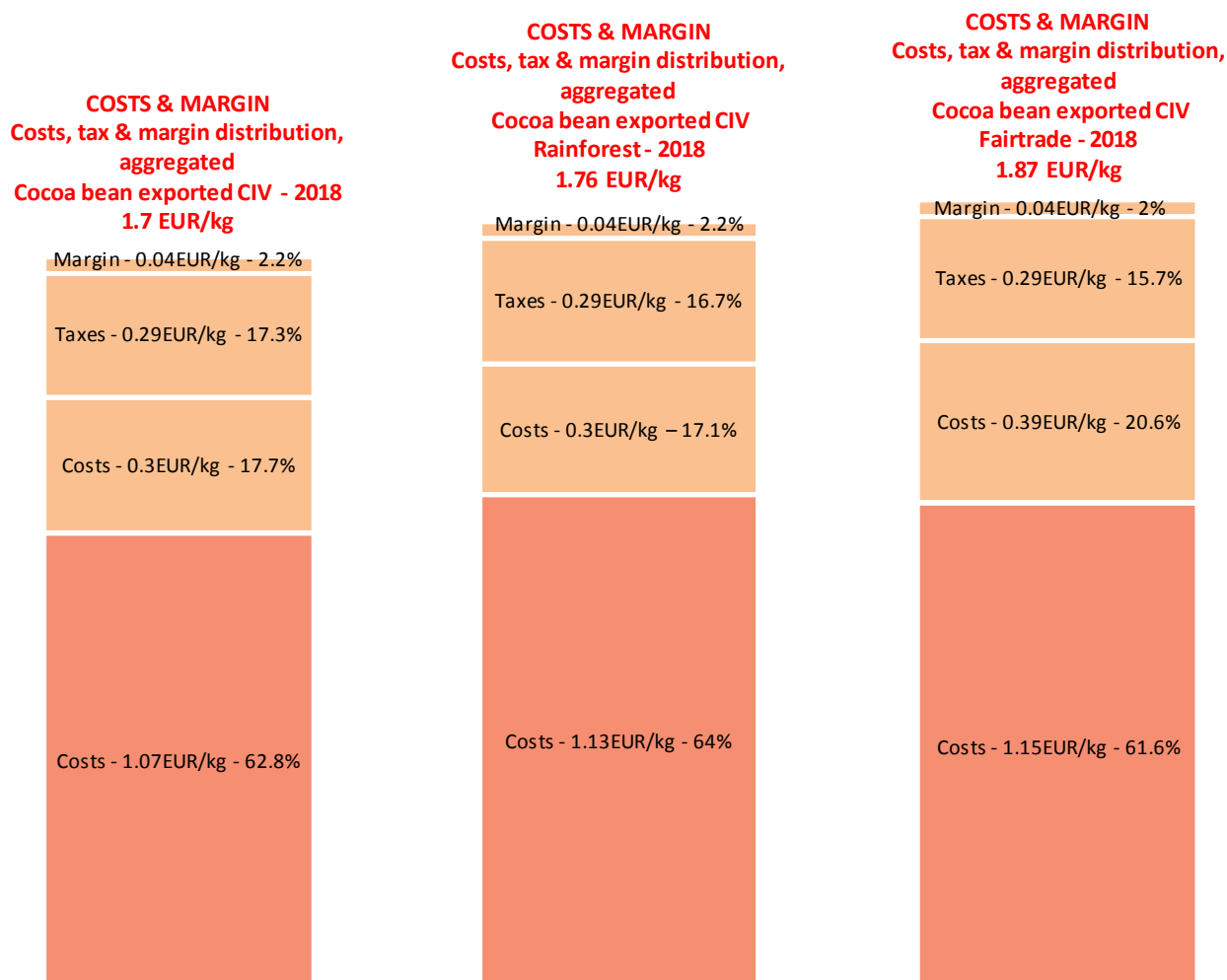


Figure 122. Distribution of value in Côte d'Ivoire (from farmers to export) for certified value chains in 2018 (cocoa harvest 2017/18).
Source: BASIC

The results of our estimates highlight that the **2 certified value chains – Rainforest/UTZ and Fairtrade - are not so different from one another**, even when compared to the conventional cocoa value chain already analysed in the previous section 3.1.1.4.

Indeed, these certified value chains appear to be variants/extensions of the conventional set up. Many farmers have benefited from support of private companies or international organisations which have encouraged them to get certified and supported the entry process. Their main aim was to promote the adoption good agricultural practices and the respect of social standards.

The **main benefit received by farmers consists in the premium** associated with both certifications: in 2018, it amounted to approximately 38FCFA/Kg on average in the case of UTZ/Rainforest²⁶⁶ and 56 FCFA/kg (0.10 USD/kg) for Fairtrade²⁶⁷ considering that almost 1/2 of the Fairtrade premium is actually received by farmers according to their latest monitoring and evaluation report²⁶⁸.

²⁶⁶ 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

²⁶⁷ <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

²⁶⁸ Fairtrade International, Cocoa Monitoring Report, 2017

In addition, **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 in strengthening the capacity of the producer organisation²⁶⁹. 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.

As a result, and as reflected in our estimates, **the final price received by farmers is mildly higher for the two certifications when compared to conventional: 1.13 euros/kg for Rainforest/UTZ and 1.15 euros/kg for Fairtrade in comparison with 1.07 euros/kg in conventional (i.e. +7%).**

Regarding Fairtrade, it is worth noting that the minimum price was not effective in recent years due to higher prices on world cocoa markets (it has been substantially increased from 2.0 USD/kg to 2.4 USD/kg in 2019, as well as the Premium from 0.20 USD/kg to 0.24 USD/kg),

In the end, the difference between the cocoa incomes is roughly 20% on average²⁷⁰ : if prices are a little higher for certified cocoa, the certified producers' expenses are slightly higher too.

If we take into account the annual global income of certified producers (sustainable and fair trade) which includes incomes from other activities, there is even less difference: 6% on average. In fact, data show that conventional producers tend to diversify more their sources of income whereas certified producers (sustainable and fair trade) need to dedicate more time to cocoa and specialise even more themselves²⁷¹.

Different qualitative studies commissioned in recent years by the sustainable certifications (especially UTZ and Rainforest Alliance) indicate a small increase in yields and improvement of living conditions²⁷², based on cocoa producers' interviews, but more recent reports have brought to perspective these conclusions.

This is the case of 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)²⁷³.

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

²⁶⁹ Fairtrade International, Cocoa Monitoring Report, 2017

²⁷⁰ M. A. Schweisguth, *Evaluating the Effects...*, op. cit.

²⁷¹ M. A. Schweisguth, *Evaluating the Effects...*, op. cit.

²⁷² 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

²⁷³ 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

| | 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 123. 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 University²⁷⁴.

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).

| | Difference 2013-2017 UTZ | Difference 2013-2017 non-UTZ | Significant difference in evolution UTZ vs non-UTZ 2013-2017 | Influence of service intensity? | Influence of service packages? |
|--|--|--|--|--|--|
| Yield in kg/ha | 2013: 527 kg/ha 2017: 497 kg/ha Diff. -30 kg/ha -6% | 2013: 259 kg/ha 2017: 402 kg/ha Diff. +143 kg/ha +55% | | The more services the higher the yield | Only package 'Agro training + pesticides + fertilizer' |
| Net income per hectare | 2017: 494,000 CFA 2013: * | 2017: 396,000 CFA 2013: * | 2017 | (UTZ) The more services, higher income | (UTZ) full package 'Agro training + pesticides + fertiliser' |
| Net income per household member | 2017: 1.39 \$ 2013: * | 2017: 1.63 \$ 2013: * | 2017 | | |
| Could not analyse (labour costs 2017 higher compared to 2013 without a reasonable explanation) | | | | | |
| Legend | | | | | |
| Positive significant change | | | | | |
| No significant change | | | | | |
| Negative significant change | | | | | |

Figure 124. Impact of UTZ certification on cocoa farmers in 2017 in Côte d'Ivoire Source: Wageningen (2018)

²⁷⁴ 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

Other studies corroborate the low impact of sustainable and fair trade certifications even if they showed that, on average, yields have increase by 10%²⁷⁵ up to 30%²⁷⁶ 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 certifications²⁷⁷. 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 workforce²⁷⁸. 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 producers²⁷⁹.

²⁷⁵ 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

²⁷⁶ Ingram V. et al., Impact of UTZ Certification of cocoa in Ivory Coast: Assessment framework and baseline, Wageningen University-CIRAD-ALP, 2014

²⁷⁷ V. Ingram & al., « Impact of UTZ Certification... », op. cit.

²⁷⁸ 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.

²⁷⁹ F. Ruf, Y. N'Dao & S. Lemeilleur, « Certification... », op. cit.



3.1.3. Main learnings on the case study of Côte d'Ivoire

Côte d'Ivoire became the first cocoa producer in the world in 1978 with more than 500 000 tons exported. It retained this position up until now, accounting for more than 40% of global cocoa production (almost 1.8 million tons in 2014/15). Today, estimates show that cocoa in Ivory Coast is cultivated on 4 to 8 million hectares by roughly 800,000 cocoa farms and almost 8 million people throughout the country who depend on cocoa for their living.

For the 2016/2017 harvest, **75% of the national production is exported as beans and the remainder 25% goes through local grinding factories**. The major part of exports go to the European Union, particularly towards Netherlands, Germany, Belgium and France.

The cocoa farms are almost exclusively family farms where smallholder farmers and their families own an average of 5 hectares, grow the cocoa trees, harvest, ferment and dry the beans before they are sold to pisteurs or cooperatives. The yields of cocoa farms are quite low: on average, the annual yield is 400 kg/ha. Downstream in the chain in Côte d'Ivoire, the leading cocoa buyers and processors are Cargill, Barry Callebaut, Olam and Cémoi which together account for more than 50% of cocoa purchases and 90% of the cocoa grinding capacity in the country.

Given this high importance for the country, the Ivorian State always took a deep interest in the cocoa sector since the independence. A public-private strategy is at the core of the last reform implemented by the Ouattara's government in 2011 which put in place a **semi-liberalised regulation model**:

- 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,
- An interprofessional organisation, the Conseil Café Cacao, 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.

This regulation system has enabled more stable prices for producers 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.

In this context, the results of our estimates tend to show that the two certified value chains – Rainforest/UTZ and Fairtrade - are not so different apart, even when compared to the conventional cocoa value chains.

3.2. Ghana

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).^{280 281}

In Ghana, **cocoa makes up about 20-25% of the total export receipt (coming second after mineral exports)**. It also accounts for around **7% of the country's GDP**.²⁸² 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.

3.2.1. Conventional cocoa

3.2.1.1. The Ghanaian cocoa sector and its main characteristics

Brief introduction to the historical aspects of cocoa-chocolate sector within the country

Cocoa was first introduced to Ghana around 1876, by Tetteh Quarshie, who brought it from Fernando Pó (now Bioko in Equatorial Guinea). The first trees were planted in the southeast and, since then, gradually shifted to the west. Currently, the Western region alone produces over 50% of the Ghanaian cocoa.²⁸³

Around 1920, Ghana became the first cocoa producing country with a record around 1930 when Ghana represented around 40% of the global production.²⁸⁴

In 1947, the government created the Cocoa Marketing Board usually named Cocobod. This institution controls the full value chain, from collecting cocoa to farmer up to the export stage. It was an absolute monopolistic position of cocoa buyer from farmers, with a fleet of trucks, warehouses... In the 1970-80s, the production underwent a critical period when the government decided to boost taxations to a very high level and to expulse thousands of foreigners, who were for the majority employed in cocoa fields: production had fallen from 591,000 tonnes in 1964 to 159,000 in 1983.^{285 286} In 1993, the Ghanaian cocoa farmer received only 30% of the FOB price.²⁸⁷

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**

²⁸⁰ ETH, Assessing the resilience of the cocoa value chain - 2016

²⁸¹ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

²⁸² World Bank, Ghana Agriculture Sector Policy Note - 2017

²⁸³ ETH, Assessing the resilience of the cocoa value chain - 2016

²⁸⁴ Ruf F., Libéralisation, cycles politiques et cycles du cacao : le décalage historique Côte-d'Ivoire-Ghana - 2009

²⁸⁵ Ruf F., Libéralisation, cycles politiques et cycles du cacao : le décalage historique Côte-d'Ivoire-Ghana - 2009

²⁸⁶ IFPRI, The partially Liberalized Cocoa Sector in Ghana - 2012

²⁸⁷ Ruf F., Libéralisation, cycles politiques et cycles du cacao : le décalage historique Côte-d'Ivoire-Ghana - 2009

the cocoa sector which is still in operation today²⁸⁸ (this model is very close to the pre-liberalisation situation in Ivorian Cost):

- **the private sector can enter the activity of cocoa beans collection from farmers.** Cocobod lost its monopsony as the sole buyer of cocoa. **Ghana 's partial liberalisation of its cocoa industry has contributed to the revitalisation of its cocoa sector and cocoa producers have benefitted from the license buying companies '(LBCs ') competition :** their first way to gain market share is a cash payment to planters and credit services, which replaces the deferred payments of the marketing monopoly time board.²⁸⁹ The main LBC is still a state-owned company: The Produce Buying Company, PBC (the one who had the monopole before the reform);
- **The COCOBOD stays in place and keep on fixing prices for farmers, has a regulatory role over the LBCs and also stay the only exporter of cocoa beans** and supplier to local industries. Finally, the Cocobod still control quality, grading and sealing.^{290 291}
- **progressive reduction of taxation and rise in real producers' prices** (In 1993, producers get 30% of FOB prices).

The semi liberalisation of cocoa sector in Ghana produced positive effects and contributed to revitalise this production, which was in a deep decline just before. It attracts the producers and also foreigners (Burkinabe notably).²⁹²

Starting in 2000 and during all Kufuor presidency (2001-2009), COCOBOD has begun to put in place different programs to sustain farmer production: crop protection program, and a subvention (70%) from 2008 on fertilisers. During these years, the cocoa production is profitable, and its production increased.²⁹³

Key facts on Ghanaian cocoa production

90% of cocoa in Ghana is produced by smallholder farmers whose farms sizes usually don't exceed 4 hectares.²⁹⁴ On the farms, the cocoa is usually grown with shade and associated with subsistence crops.

The **yields are relatively low in Ghana,** compared with others producer countries (400-450 kg/ha : similar to Ivorian Cost), due to ageing trees, pest and disease infestation and agricultural practices.²⁹⁵

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.**

²⁸⁸ Kwaku Oforu-Asare, The "Meso-Model" of Liberalization: a Salvation for Ghana's cocoa Industry? - 2018

²⁸⁹ Ruf F., Libéralisation, cycles politiques et cycles du cacao : le décalage historique Côte-d'Ivoire-Ghana - 2009

²⁹⁰ Ruf F., Libéralisation, cycles politiques et cycles du cacao : le décalage historique Côte-d'Ivoire-Ghana - 2009

²⁹¹ Kwaku Oforu-Asare, The "Meso-Model" of Liberalization: a Salvation for Ghana's cocoa Industry? - 2018

²⁹² Ruf F., Libéralisation, cycles politiques et cycles du cacao : le décalage historique Côte-d'Ivoire-Ghana - 2009

²⁹³ Ruf F., Libéralisation, cycles politiques et cycles du cacao : le décalage historique Côte-d'Ivoire-Ghana - 2009

²⁹⁴ ETH, Assessing the resilience of the cocoa value chain - 2016

²⁹⁵ World Bank, Ghana Agriculture Sector Policy Note - 2017

The **cocoa production delivers 70-100% of the income of farmer households**²⁹⁶ and these smallholder cocoa farmers provide a livelihood for over 4 to 6 million people (25–30% of the population).^{297 298}

Most of these cocoa producers' ferment and dry the beans themselves before selling and delivering them to the Licensed Buying Companies. **Around 101,796 farmers are members of cooperatives according to COCOBOD, and 512 farmer cooperatives were registered in 2019.**²⁹⁹

The Cocoa value chain in Ghana has an hourglass structure: large number of farmers, limited number of buyers (40-50), followed by COCOBOD which has a monopoly on exporting the cocoa beans to a few dozens of international merchants, as well as to numerous foreign and domestic processors,³⁰⁰

As in Côte d'Ivoire, **the current organisation of the supply chain in the country and the regulation of the cocoa sector does not incentivise producers to differentiate their production** depending on quality. Differentiation seems though possible in specific supply chains such as certified or organic.³⁰¹

Licensed Buying Companies (LBCs) assumes the internal marketing

Once fermented and dried, farmers sell dry and fermented cocoa beans to Licensed Buying Companies (LBCs) (directly or sometimes through purchasing clerks), which transport it from villages to the marketing subsidiary of COCOBOD – Cocoa Marketing Company (CMC).

LBCs obtain licensed from COCOBOD which give them the right to buy cocoa from farmers. There are more than 40 LBCs companies, with several buying centres at the village level.³⁰²

LBCs usually externalise part of their activities: in particular, the collection of cocoa beans from farmers can be done by external agents (frequently ex-employees of the Produce Buying Company, managed by COCOBOD), on commission basis. LBCs can choose where they collect and the PBC is the “buyer of last resort” and covers the totality of the districts.

In 2015/16, The Produce Buying Company Limited (PBC) continued to be the leading buyer of cocoa with 30.88% share of the market. Armajaro Ghana Limited and Olam Ghana Limited followed in second and third places with market shares of 13.43% and 11.79% respectively. Ten (10) of the remaining LBCs with market share of between 1.00% and 10.00% accounted for about 40% of the market. The other twenty-seven (27) companies together accounted for 3.98% of the market

²⁹⁶ ETH, Assessing the resilience of the cocoa value chain - 2016

²⁹⁷ Kwaku Ofosu-Asare, The “Meso-Model” of Liberalization: a Salvation for Ghana’s cocoa Industry? - 2018

²⁹⁸ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

²⁹⁹ Site internet du COCOBOD, 2019 (<https://www.cocobod.gh/>)

³⁰⁰ ETH, Assessing the resilience of the cocoa value chain - 2016

³⁰¹ Entretien de terrain BASIC, Accra – juillet 2019

³⁰² COCOBOD, Annual Report 2016 - 2017

Largest Licensed Buying companies
(share of market, season 2015-16)

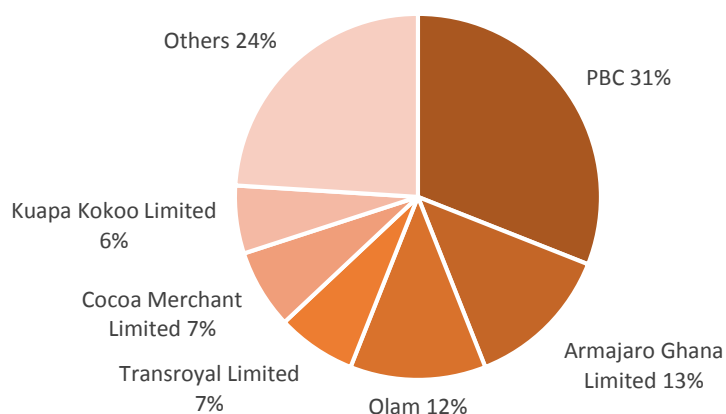


Figure 125 : Largest Licensed Buying Companies (Source: Cocobod, 2019)

LBCs are pre-financed by loans with favourable rates from COCOBOD, issued from the forward contracts. Indeed, it is difficult to get advantageous loan from Ghanaian banks.

The price at which the LBCs buy the cocoa from farmers is determined by a COCOBOD multi-stakeholder platform: The Producer Price Review Committee (PPRC). This committee fixes producer prices which is announced by the Ministry of Finance to commence the opening of the new crop season.³⁰³

The fixed price LBCs must pay to farmers is linked to minimum quality standards and is set according to the calculation performed each year by the PPRC regarding the distribution of value of exported cocoa among all actors in the chain (as in Côte d'Ivoire).

The orders of magnitude of each component of value distribution was approximately the following in 2017:

- Industry costs (input supply programs, social programs) are set at 15% of the FOB price (rising over time).³⁰⁴
- Explicit taxes: 3-4%.³⁰⁵
- Direct marketing cost (transportation, storage, quality control): 6-7%
- LBCs and hauliers:
- Farmers: **at least 70% of the so-called "net free-onboard (FOB) price,"** (a little bit less than 60% of the ICCO price on the period 2010-2015³⁰⁶) which is defined as the FOB price minus allowances for "industry costs" and direct marketing costs. The government, through COCOBOD, further ensures that the needed inputs such as fertilisers, insecticides and extension services are provided to farmers at either no cost or at a subsidised cost.³⁰⁷ The use of a 'net' FoB price is somewhat controversial because it implies that certain costs are

³⁰³ ETH, Assessing the resilience of the cocoa value chain - 2016

³⁰⁴ World Bank, Ghana Agriculture Sector Policy Note - 2017

³⁰⁵ World Bank, Ghana Agriculture Sector Policy Note - 2017

³⁰⁶ The Royal Tropical Institute, Demystifying the cocoa sector in Ghana and Côte d'Ivoire, chapter 11 - 2018

³⁰⁷ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

deducted before allocating a share of the price to the producer. Some have argued that some service provision (e.g., fertiliser procurement and distribution) would be better handled by the private sector, as there are frequent complaints that inputs do not reach farmers on time or are vulnerable to corruption.

Figure 11.2 Producer prices in US dollars expressed as a percentage of the ICCO daily price¹⁵

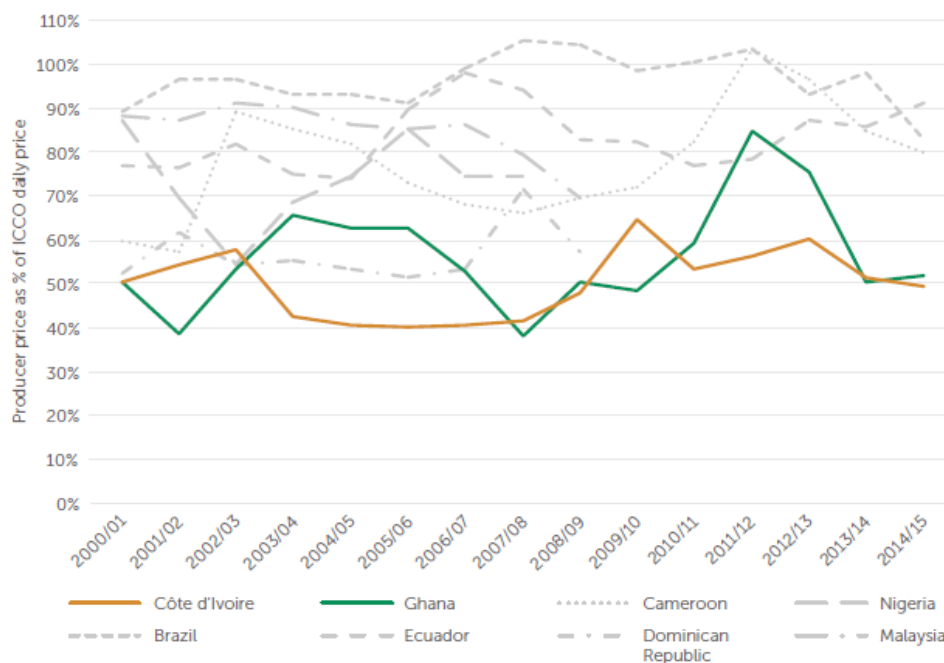


Figure 126 : Ghanaian cocoa farmgate prices as a share of FOB prices (Source: KIT, 2018)

This price setting mechanism may be distorting the incentives for producers to invest in productivity enhancing practices and for prices to be differentiated based on quality (however, premium payment for certified cocoa is possible). Moreover, prices are uniform across the country and do not reflect regional differences in production costs or local environmental and social impacts. However, a comparative assessment with Côte d'Ivoire shows that price setting mechanisms are similar between these two cocoa supply leaders, and **Ghana's producer price seems to be slightly higher than that of Côte d'Ivoire.**³⁰⁸

Due to **high inflation in Ghana, the real price paid for cocoa at the farm gate has decreased significantly since the price decline.** Due to a combination of forward sales and a stabilisation fund that purportedly was financed through previous years of higher cocoa prices, COCOBOD has been able to maintain a **stable minimum price during the 2016/17 and 2017/2018 seasons.** Though this is an excellent way to alleviate the immediate effects of the price volatility on smallholder farmers, it is increasingly stimulating cross-border smuggling from Côte d'Ivoire. At the same time, it is a costly exercise. The effect of a stable price in Ghanaian cedi, the local currency, is reduced by the high inflation in Ghana, the COCOBOD and Ghanaian government are presently losing hundreds of millions of dollars as they are not able to cover costs and collect taxes as usual.³⁰⁹

³⁰⁸ World Bank, Ghana Agriculture Sector Policy Note - 2017

³⁰⁹ Cocoa Barometer 2018 - 2019

Following the collect of cocoa beans, the LBCs stocks cocoa in warehouse and the **first quality control of COCOBOD** (through Quality Control Company - QCC) happens here: QCC controls the uniformity, moisture content and quality of cocoa. Then, QCC grades and seals it.

Once the cocoa is sealed in the bags, LBCs hire hauliers to transport it to Cocoa Marketing Company (CMC) of COCOBOD (some LBCs transport the cocoa themselves to better manage risks due to transportation).

In parallel, of the supply chain which operates through LBCs, there are about five **cocoa waste companies**, licensed by COCOBOD, that purchase inferior quality cocoa beans and also cocoa waste from farmers and processors (cocoa shells, husks and cocoa skin). Before being shipped abroad, cocoa waste is gathered at the companies' warehouses to be checked by COCOBOD in order to make sure that no cocoa of acceptable quality is exported through this channel. In total, cocoa waste companies' exports represents less than **2 percent of the export of cocoa beans**.³¹⁰

Trading of cocoa beans for exports

The Cocoa Marketing Company (CMC) has exclusive rights to market and export unprocessed cocoa to foreign buyers and local processors. The export of cocoa beans concerns the main crop which produce the high-quality beans. It represents around 77% of the total cocoa exports of the country (for the rest: 21% are sold to processing companies and 2% are exported by cocoa waste companies).³¹¹

Geographical areas of Ghanaian cocoa exports (shares in % of total exports - 2014)

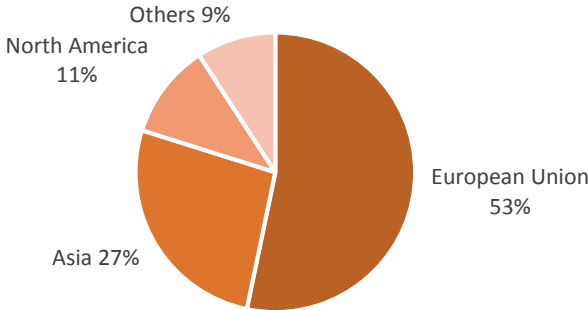


Figure 127. Geographical areas of Ghanaian cocoa exports as shares of total exports, 2014 (Source: Cocobod annual report, 2016)

Due to high rate of export, fluctuations of world price of cocoa have significant impacts on the functioning of the cocoa value chain in Ghana. CMC manages pre-harvest **forward sales and contracts** at fixed price with international merchants and cocoa processors to hedge against price volatility. Around **60-80% of cocoa is pre-sold**. This high rate is due to the recognised quality of Ghana cocoa beans on international market, which is the result of a strong quality control by the government along the supply chain.

³¹⁰ ETH, Assessing the resilience of the cocoa value chain - 2016
³¹¹ ETH, Assessing the resilience of the cocoa value chain - 2016

The forward contracts are then provided as collateral to borrow the funds from an international syndicate, and these funds are used as the seed fund for LBCs.³¹²

Ghana receive a **4-6% price premium on the international market** due to the consistent superior quality of its cocoa beans: slightly low levels of debris and defective beans, higher-than average fat content as well as mild and rounded flavour.³¹³

In 2017, the country received USD 2,71 billion from the export of cocoa. The cocoa is the only export commodities which ... goes directly to central bank.³¹⁴

Grinding activities in Ghana

Historically, **efforts to process cocoa for export in Ghana can be traced back to the 1960s** when the West Africa Mills Company (WAMCO) was established through private initiatives. It was set up to process cocoa into cocoa paste, cocoa butter, and other products. Subsequently, the government established the Cocoa Processing Company (CPC), a subsidiary of COCOBOD, in 1965 to process cocoa into semi-finished and finished products. The CPC was privatised in the 1980s as part of economic reforms.³¹⁵

To attract foreign direct investments into the domestic cocoa processing sector, the **Ghanaian government started twenty years ago to offer to investors a competitive package of economic incentives**. It includes price discounts, tax free zones and extended payment credit. These efforts resulted in an increase in domestic grinding capacities from 110,000 MT in the early 2000s to approximately 431,500 MT in 2013. In the midterm, the government aims to process at least 60% of the total cocoa output domestically before exporting it.³¹⁶

The processing activities in Ghana concerns particularly the light crop beans (middle quality beans). The CMC sell around 20-25% of these beans to domestic processors, at a discount price.

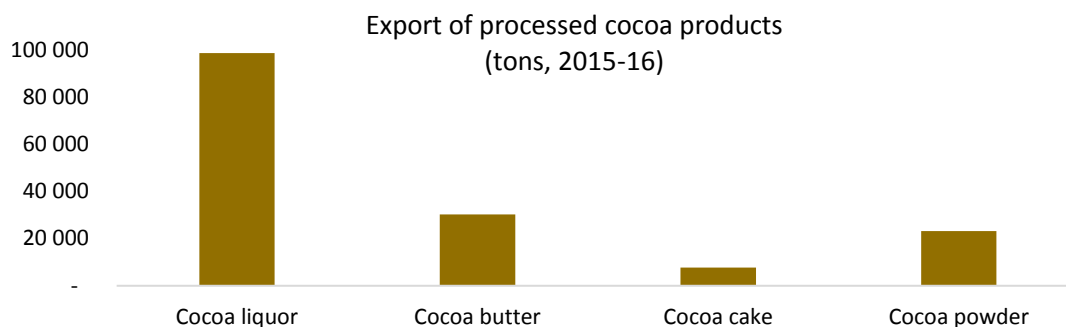


Figure 128 : export of processed cocoa products, 2015-16 (Source: Cocobod, 2019)

Cocoa beans are processed into semi-finished products such as liquor, butter, and powder, of which 95% is exported. The remaining 5% is used for cocoa beverages, toffees and chocolate destined to the local markets. There is also a limited number of domestic efforts to process cocoa by-products (husks, shells, cocoa pulp) as well as inferior quality beans into various finished products not traditionally associated with cocoa such as shampoos, soaps, alcohol, etc.³¹⁷

³¹² ETH, Assessing the resilience of the cocoa value chain - 2016

³¹³ ETH, Assessing the resilience of the cocoa value chain - 2016

³¹⁴ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

³¹⁵ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

³¹⁶ ETH, Assessing the resilience of the cocoa value chain - 2016

³¹⁷ ETH, Assessing the resilience of the cocoa value chain - 2016

Cocoa beans processed by factories
(% of volume processed, 2015-16)

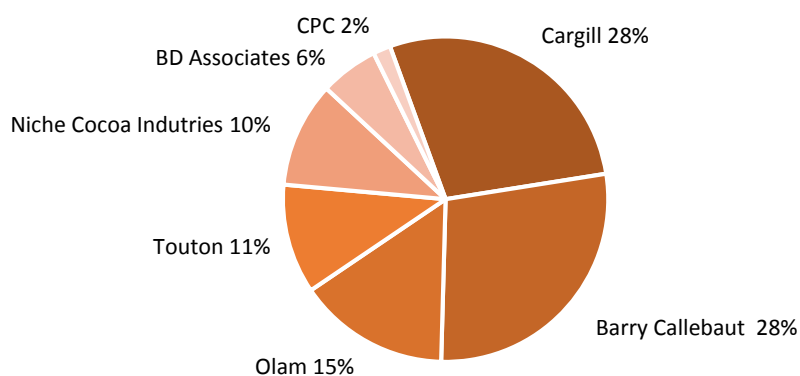


Figure 129 : Cocoa beans processed by factories, 2015-16 (Source: Cocobod, 2019)

Barry Callebaut, Cargill, and Olam made up more than 70% of the cocoa processing volumes in 2015-16. Currently, there are several processing companies that add some form of secondary processing (confectioneries and chocolate) to the primary processing of cocoa into semi-finished products (butter, liquor, cake, and powder).³¹⁸

The total installed capacity for these companies is about 431,000 metric tonnes, out of which 229,693 metric tonnes (53 percent) is being utilised (Goodman, 2017). There is uncertainty about the availability of cocoa beans, as these companies are often left with no choice but to either pay higher prices for cocoa (international prices) or leave their machinery idle. It is reported that cocoa processing companies had to import about 5,500 tonnes of light crop cocoa beans from Côte d'Ivoire in 2015/2016 to meet their operations as not enough local light crop beans were available (Goodman, 2017).³¹⁹

3.2.1.2. Structure of the cocoa-chocolate value chain in Ghana

The state is present at each stage of the Ghanaian's cocoa supply chain, and the principal roles of private companies are on collect and process

From the cocoa sector reform in 1993, the sector is semi-liberalised with the following characteristics:

- A quality control system regulated by the State.
- A producer price set by the State before the harvest season and equivalent to at least 70% of the "net-FOB" price.
- A state monopoly of cocoa bean exports.
- A state monopoly of cocoa bean supply to domestic processors.
- A leader position on internal marketing (buying cocoa from farmers).
- Services and input supply to production.
- Regulatory role (notably of the private actors).

³¹⁸ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

³¹⁹ ILO, Assessing the Employment Effects of Processing Cocoa in Ghana - 2019

The Cocoa marketing Board (COCOBOD), is in charge of the majority of this regulation. The mission of COCOBOD is to encourage and facilitate the production, processing and marketing of good quality cocoa, coffee and sheanut in all forms in the most efficient and cost-effective manner and maintain the best mutual industrial relation with its objectives. Its functions include production, research, extension, internal and external marketing and quality control of cocoa.³²⁰

Focus on quality control:

- Quality Control Division (COCOBOD subsidy) checks cocoa beans three times: at the warehouses of LBCs, before entering Cocoa Marketing Company (CMC) and prior to export shipment. In addition, QCC inspects cocoa waste at cocoa waste companies’ warehouses, to prevent exports of beans of an acceptable quality through this channel.
- Very strong, costly, and slow and LBCs would like to make it faster.
- But it allows a standardised and high-quality cocoa which also benefits form the main importers who benefit a constant quality. For example, Cadbury communique on Ghanaian beans in all its products commercialised in UK and depends so on the capacity of Ghanaian cocoa supply chain to evaluate, grade, and seal the beans for its factory in Birmingham.

This recognised quality is also responsible for the premium in the international market and for the possibility to get a high rate of forward contracts. These contracts are then provided as collateral to borrow the funds from an international syndicate, and these funds are used as the seed fund for LBCs.³²¹

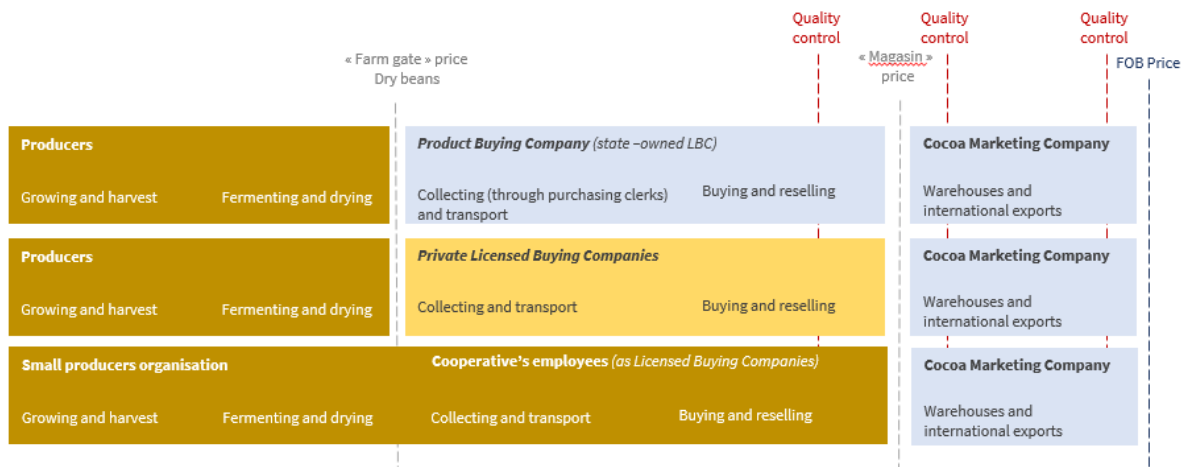
| Stage of the supply chain | Institution in charge, governance | Function |
|---------------------------|---|--|
| Whole supply chain | PPRC: Producer Price Review Committee – 1983 PPRC is chaired by the Ministry of Finance and includes COCOBOD, Bank of Ghana, representatives of farmers, LBCs and hauliers | - Fixes producer prices annually (75% of the net FOB price for 2017/18) |
| | COCOBOD subsidiary: ESMS: Environmental and Social Management System | - Identify and manage potential environmental, social, health and safety risks in all the cocoa sector |
| | COCOBOD subsidiary: QCD: Quality Control Division CMC: Cocoa Marketing Company | - Quality control - Grading - Sealing |
| Production | COCOBOD subsidiary: - Cocoa High-tech Program - 2003 - SPD: Seed Production Division - CHED: Cocoa Health and Extension Division - COPADEC: Cocoa Diseases and Pests Control - 2001 | - Fertiliser, pesticides and seedlings distribution (High-Tech program) - Pods and seedlings production (SPD) - Pest and disease control (COPADEC) |
| | COCOBOD subsidiary: - CRIG: Cocoa Research Institute of Ghana | - Agricultural and processing researches |
| | COCOBOD and subsidiary: - PBC: Producing Buying Company | - State-owned LBC (PBC) |

³²⁰ Ghana Cocoa Board, Summary Environmental and Social management system - 2018

³²¹ ETH, Assessing the resilience of the cocoa value chain - 2016

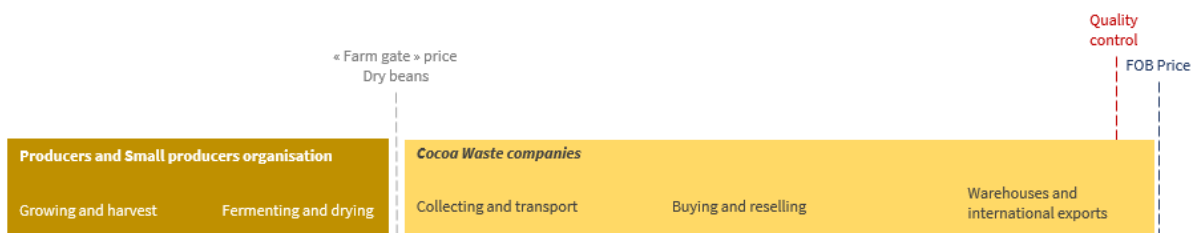
| | | |
|------------|---|--|
| | CMC: Cocoa Marketing Company | <ul style="list-style-type: none"> - Regulatory role on LBCs: on activities, grants their licences, provide them with seed money (COCOBOD & CMC) - The only exporter of cocoa beans (CMC) - Manage forward contracts: 70% of the cocoa beans) (CMC) |
| Marketing | Cocobod subsidiary: - CMC: Cocoa Marketing Company | - Monopoly in supplying cocoa beans to local industries (CMC) |
| Processing | | - Advantageous economic package: price discounts, tax free zone, advance credit payment |

Table 1: COCOBOD functions along cocoa value chain (Source: BASIC, 2019)



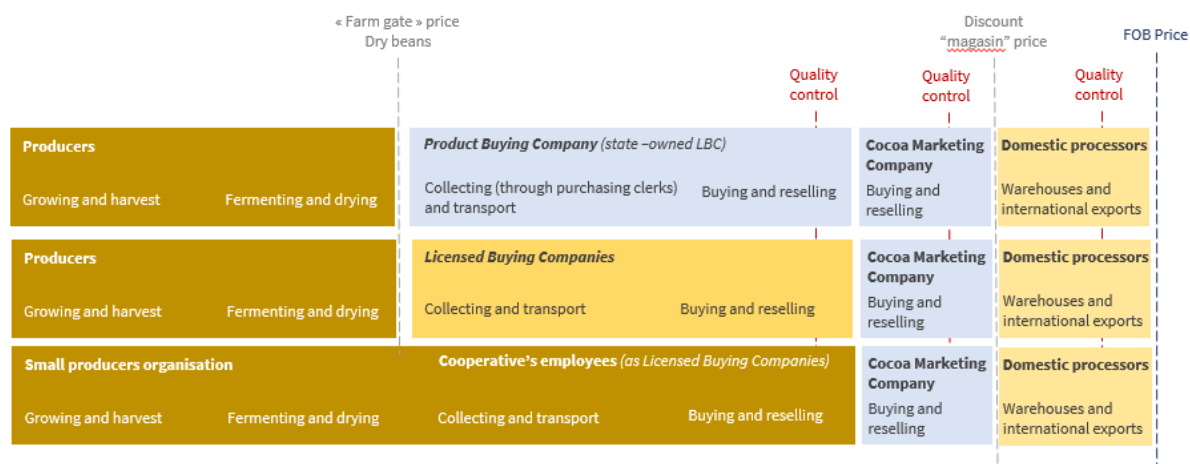
Supply chain organisation – Export of cocoa beans – High quality beans (high crop beans) : 75% of total exports

Figure 130 : Ghanaian supply chain, from production to exports of cocoa beans. (Source: BASIC)



Supply chain organisation – Export of cocoa beans – Low quality beans < 2% of total exports

Figure 131: Ghanaian supply chain, from production to exports of cocoa inferior quality beans and by-products (Source: BASIC)



Supply chain organisation – Export of processed cocoa products – middle quality beans (low crop beans) : 20-25% of total exports

Figure 132 : Ghanaian supply chain, from production to exports of cocoa processed products (Source: BASIC)

The majority (around 75%) of farmers are not organised. Kuapa Kokoo is the largest cooperative with around 100,000 registered farmers. In global, the state:

- Makes 30% of the collect from farmers (through PBC)
- Makes around 75% of the export (in volume)

Even in the processed supply chain, the Cocoa Marketing Company is an intermediary actor between LBCs and domestic processors.

3.2.1.3. Economic strategies and business models of the main actors in the Ghanaian cocoa sector

Cocoa producers' economic strategy

Cocoa delivers 70-100% of the income of 800 000-1 million smallholder farmers.³²²

Whilst an important part of cocoa farmers are relatively poor, KIT argues³²³ that farmers explain that cocoa income enables them to cover basic living costs and allows them to make modest investments that help them get ahead.³²⁴

Depending on the costs of hired labour and the price for cocoa, farms with hired labourers and higher productivity can potentially earn less than farmers who work a smaller farm with less hours and lower yields, as the costs for hired labour are often significantly higher than a farmer's income. (In 2014, farmers in Ghana paid 5 USD a day for wageworkers).³²⁵

³²² ETH, Assessing the resilience of the cocoa value chain - 2016

³²³ KIT, Demystifying the cocoa sector in Ghana and Côte d'Ivoire, 2018

³²⁴ Cocoa Barometer 2018 - 2019

³²⁵ Cocoa Barometer 2018 - 2019

While the majority of farmers (around 80%) own the land that they cultivate, others are sharecroppers – they manage the fields on a share basis. There are two sharecropping systems in Ghana locally known as abunu and abusa³²⁶ :

- In abunu, sharecroppers establish cocoa farms themselves and are responsible for the main activities on the farm such as managing the farm, training, hiring labour and applying inputs. In return, abunu sharecroppers receive 50% of the harvest.
- In abusa, owners hire caretakers to manage farms for one-third of the crop, while inputs are usually provided by the landowner, also the quantity may be inadequate.

Cocoa farming is a labour-intensive activity, therefore many farmers organise into informal groups, locally known as nnoboa, in order to help each other with harvest and postharvest practices.³²⁷

Role played by the State-led regulation in recent years

The last crisis on the world cocoa market in 2016-2017 may have been what triggered the current initiative put forward by Ghana and Côte d'Ivoire. It represented yet another sign of the high dependence to world markets and the absence of trickling effects of cocoa on the social and economic development of both countries³²⁸. This realisation led to the “Déclaration d'Abidjan du 13 juin 2018”, an attempted rapprochement between the two countries to build a joint strategy to harmonise their public policies and optimise the benefits earned from the cocoa value chain³²⁹.

Both countries teamed in 2019 to implement on 2019/2020 harvest 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 price³³⁰.

3.2.1.4. Key results/figures on value distribution from production to FOB

In order to better understand our estimates of the value and costs breakdown in Ghana in 2018, it is first important to put it in the context of the recent evolutions of both:

- the FOB export price of cocoa beans
- the farmgate price of cocoa beans

³²⁶ ETH, Assessing the resilience of the cocoa value chain - 2016

³²⁷ ETH, Assessing the resilience of the cocoa value chain - 2016

³²⁸ World Bank, 2019, op. cit.

³²⁹ Ibid

³³⁰ Reuters, « Côte d'Ivoire, Ghana lift threat to cocoa sustainability schemes », October 23, 2019

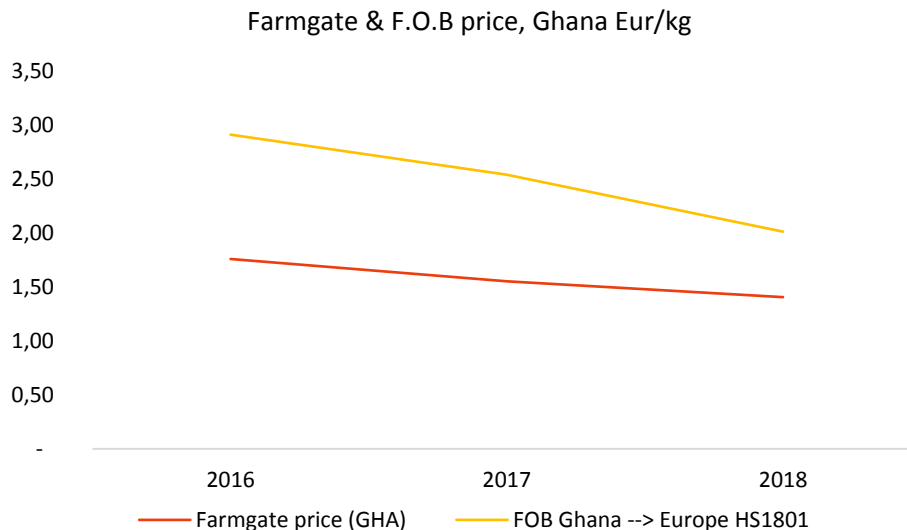


Figure 133. Evolution of the farmgate and FOB export price in Ghana between 2014 & 2018. Source: BASIC

The above diagram illustrates the impact of the strategy put in place by the COCOBOD to buffer and compensate **the drop of almost 30% of the export prices in 2017-2018** for cocoa farmers.

As a result of these measures implemented by the COCOBOD (see above the section 3.2.1.1. for details), the farmgate price has only decreased by 20% since 2016 and **the price received by cocoa farmers amounts to more than 70% of the export price in 2018, compared to only 60% (similarly to Côte d'Ivoire) in 2016.**

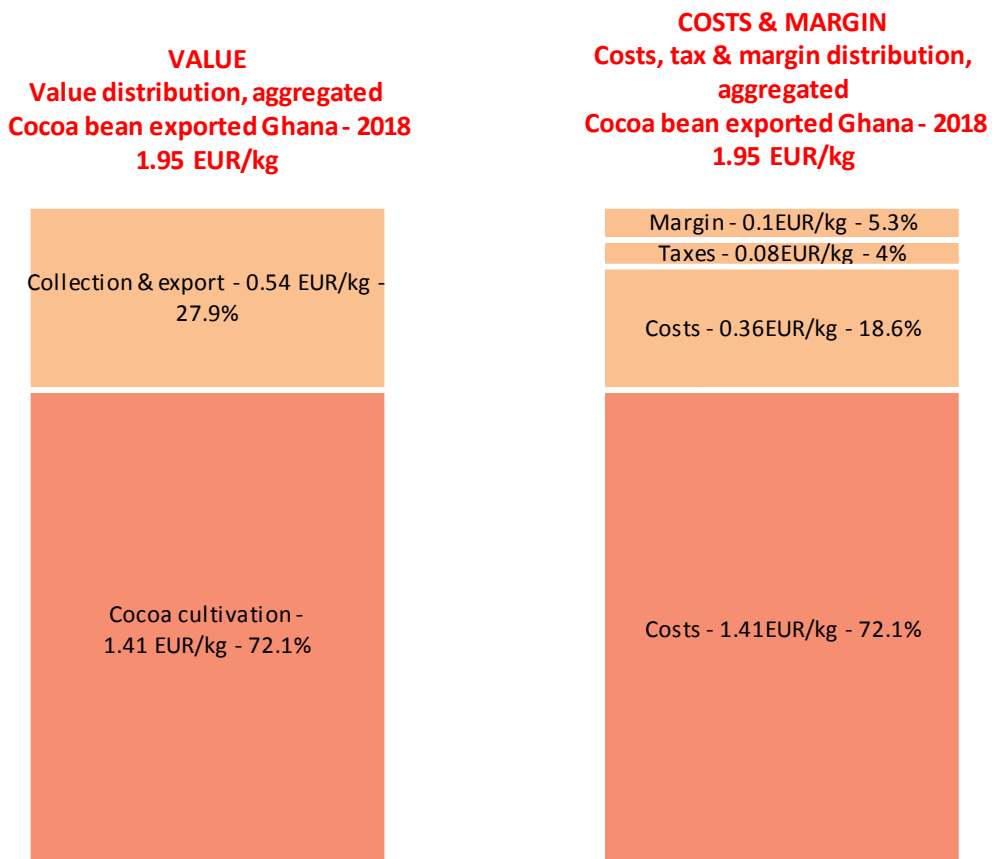


Figure 134. Distribution of value, costs & margins in Ghana (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC



Figure 135. Distribution of costs & margins for collection, transport, warehousing and export in Ghana in 2018 (cocoa harvest 2017/18). Source: BASIC

The first observation stemming from our estimates is the **substantially high export price achieved by Ghana, especially in comparison with Côte d'Ivoire** (1.95 euros/kg compared to 1.7 euros/kg in 2018), which is mainly due to the strong quality control put in place by the COCOBOD which ensures the consistency of the quality of Ghanaian beans which is quite valued on the world market. **Through the public regulation system in place in Ghana, the rest of the chain is either directly managed by COCOBOD, or heavily regulated regarding LBCs. As a result, it is quite difficult to get information on the costs and margins up to the export stage.**

A recent study conducted by the Ghanaian research institute Imani³³¹ provides in-depth insights on these cost components, which we have used for our estimates (see the previous 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).

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

In terms of public taxes, although their level seem much 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.

3.2.1.5. Focus on the farmers' share of value

In order to contextualize the results of our estimates for Ghanaian cocoa farmers, we have first analysed the cost breakdown of cocoa cultivation (before farmgate).

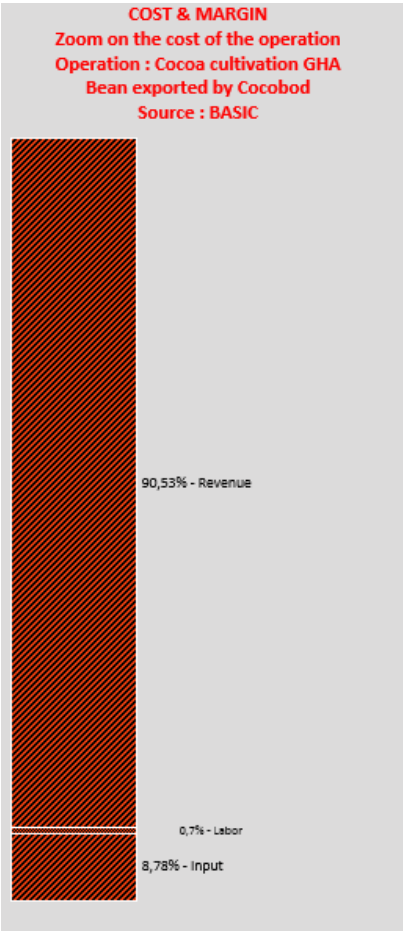


Figure 136. Breakdown of costs of cocoa cultivation in Ghana in 2018 (cocoa harvest 2017/18). Source: BASIC

The most recent studies on cocoa cultivation in Ghana which we used for our estimates - in particular conducted by the Royal Tropical Institute (KIT) in 2017/2018³³² –tend to show that the **cash expenses of cocoa farmers, whether for fertilisers and pesticides, are quite low** but substantially higher than in Côte d'Ivoire: they amount to 8.78% of the total revenue of cocoa farmers compared to less than 1% in Côte d'Ivoire.

332 KIT, Demystifying the cocoa sector in Ghana and Côte d'Ivoire, 2018

Reversely, the cash amount allocated to labour in Ghana (0.7% of their total revenue) seems quite lower than in Côte d'Ivoire (around 5%), potentially linked to the fact that the cocoa Ghanaian production relies more on family labour or exchanges of services among farmers.

In the end, more than 90% of the money received by farmers is used to ensure the living of their family. However, given their low yields and the limited land area they cultivate, the income they earn through cocoa appears to be barely enough for them to reach the poverty line, if not the absolute poverty line, similarly to the situation in Côte d'Ivoire.

Regardless of fluctuations on the world cocoa markets, the price received by the majority of small cocoa growers has not been sufficient for them to cover their costs of production and the basic needs of their families³³³.

As a result, the cocoa producers live structurally below the poverty line, a precarious condition that leads to a vicious circle with negative economic, social, and environmental consequences for the producers and their families.

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 revenues³³⁴. 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 cocoa³³⁵.

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%³³⁶. 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 year**³³⁷.

333 BASIC, The Dark side of chocolate, 2016

334 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

335 BASIC, The Dark side of chocolate, 2016

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

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

3.2.2. Certified cocoa

3.2.2.1. Facts and figures on certifications

Ghana stands out as the second biggest origin of certified cocoa for³³⁸:

- UTZ (21% of its worldwide certified cocoa area and 13% of its total production)
- Rainforest (21% of its worldwide certified cocoa area and 16% of its total production)
- Fairtrade (25% of its worldwide certified cocoa area and 20% of its total production)

The organic certification development in the country is very limited with a total area of 9326 Ha in 2018 and a production of 9326 tons³³⁹.

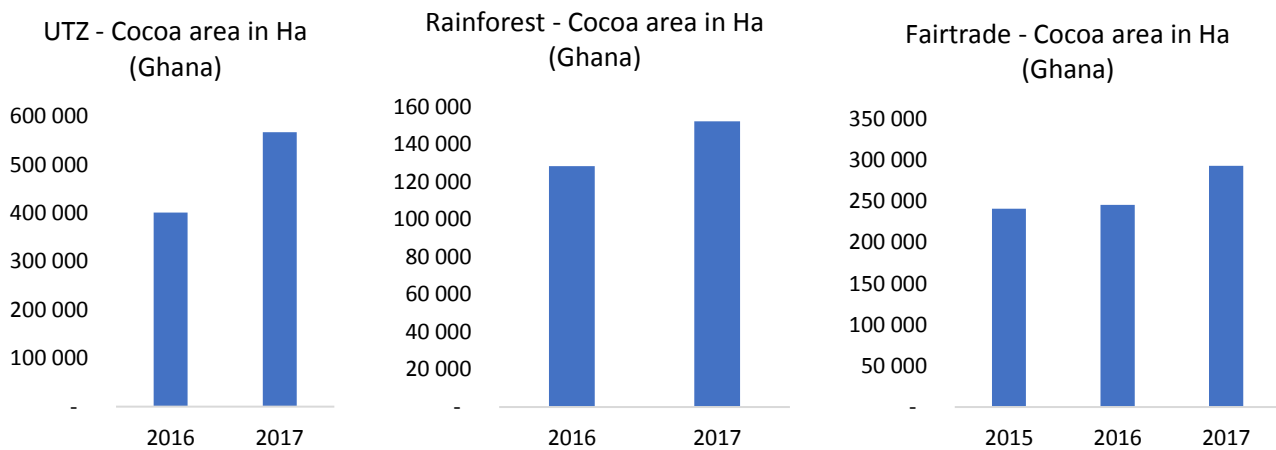


Figure 137. Estimated cocoa area by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

Regarding cultivated area, UTZ is by far the leading certification in the country with 567,000 ha certified, still increasing in recent years. Fairtrade comes second with 293,000 Ha (and slow growth), and Rainforest comes third with an estimated 152,000 Ha in 2018³⁴⁰.

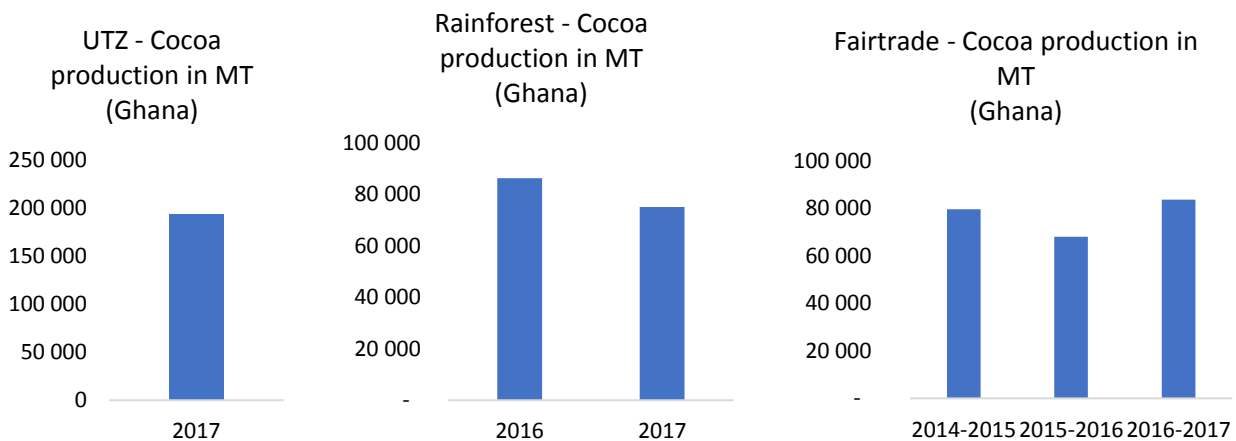


Figure 138. Estimated cocoa production by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

338 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

339 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

340 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

In terms of production volumes, the ranking is the same: UTZ achieved a potential of certified production of more than 193,00 tons in 2017, more than double Fairtrade with 83,000 tons, just above Rainforest with 75,00 tons (the high level of the Rainforest production volumes potentially corresponding to much higher yields than for the 2 other certifications)³⁴¹.

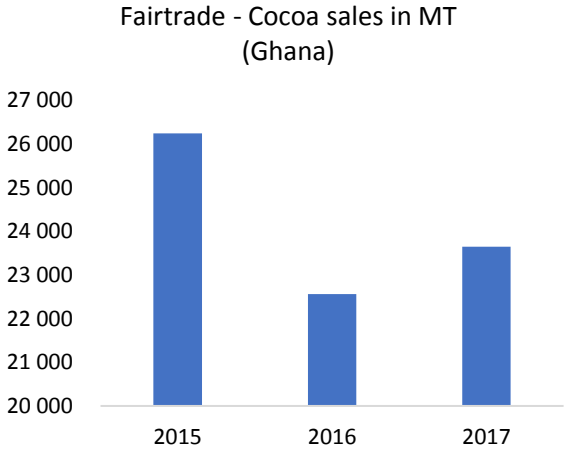


Figure 139. Estimated cocoa sales by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

It is worth noting that the actual sales of certification cocoa are (much) lower than the recorded potential of production, as exemplified by Fairtrade: they amounted to only 23,000 tons in 2017, to be compared with the potential of production of 83,000 tons (no data is published by UTZ and Rainforest for the country)³⁴².

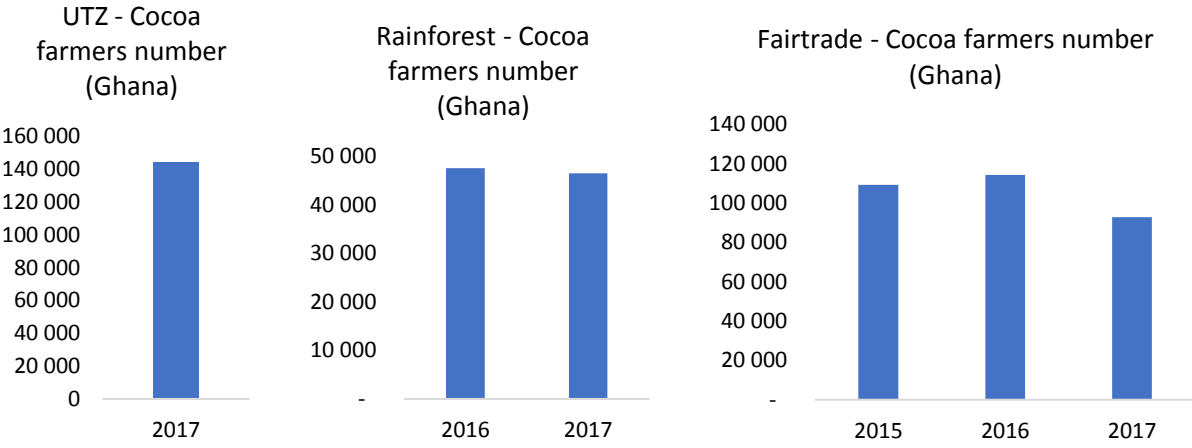


Figure 140. Estimated number of cocoa farmers by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

Finally, regarding the number of cocoa farmers being certified or member of a certified organisation, UTZ reaches almost 144,000 farmers, compared to 92,000 farmers for Fairtrade and 46,000 for Rainforest³⁴³.

341 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.
 342 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018..
 343 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018..

3.2.2.2. Key results/figures on value distribution from production to FOB

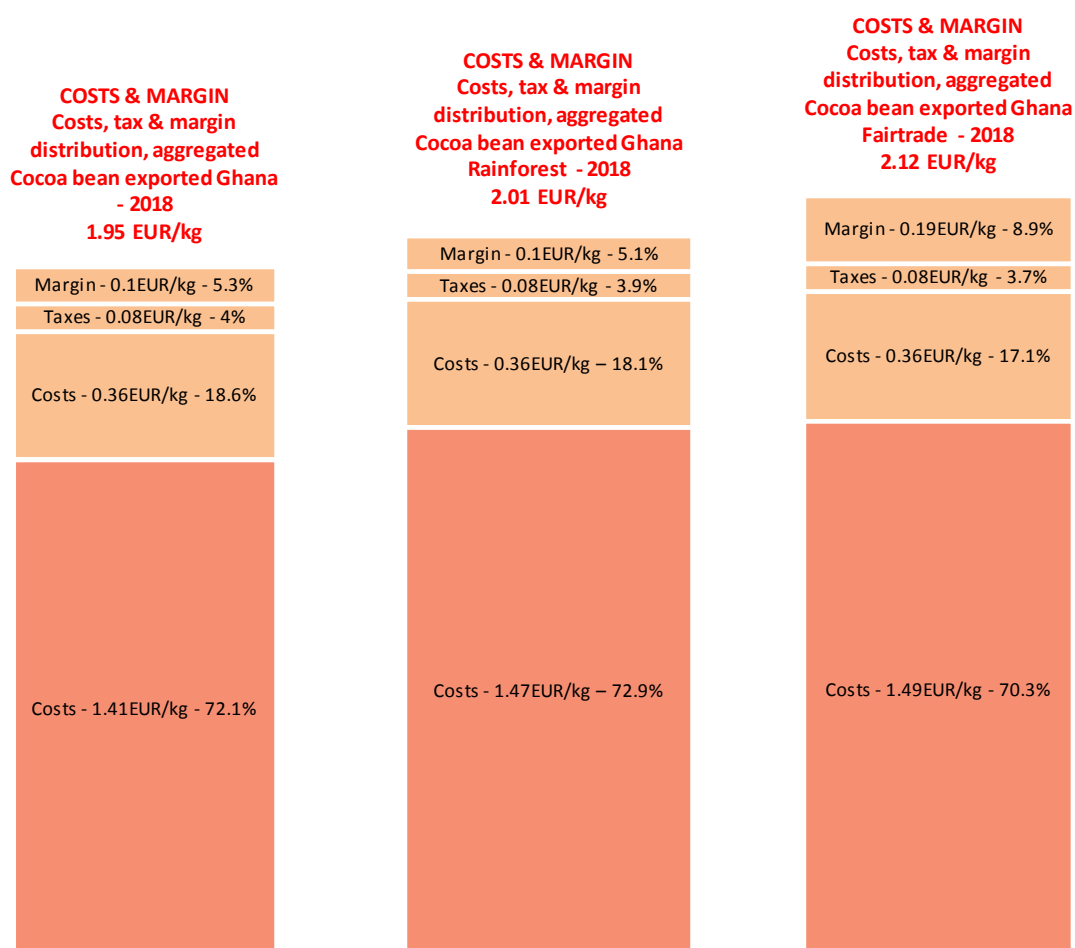


Figure 141. Distribution of value in Ghana (from farmers to export) for certified value chains in 2018 (cocoa harvest 2017/18). Source: BASIC

As in the case of Côte d'Ivoire, the results of our estimates highlights that the **2 certified value chains – Rainforest/UTZ and Fairtrade - are not so different apart**, even when compared to the conventional cocoa value chain already analysed in the previous section 3.2.1.4.

Indeed, these certified value chains appear to be variants/extensions of the conventional set up.

Most Rainforest/UTZ farmers have benefited from support of private companies which have encouraged them to get certified and supported the entry process. Their main aim was to promote the adoption good agricultural practices and the respect of social standards.

In the case of Fairtrade, the major part of area, volumes and sales are associated with the cooperative Kuapa Kokoo, which has been certified for almost 20 years and is a rare show case of large-scale producer organisation which have been able to being granted the right by the COCOBOD to export directly cocoa to foreign buyers.

As for Côte d'Ivoire, different qualitative studies commissioned over the past years by the sustainable certifications (especially UTZ and Rainforest Alliance) indicate a small increase in yields and improvement of living conditions³⁴⁴. The same has been documented for Fairtrade.

³⁴⁴ V. Ingram & al., « Impact of UTZ Certification... », op. cit.

The limited increase of yields can be even more deceptive for farmers as certifications require an important investment in workforce³⁴⁵. 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 sustainable and fair trade standards and their appropriation by the producers³⁴⁶.

In addition, regarding Fairtrade, the minimum price has not been effective in recent years due to higher prices on world cocoa markets (it has been substantially increased from 2.0 USD/kg to 2.4 USD/kg in 2019, as well as the Premium from 0.20 USD/kg to 0.24 USD/kg).

As a result, **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 2018³⁴⁷) which is paid by the buyer to the cooperative, over which the latest monitoring and evaluation data published by Fairtrade³⁴⁸ 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 itself³⁴⁹.

This is reflected in our estimates: **the final price received by farmers is mildly higher for the two certifications when compared to conventional**, i.e. 1.47 euros/kg in the case of UTZ/Rainforest and 1.49 euros/kg for Fairtrade in comparison with 1.41 euros/kg for conventional cocoa beans (i.e. +6%).

³⁴⁵ 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.

³⁴⁶ F. Ruf, Y. N'Dao & S. Lemeilleur, « Certification... », op. cit.

³⁴⁷ <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

³⁴⁸ Fairtrade International, Cocoa Monitoring Report, 2017

³⁴⁹ Fairtrade International, Cocoa Monitoring Report, 2017



3.2.3. Main learnings on the case study of Ghana

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 700,000 to 900,000 tonnes annually over the past decade).

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. 90% of cocoa in Ghana is produced by small holder farmers whose farms sizes usually do not exceed 4 hectares. The yields are relatively low in Ghana (around 400 kg/ha) and quite similar to Côte d'Ivoire.

From the cocoa sector reform in 1993, **the sector's regulation system** has been partially liberalised and **has the following key characteristics:**

- A quality control system regulated by the State.
- Services and input supply to production.
- 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.
- A state monopoly of 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 coca 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 producers 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 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.

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 a result, 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.

As in 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. The main benefit farmers get from the Rainforest/UTZ as well as Fairtrade seem to lie in the premium they receive.

3.3. Ecuador

3.3.1. Conventional cocoa

3.3.1.1. The Ecuadorian cocoa sector and its main characteristics

Brief introduction to the historical aspects of cocoa-chocolate sector within the country

It is with a royal decree from 1789 signed by Carlos IV that cocoa plantations started to spread in the region later to be known as Ecuador. Spain was back then the leading exporter of cocoa around the world, later to be replaced by Germany and France³⁵⁰. At the end of the 19th century, Ecuador was the first world cocoa producer with a little over 26,000 tonnes produced in 1899, ahead of other important Latin exporting countries such as Brazil, Venezuela or the Dominican Republic.

Its peak production was during the first two decades of the 20th century (an average of 40,000 tonnes per year) during the Ecuadorian industrial revolution: modern modes of transportation now made possible international trade and demand was rising rapidly in the USA and Europe³⁵¹. Ecuador was also helped by the availability of cheap manual labour³⁵².

But it then decreased, mainly due to the impact of the world prices' successive falls due to WWI and the 1929 crisis³⁵³, the spread of diseases within the cocoa plantation and the rapid rise of Western African Countries under colonial yoke. Large cocoa plantations collapsed and were turned into banana plantations, whereas smallholders planted cocoa trees on few hectares in their farms³⁵⁴. From the mid-1940s to the mid-1960s, Ecuadorian agriculture was mainly oriented towards the banana sector which changed the country by introducing new capitals in the economy and employed labour instead of independent farming in the countryside³⁵⁵.

The production started to pick up again in the 1980s: the depreciation of the Ecuadorian currency made the domestic costs relatively cheap and resulted in high revenues from exports, favouring then the cocoa sector and partially offsetting the negative impacts of the cocoa prices' falls in 1980s and 1990s³⁵⁶.

The State's program led since the mid-2010s achieved high results: Ecuador was in 2016 the 4th world cocoa producing country with over 260,000 tonnes produced this year, around 5% of the global production.

350 Vassallo, "Diferenciación y agregado de valor en la cadena ecuatoriana del cacao", 2015

351 Pigache and Baimbille, 2007 in Vassallo 2015, op. cit.

352 Vassallo 2015, op. cit.

353 Ibid

354 Purcell and al., The value of rents: global commodity chains and small cocoa producers in Ecuador", 2018

355 Uquillas 2008 in Vassallo 2015, op. cit.

356 Vellema and al., "Chain governance, sector policies and economic sustainability in cocoa: a comparative analysis of Ghana, Côte d'Ivoire and Ecuador", 2008

Key facts on Ecuadorian cocoa production

The agricultural sector is quite important for the Ecuadorian economy: it represents 8.5% of the national GDP and it is estimated that the livelihood of 25% of the Ecuadorians depends on this sector – close to 1.6 million people. Among the export crops, cocoa is third with 621 million USD in 2015, long after banana that accounts for 2,700 million USD and shrimps for 2,580 million USD in the same year³⁵⁷.

An estimated 100,000 producers³⁵⁸, mostly smallholders (owning 5 hectares on average) but some large plantations too, cultivate and harvest around 537,000 hectares for a production amounting to 264 000 tonnes in 2016. Within these producers, an estimated 80% cultivate less than 10 hectares³⁵⁹ (studies from the Ecuadorian Ministry of Agriculture even evaluate that 82,000 of cocoa producers cultivate and harvest cocoa on 2 to 3 hectares plantations³⁶⁰), 15% between 10 to 20 hectares and 5% more than 20 hectares³⁶¹.

| | Monoculture of cocoa | Cocoa in association |
|-----------------------------|----------------------|----------------------|
| Area in hectares | 243.000 | 190.000 |
| Agriculture production unit | 58.400 | 38.360 |
| Average | 4.16 ha | 4.95 ha |
| Less tha 10ha | 50% | 49% |
| Less than 20ha | 17% | 20% |
| Over 20ha | 33% | 31% |

Figure 142. Categories of cocoa production models in Ecuador. Source: BASIC, based on MAG-IICA 2006 and Vallasso 2015

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 hectares³⁶².

A difficult valorisation of Ecuadorian cocoa on the world market for FFC (Fine or Flavour Cocoa)

One of the defining characteristics of Ecuadorian cocoa is the existence of different quality of cocoa being cultivated in the country.

They can be divided into two main categories: the CCN-51³⁶³ cocoa and the *Cacao Arriba*, a criolla variety also known as “cacao nacional” from which is produced the *Cacao fino y de aroma* (CFA, also called FFC or Fine Flavour Cocoa).

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

358 An estimated 90% of these producers are individuals and non-organised, mostly smallholders (see below)

359 Radi y Martínez 2008 in Vassallo 2015, op. Cit.

360 MAGAP, 2016.

361 Radi y Martínez 2008, op. cit.

362 Rosero 2002 in Vallasso 2015

363 Colección Castro Naranjal (CCN-51), hybrid variety that results from national R&D in Ecuador.

Cocoa Arriba is the variety for which Ecuador is known worldwide. It recognised for its flavour notes of fruits and flowers which is quite sought for on the world market by cocoa experts while the CCN-51 is mostly well-known for its high yields and resistance to disease but poor(er) taste, as well as high content of fat which turned it into a great commodity to produce cocoa butter.

Numbers differ but according to estimates from ICCO and USDA³⁶⁴, **the CCN-51 represents 33%³⁶⁵ to 36%³⁶⁶ of the national production.** Combined with the Arriba Superior Epoca (ASE), ICCO estimates that the average Ecuadorian production of conventional cocoa between 2012 and 2016 is 73.7% of the national production³⁶⁷. The remaining Ecuadorian production is composed of 20.7% of FFC and 5.7% of FFC Premium according to ICCO’s estimates over the same period between 2012 and 2016³⁶⁸.

Even though Ecuador produces over 60% of the global FFC³⁶⁹ (FFC represents itself an estimated 6% of the global cocoa³⁷⁰), it does not succeed to valorise its FFC and to achieve high prices on the world market compared to other origin such as Colombia, Peru or the Dominican Republic³⁷¹.

This seems to be mainly due to the **lack of quality’s valorisation from the commercial intermediaries and the frequent mix of CCN-51 with FFC:** for that reason, the ICCO decided in 1994 to downgrade Ecuadorian FFC’s export status from 100% to 75% where it remains today³⁷². In the end, even though the Ecuadorian cocoa has an image of high-end and top-quality towards the consumer, the majority of the Ecuadorian cocoa arriving at European ports is mainly considered as low quality³⁷³.

Compared averages prices on world market for conventional cocoa and CA (FFC) between Ecuador, Colombia, the Dominican Republic and Peru (in USD/Mt, 2012-2016)

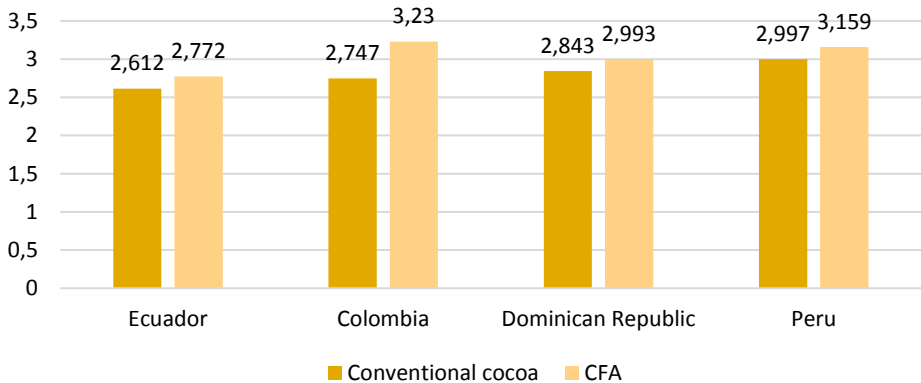


Figure 143. Compared averages prices on world market for conventional cocoa and FFC between Ecuador, Colombia, the Dominican Republic and Peru (in USD/Mt, 2012-2016). Source: Swisscontact 2017 based on data from Anecacao, MAGAP Peru and Dominican Republic, CONACADO and PROCOLOMBIA

364 USDA, Ecuador Cocoa Update and Outlook, 2015
 365 USDA’s estimates for the year 2015
 366 ICCO estimates, average from 2012 to 2016
 367 ICCO estimates in Swisscontact, “Estrategias país para la oferta de cacao especiales – Políticas e iniciativas privadas exitosas en el Peru, Ecuador, Colombia y Republica Dominicana”, 2017
 368 Swisscontact, 2017, op. cit.
 369 CFN, Ficha sectorial cacao y chocolate, 2018 ; 65% according to WCF’s estimates in 2013
 370 Purcell 2018, op. cit.
 371 Ibid
 372 AFP, El cacao CCN-51 paso de patito feo a cisne de la producción ecuatoriana
 373 Vallasso 2015, op. cit.

Nonetheless, it seems that in the countryside, the FFC serves as a reference for setting prices within a region: if some producers or producers' associations manage to achieve a higher price for their FFC, it has a positive impact on the prices for other producers, even for those not producing FFC³⁷⁴.

A high number of intermediaries in the supply chain up until exports

The cocoa supply chain in Ecuador is entirely private led, with very little intervention from the State. There is a high number of intermediaries that buy cocoa from the producers and then sell and deliver it to few exporters and manufacturers located in the country. Numbers differ according to study, but it is estimated that there are 1,000 commercial intermediaries (divided between 653 small and 337 medium to large commercial intermediaries)³⁷⁵.

Some studies inform that between these commercial intermediaries and the exporters (between 40 to 50 of them), other intermediaries exist like processing centres and brokers³⁷⁶.

Trading of cocoa for exports

Around 30 exporters are operating in Ecuador for the account of international companies, with the mission to fulfil the terms of their contracts in volumes, prices, and quality.

The main exporters³⁷⁷ in Ecuador work for big international chocolate manufacturers such as Cargill and Barry-Callebaut but also brands such as Nestlé and Hershey that kept some in-house grinding and chocolate manufacturing facilities³⁷⁸.

An estimated 90% of the national production is exported as raw beans, the remaining 10% being exported as cocoa mass, butter, cake or powder (and for a very small part as chocolate products)³⁷⁹.

Exporters of raw cocoa beans from Ecuador (shares in % of total exports of raw cocoa beans - Anecacao 2011)

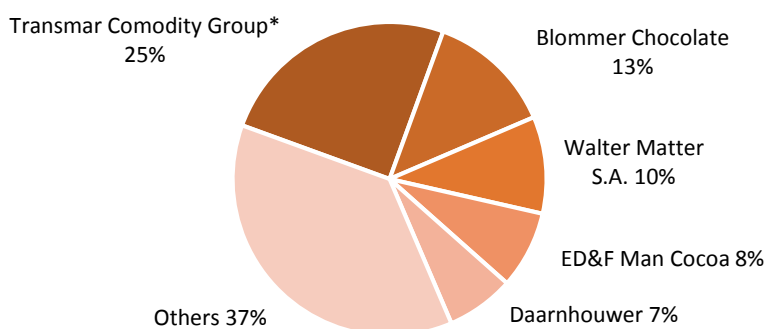


Figure 144. Exporters of raw cocoa beans from Ecuador (shares in % of total exports of raw cocoa beans). Source; Anecacao 2011

374 Swisscontact 2017, op. cit.

375 Ibid

376 Ibid

377 Transmar was the leading exporter up until it went bankrupt in 2016 (Reuters, "Former Transmar executive sentenced to three years prison for fraud", August 14, 2018)

378 Swisscontact 2017, op. cit.

379 Anecacao, 2011

Once the first exporter of cocoa from Ecuador, Transmar went bankrupt in 2016: it used to export semi-finished products for Mars in the USA and Ritter Sport in Europe whilst raw cocoa beans were sold to ADM, Cargill, Barry Callebaut or Nestlé³⁸⁰. It was an emblematic exporter in Ecuador, relying on a network of unregulated intermediaries and regarded as an example of “concentration at one point of the chain” compatible with “continuing fragmentation at other points”³⁸¹. In 2014, Nestlé was the biggest buyer and exporter of Ecuadorian cocoa³⁸².

In 2006, the Ecuadorian Ministry of Agriculture estimated that the production of cocoa butter was undertaken by 9 companies from which 4 exported close to 99% and 11 companies involved in the production of cocoa mass from which 4 exported 97%³⁸³.

Exports of Ecuadorian cocoa (expressed by country of destination, shares in % of total national exports in million USD FOB, from 2013 to 2017)

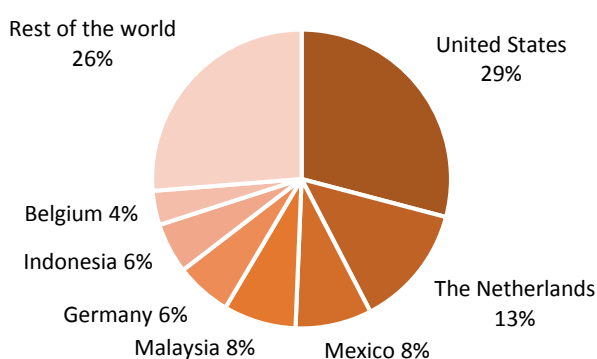


Figure 145. Exports of Ecuadorian cocoa (expressed by country of destination, shares in % of total national exports in million USD FOB, from 2013 to 2017). Source: Central Bank of Ecuador 2018

United States is the first market for Ecuadorian cocoa, for raw beans as well as semi-transformed products (especially cocoa butter): the US share of Ecuadorian cocoa exports rose even more to compensate the decline in exports of South East Asian countries³⁸⁴.

Very little grinding activities in Ecuador

In percentage, the exports of semi-transformed products of cocoa and chocolate are very little compared to the exports of raw beans. Nonetheless, there are some grinding and chocolate manufacturing facilities within the country. Some are mostly oriented towards the domestic or regional end-consumer market (Ecuacocoa, Edeca or Infelersa), other produce for the international market, such as Ferrero del Ecuador and Nestlé Ecuador. The latter produces and exports cocoa butter (for which Nestlé Ecuador is the first exporter in Ecuador), cocoa mass, powder, cake and chocolates, mostly for the United States and Argentina.

380 Purcell 2018, op. cit.

381 Humphrey 2006 in Purcell 2018, op. cit.

382 Confectionery news, “Arriba! Arriba! Nestlé taps fine flavor beans for Ecuadorian chocolate plant”, July 2nd, 2014

383 MGAP-IICA 2006 in Vallaso 2015, op. cit.

384 Interview with a chocolate manufacturer

For instance, in 2014, Nestlé invested 16 million USD to open a chocolate moulding and packaging line using FFC in its plant of Guayaquil, to supply domestic³⁸⁵ as well as export markets³⁸⁶.

3.3.1.2. Structure of the cocoa-chocolate value chain in Ecuador

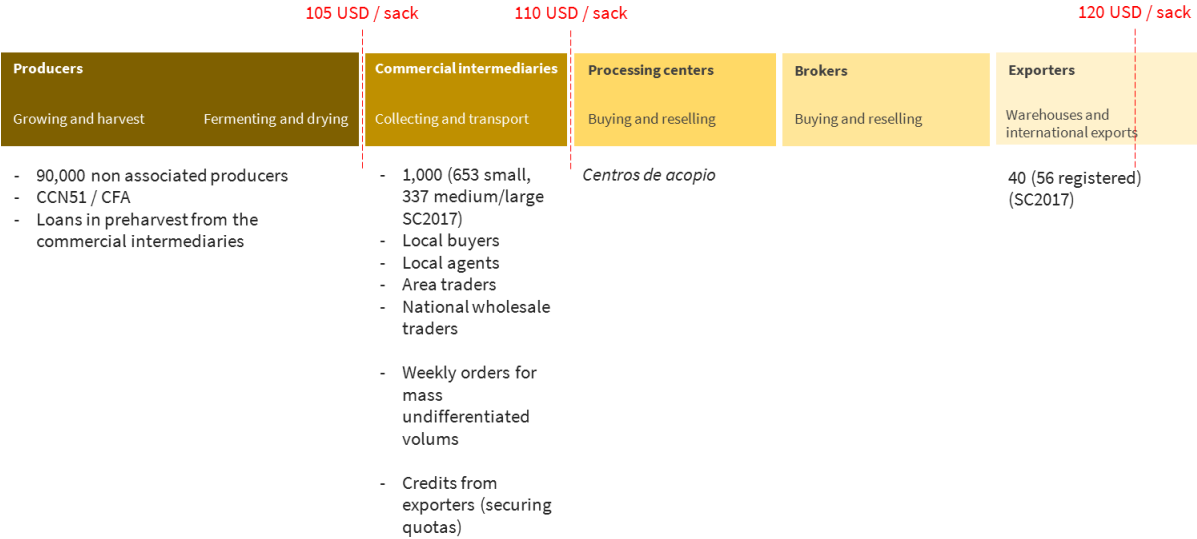


Figure 146. Main cocoa supply chain in Ecuador. Source: BASIC based on Swisscontact 2017

Regarding the commercialisation of conventional cocoa, it is estimated that on average there are 4 to 5 commercial intermediaries involved between the cocoa farmers and the final exporter³⁸⁷.

It seems that, in the case of FFC supply chains, there are fewer commercial intermediaries, mostly because of the more direct link between the producers’ associations³⁸⁸ and the market³⁸⁹.

Another factor is that chocolate manufacturers who seek FFC for their premium or certified cocoa tend to invest in the production stages (or even integrate when they invest in cocoa plantations, see below): for instance, some of them develop quality laboratory located in Ecuador in order to gain more control before exports and increment the value they can draw from the exports and commercialisation of higher quality cocoa³⁹⁰.

Little implication from the Ecuadorian State on the commercialisation of cocoa but recent intents to boost the FFC production

Except the recent public policies initiated by the State in order to renew the production of Cacao Nacional, it seems that the commercialization of cocoa in Ecuador is done without no intervention from the State at all³⁹¹.

385 The domestic Ecuadorian market is dominated by Nestlé (24%), followed by Argentinean firm Arcor (14,9%) and local firm Universal Sweet Industries (13,7%). Mars, Hershey and Ferrero also have a presence (Confectionery News 2014, op. cit.)
 386 Confectionery news, “Arriba! Arriba! Nestlé taps fine flavor beans for Ecuadorian chocolate plant”, July 2nd, 2014
 387 Vassallo, 2015, op. cit.
 388 Most of the FFC is commercialised through producers’ association, which often deal directly with the exporter or even can turn into exporters or chocolate manufactures themselves (Vallamo 2015, Swisscontact 2017).
 389 Swisscontact 2017, op. cit.
 390 Ibid
 391 Vassallo, 2015, op. cit.

Two main public institutions are linked to the cocoa sector. First the Ministry of Agriculture, especially since it implemented its programme of renewal of FFC (*Proyecto de reactivación del cacao nacional fino de aroma*) in 2013 (see below). Second, the institution in charge of promoting exports worldwide as well as attracting foreign capitals, PROECUADOR (*Promoción de exportaciones e inversiones extranjeras*), which obviously promotes cocoa along with other products from Ecuador³⁹².

Since the 2000s, the Ecuadorian government mainly sees its role as facilitating chain alliances to enforce FFC on the world market in order to vitalise a “high price niche market”. For instance, the State favoured the renewal of the country’s agricultural by facilitating partnerships between private and public actors, playing then a crucial role³⁹³. It actively supported the value chain of FFC and one of its major results is the decree of July 2005 that defines fine flavour cocoa as that harvested from Arriba variety, which has to be marketed separately from the CCN-51³⁹⁴.

3.3.1.3. Economic strategies and business models of the main actors of Ecuadorian cocoa sector

Cocoa producers’ economic strategy

Over the last decades, cocoa producers have been driven towards growing CCN-51 which has often replaced the *Cacao Nacional* trees. The CCN-51 mostly appeals to them because it achieves higher yields (two to threefold the *Cacao Nacional*’s yields) with conventional production methods.

For the large majority of the producers who are not members of a cooperative in capacity to valorise towards its clients the quality of the FFC to achieve higher prices (see below), CCN-51 and FFC are paid the same by the commercial intermediaries.

Moreover, cultivating FFC draws additional costs to plant cocoa and maintain the plantations, as it is a variety of cocoa that requires more care³⁹⁵.

Thus, there is **no incentive to grow FFC, whereas there is to grow CCN-51** as it produces more, and cocoa smallholder farmers can hope to draw more income from it.

Nonetheless, some smallholders still grow FFC: they are mostly owning only 2 to 3 hectares, cultivate cocoa in association with other crops as it is traditional in Ecuador, and the large majority of them belongs to cooperative (see below).

The Ecuadorian State strategy, between quantitative growth and valorisation of quality

Since 2010, cocoa has been identified by the Ecuadorian State as one of the pillar crops for the renewal of its agriculture – the other two being banana and café, the three together representing 20% of the agricultural GDP in 2015. The aim of the State is to diversify its economy to tackle poverty, social and geographical inequalities.

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

393 Vellema 2016, op. cit.

394 Ibid

395 Swisscontact 2017, op. cit.

In the cocoa sector, several programs have been launched, among which one focused on the renewal of FFC production: the State invested 70 million USD between 2012 and 2015 to allow the Ministry of Agriculture to support farmers in renewing their plantations with FFC, develop new ones (instead of planting CCN-51) and provide them with chemical inputs.

The development of cocoa plantations

Mostly grow under monoculture and intensive agricultural practices, the CCN-51 is, as we said before, highly recognised for its resistance to diseases, its high yields and even high productivity when it comes to use it as an input for cocoa butter.

Some of these new plantations, especially the bigger ones which can reach up to 1,000 hectares are owned directly by chocolate manufacturers, even from abroad. For instance, Jeff de Bruges, one of the most well-known chocolate retailers in France, announced in 2019 to invest in cocoa plantations in Ecuador in order to develop a new range of chocolate recipes with a 100% of Ecuadorian cocoa³⁹⁶. Since 2016 and the 4th World cocoa summit, it seems that industrials along with Ecuadorian officials are looking into the possibility of mechanizing the cocoa cultivation, meaning that plantations would have to be larger than 50 hectares³⁹⁷. For instance, Mars acquired a R&D 485-hectare cocoa plantation in Guayaquil, Hacienda La Chola, that is testing new agricultural practices and smart irrigation systems of large-scale plantations³⁹⁸.

3.3.1.4. Key results/figures on value distribution from production to FOB

In order to better understand our estimates of the value and costs breakdown in Ecuador in 2018, it is first important to put it in the context of the recent evolutions of both:

- the FOB export price of cocoa beans
- the farmgate price of cocoa beans

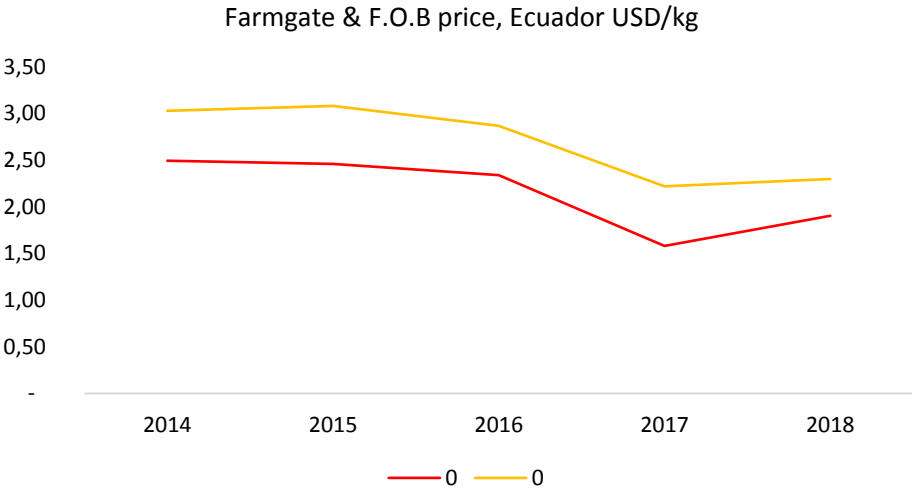


Figure 147. Evolution of the farmgate and FOB export price in Ecuador between 2014 & 2018. Source: BASIC

396 CFN, Ficha sectorial cacao y chocolate, 2018; ProEcuador, “Importante marca de chocolates en Francia invertirá en plantaciones en Ecuador”, March 29, 2019
 397 Confectionery news, “High tech revolution: Ecuador’s cocoa sector prepares to mechanize”, July 4th, 2016
 398 Confectionery news, “Mars buys Ecuadorian cocoa farm for scientific research”, April 13, 2016

Even though the cocoa sector is liberalised in Ecuador, the average farmgate price achieved by farmers remained at roughly over 75% of the FOB price since 2014 (see above diagram).

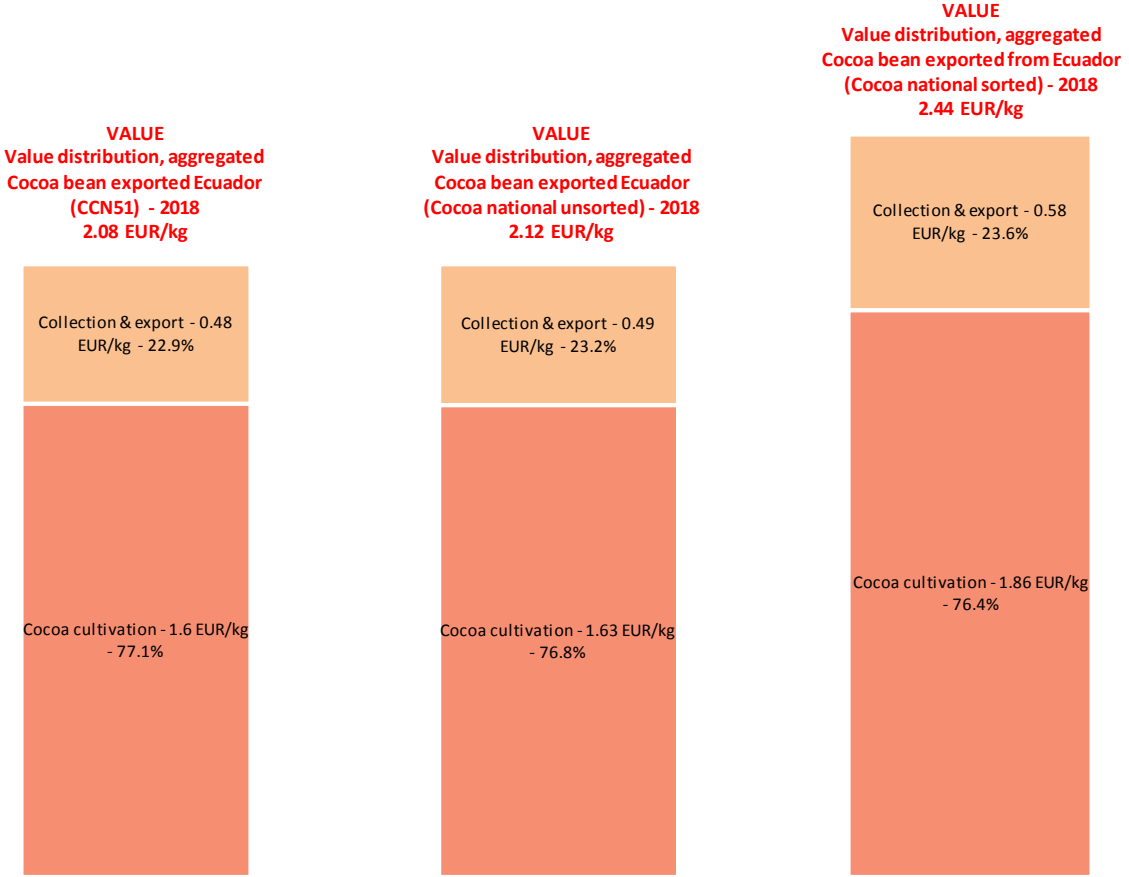


Figure 148. Distribution of value in Ecuador (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC

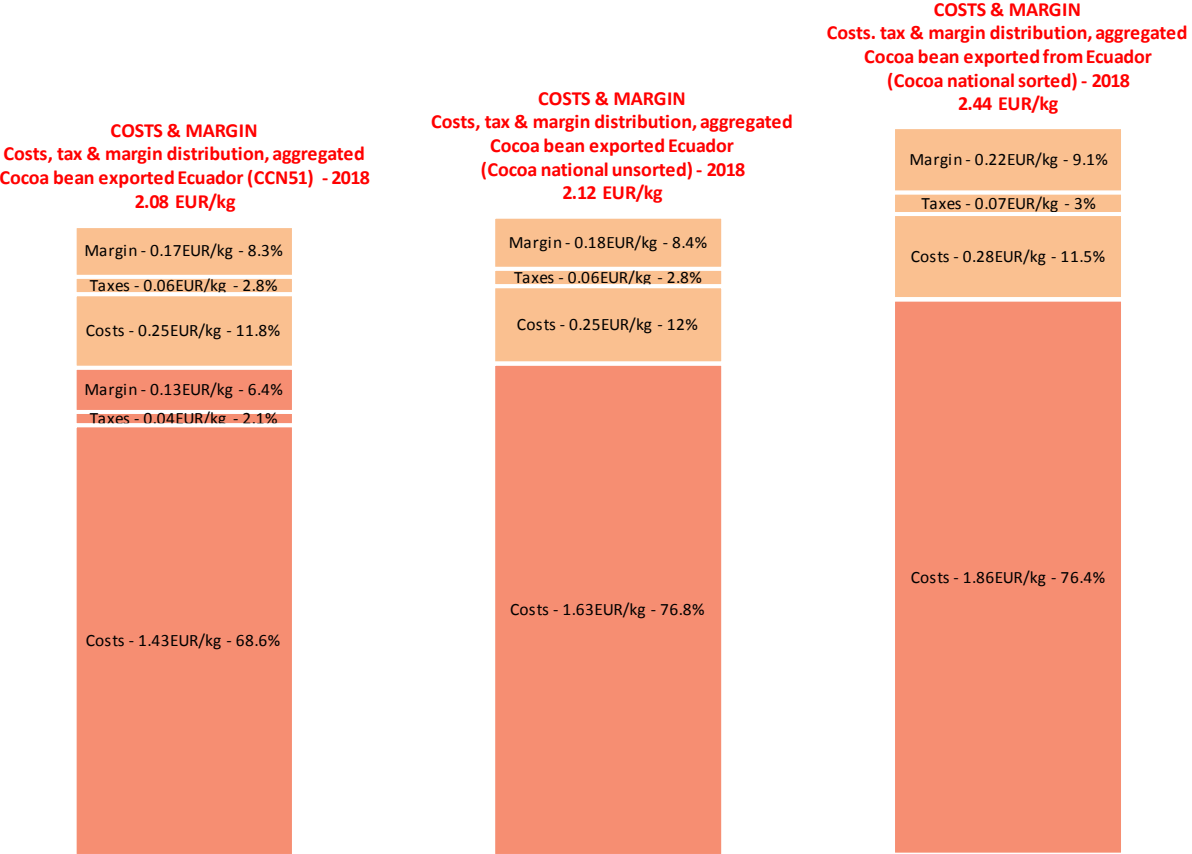


Figure 149. Distribution of costs and margins in Ecuador (from farmers to export) in 2018 (cocoa harvest 2017/18). Source: BASIC

The results of our research, confirmed by interviews with experts in Ecuador, show that 3 main patterns of cocoa value chains can be identified.

Firstly, the very specific case of middle-size plantations which are mainly dedicated to the cultivation of CCN51 with industrialised practices (involving a certain level of mechanization) and sometimes invest in FFC production on smaller lots. They take in charge the fermenting of cocoa beans which is also often made in an 'industrialised manner' for CCN 51.

This value chain is associated with the lowest export price (2.08 euros/kg in 2018) and **its business model relies on the important volumes of production generated thanks to much higher yields** compared to the more classical production of cocoa in Ecuador (from 1,000 tonnes to 2,000 tonnes and beyond).

The related plantations are quite profitable as they apparently manage to reach a net margin of 8% on the farmgate price (after income tax), their internal costs being mainly made up of labour expenses as well as input purchases.

The second value chain is the typical set up involving non organised small-holder farmers who are quite isolated and produce predominantly the national variety (*cacao nacional*) which they are not able to differentiate, together with a minority of CCN 51.

Being unable to get recognition for the specificity of some of their production, and in a low bargaining position towards intermediary collectors (because of their isolation), they are in direct competition with plantations selling the highly productive CCN51 considered of even higher quality, and cannot achieve a higher price for their cocoa.

As they have very poor yields (especially compared to plantations), the income they get is on average not sufficient to reach the poverty line.

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.

Finally, the 3rd and last value chain pattern corresponds to the more qualitative case of FFC production undertaken by small-holder farmers organised in cooperatives and who often benefit from the support of either private buyers (e.g. Nestlé), or international cooperation and NGOs.

In these chains, the share of value allocated to cocoa cultivation is substantially higher: 1.86 euros/kg instead of 1.63 euros/kg for non-organised farmers (i.e. 14% higher). They also tend to have greater yields than the isolated small-holder farmers (notably thanks to the support they get). However, the related internal costs are higher for the cocoa farmers as they invest greater financial resources and work hours annually to maintain their cocoa farm, conduct a more controlled and qualitative fermentation, and sort the cocoa beans.

In the end, it appears that the higher cocoa prices and higher yields they benefit from are partly, and sometimes greatly, negatively compensated by the higher costs they bear.

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.

3.3.2. Certified cocoa

3.3.2.1. Facts and figures on certification

Ecuador appears to be a small origin of certified cocoa for the 4 systems analysed³⁹⁹:

- UTZ (3% of its worldwide certified cocoa area and 6% of its total production)
- Rainforest (4% of its worldwide certified cocoa area and 8% of its total production)
- Fairtrade (1% of its worldwide certified cocoa area and 1% of its total production)
- Organic (3% of its worldwide certified cocoa area and 1% of its total production)

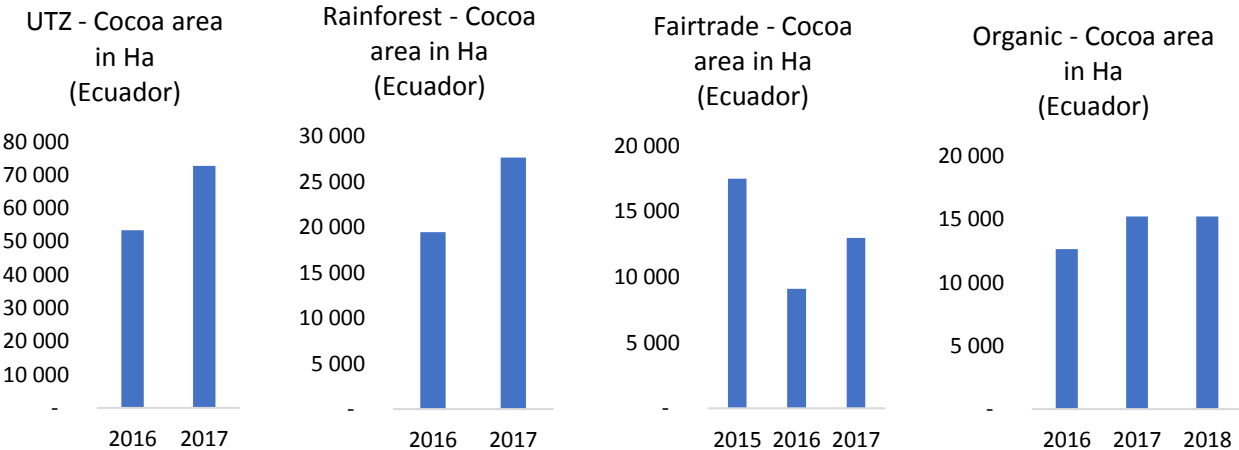


Figure 150. Estimated cocoa area by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

399 ITC, UNCTAD, GATT and al., “The State of Sustainable Markets”, 2018..

Regarding cultivated area, UTZ is by far the leading certification in the country with 72,700 ha certified, still increasing in recent years, as for Rainforest which ranks second with 27,000 Ha. Organic comes third with 15,000 Ha and Fairtrade last and in decline with an estimated 13,000 Ha in 2018⁴⁰⁰.

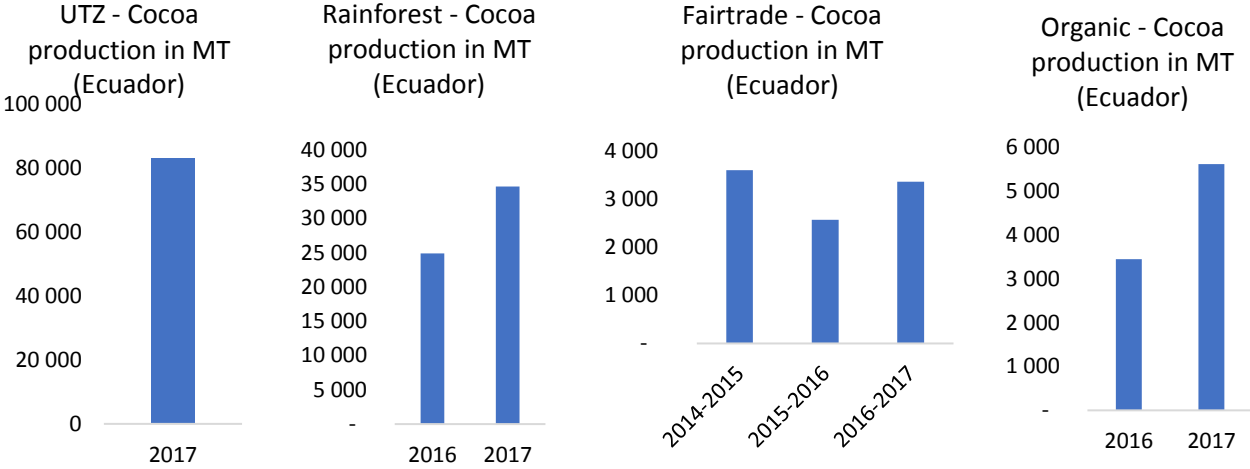


Figure 151. Estimated cocoa production by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

In terms of production volumes, the ranking is the same: UTZ achieved a potential of certified production of more than 83,00 tons in 2017, more than double Rainforest with 34,600 tons. Organic and Fairtrade come behind with 5,600 tons and 3,300 tons respectively⁴⁰¹.

It is worth noting that the gap between Fairtrade/organic and UTZ Rainforest is:

- much higher in terms of production (with a multiplication factor of 20-25 with UTZ and 8-10 with Rainforest)
- than in terms of cocoa area (with a multiplication factor of 5 with UTZ & 2 with Rainforest)

This massive difference can be explained by **the much higher yields achieved by UTZ/Rainforest cocoa producers, probably above 1,200 kg/ha per Ha compared to around 300 kg/ha for Fairtrade** (potentially due to the fact that they do not cultivate the same cocoa variety).

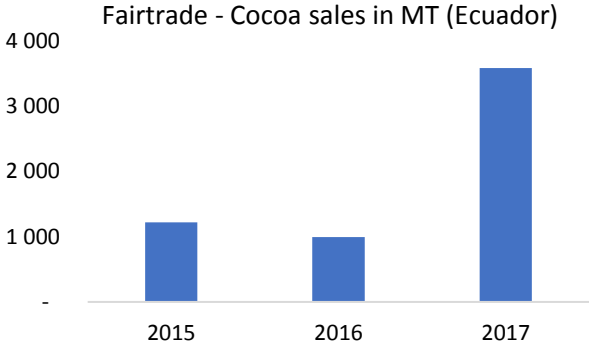


Figure 152. Estimated cocoa sales by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

Another noticeable point for Ecuador is that almost 100% of the Fairtrade-certified production was sold as Fairtrade, in stark contrast with Côte d’Ivoire where less than half of the Fairtrade production is sold under the conditions of the label and Ghana where this ratio only reaches 15-20% (no data is published by UTZ and Rainforest for the country, but at global level it is 50-60%)⁴⁰².

400 ITC, UNCTAD, GATT and al., “The State of Sustainable Markets”, 2018.
 401 ITC, UNCTAD, GATT and al., “The State of Sustainable Markets”, 2018.
 402 ITC, UNCTAD, GATT and al., “The State of Sustainable Markets”, 2018.

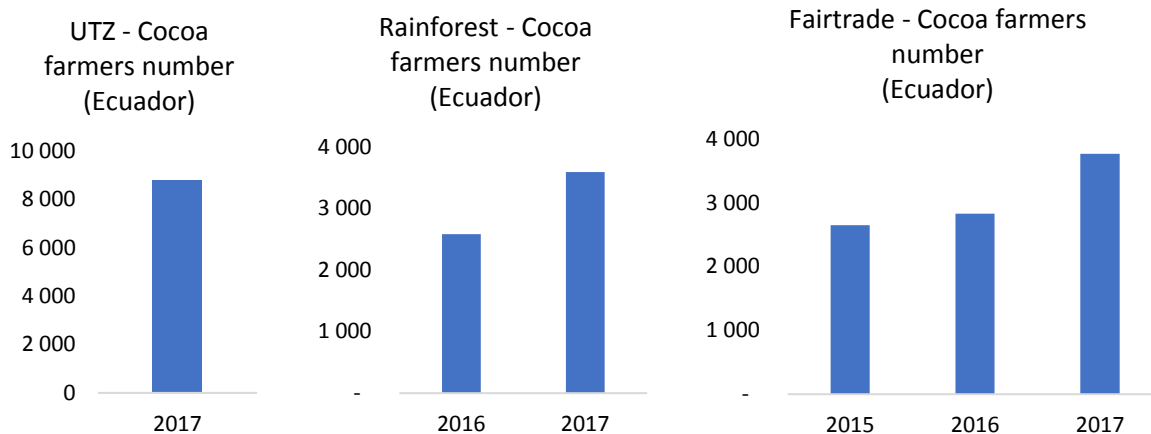


Figure 153. Estimated number of cocoa farmers by certification. Source: BASIC, based on ITC, UNCTAD, GATT and al

Finally, regarding the number of cocoa farmers being certified or member of a certified organisation, UTZ reaches almost 8,800 farmers, compared to 3,600 farmers for Rainforest and 3,700 for Rainforest⁴⁰³. This emphasises once again the differences between Fairtrade and the two other certification schemes, as the multiplication ratio is 2 with UTZZ and 1 with Rainforest (i.e. a ratio twice lower than for the production gap). This indicates that the **UTZ/Rainforest farmers are not only more productive in terms of yields, but also at least twice larger than Fairtrade-certified farmers.**

3.3.2.2. Key results/figures on value distribution from production to FOB

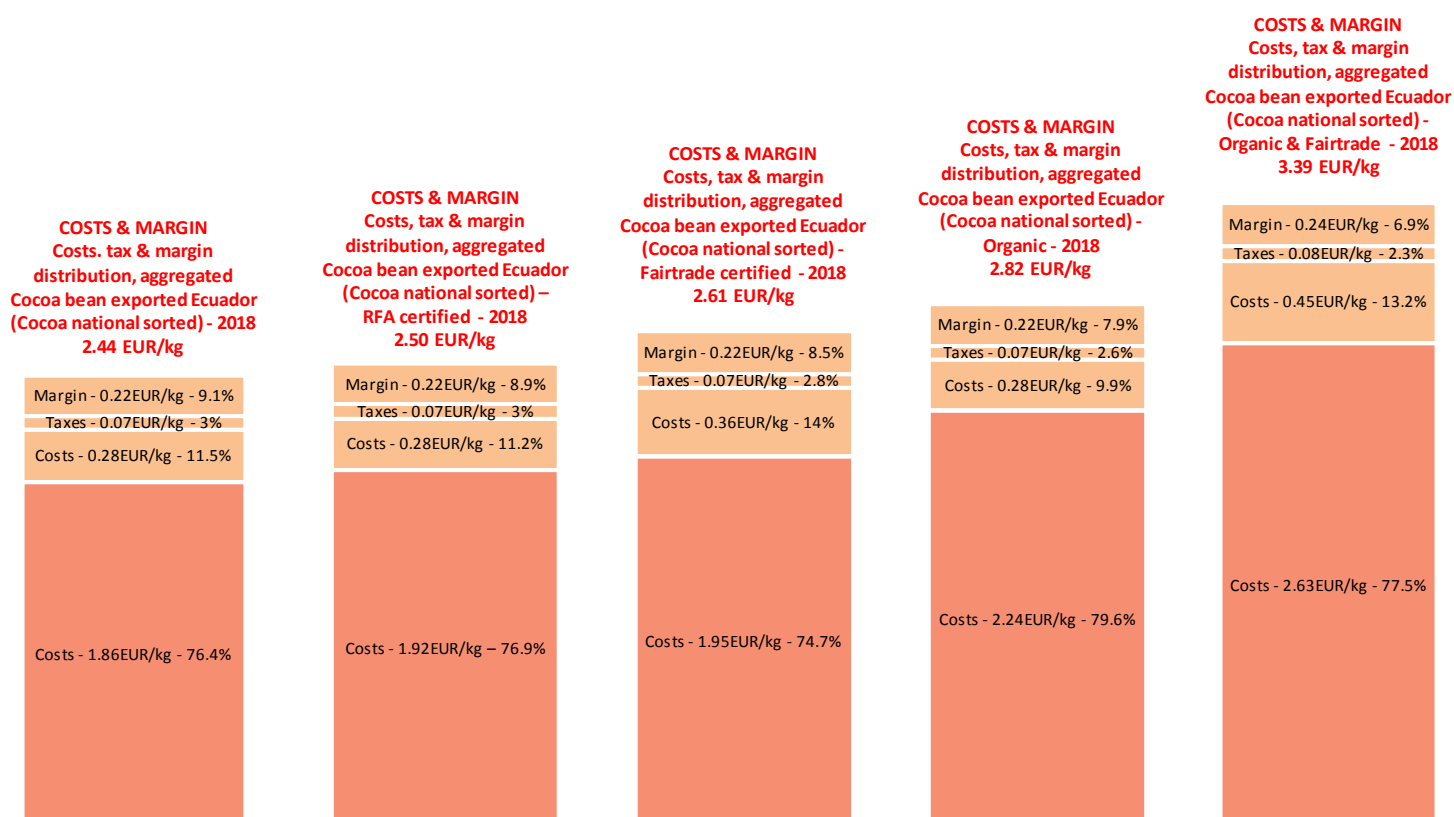


Figure 154. Distribution of value in Ecuador (from farmers to export) for certified value chains in 2018 (cocoa harvest 2017/18). Source: BASIC

403 ITC, UNCTAD, GATT and al., "The State of Sustainable Markets", 2018.

In this context, the results of our estimates highlight **4 different certified value chains**, which we have compared to the conventional 'qualitative cocoa' value chain already analysed in the previous section 3.3.1.4.

The two first types of value chains correspond to the **Rainforest/UTZ-certified producers** and the **Fairtrade-certified producers not combined with organic** certification.

These types appear to be variants/extensions of the conventional 'qualitative cocoa' value chain.

The associated farmers are most often (small) plantations (only for Rainforest/UTZ) or organised farmers in groups (for the 3 certifications) who have specialised in the more qualitative Fine & Flavour Cocoa production.

Based on the interviews we have conducted and the available literature, it seems that these producers have (much) greater yields than the average Ecuadorian cocoa farmer, and larger farms (especially for Rainforest/UTZ). As a result, **these farmers are above average in terms of resources, in most cases prior to their entry in the certification systems analysed.**

A significant part of the farmers previously benefited from support of private companies which were looking for a more qualitative sourcing in the country. In many cases, these companies have encouraged the farmers to get certified and supported the entry process. Their main aim was to promote the adoption of good agricultural practices and the respect of social standards among the more well-off farmers they worked with.

As these farmers achieve an above-average income (thanks to their higher yields and larger cocoa cultivated area), **the main benefit they get** from the 2 certifications Rainforest/UTZ and Fairtrade **is the premium they receive.**

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 2018⁴⁰⁴) which is paid by the buyer to the cooperative, over which the latest monitoring and evaluation data published by Fairtrade⁴⁰⁵ 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 itself⁴⁰⁶.

As a result, as reflected in our estimates, **the final price received by farmers is mildly higher for the 2 certifications when compared to conventional**: 1.92 euros/kg for Rainforest/UTZ and 1.95 euros/kg for Fairtrade in comparison with 1.86 euros/kg in conventional (i.e. +3% to 4%).

⁴⁰⁴ <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

⁴⁰⁵ Fairtrade International, Cocoa Monitoring Report, 2017

⁴⁰⁶ Fairtrade International, Cocoa Monitoring Report, 2017

Regarding Fairtrade, it is worth noting that the minimum price was not effective in recent years due to higher prices on world cocoa markets (it has been substantially increased from 2.0 USD/kg to 2.4 USD/kg in 2019, as well as the Premium from 0.20 USD/kg to 0.24 USD/kg).

The 3rd (organic-certified) and 4th (Fairtrade and organic-certified) type of value chains are quite different in nature.

According to our interviews and the available literature, they **correspond to farmers more independent from their buyers who are organised in cooperatives** which have been supported (by cooperation and NGOs), or had the resources, to **enter in the organic certification**. Indeed, even though a majority of Ecuadorian cocoa farmers are (very) close to organic practices, the certification process is lengthy and costly (notably to comply with traceability requirements).

An important proportion of these farmers were already Fairtrade certified, thereby benefiting from more secured and remunerative markets, as well as longer term partnerships with small(er) cocoa importers and brands in Europe. **This environment has enabled them to get sufficient resources to get organic-certified.**

The organic certification has been an asset, both in terms of higher prices for farmers (which is amplified in the case of the Fairtrade certification through the existence of an organic Premium) **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.

The combination with 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**. The Fair Trade premium, which is further amplified by an organic premium defined in the Fair Trade standards have brought the needed financial resources for cooperatives to invest in their capacity building as well as training for farmers (and an increased capacity to access credit and leverage on premium investment money).

This furthermore enables farmers to get a recognition for the value of their work down to the end consumers who are ready to pay a higher price for a differentiated “green and fair” chocolate from identified origins.

These impacts are reflected in our estimates that show a **higher price for farmers when compared to conventional:**

- 2.24 euros/kg for organic in comparison with 1.86 euros/kg in conventional (i.e. + 20%).
- 2.63 euros/kg for Fairtrade & organic in comparison with 1.86 euros/kg in conventional (i.e. + 41%).



3.3.3. Main learnings on the case study of Ecuador

Ecuador was in 2016 the 4th world cocoa producing country with over 260,000 tonnes produced this year, around 5% of the global production. 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.

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.

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, Blommer, Walter Matter, ED&F Man, and Daarnhouwer).

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
- on the other hand, **specific cocoa varieties** which are either linked to Fine and Flavour Cocoa or **higher productivity CCN51**, and which are both more profitable than standard unsorted cocoa: sorted fine and flavour varieties are associated with +15% farmgate price while industrialised production of CCN51 generates an estimated net margin of +8-10%.

These are the results of **differentiation strategies developed by Ecuadorian producers and private actors which have required significant investments and capacity building.**

The fact that the **cocoa sector is liberalised leaves room for greater potential of differentiation of cocoa production, but is associated with a quite polarised producer base:**

- On the one hand, small to mid-size (industrialised) plantations and organised small-holder farmers benefiting from private and public support are the ones who produce the high(er) quality and high(er) yield varieties, achieving better income (and profits for plantations).
- 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.

In this context, the results of our estimates highlight 4 different certified value chains:

- The two first types correspond to the Rainforest/UTZ-certified and the Fairtrade-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 Fairtrade).
- 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 Fairtrade 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, specialization in Fine Flavour Cocoa and protection of their traditional agroforestry systems of cocoa production.

3.4. Cameroon

According to ICCO data, Cameroon is the 5th largest cocoa producing country (after Côte d'Ivoire, Ghana, Ecuador and Nigeria). It produced 241,000 tonnes of dry cocoa beans in 2018-19 (a stable production for the past 3 seasons).⁴⁰⁷

It is the main cash crop in the country. In 2009, cocoa represented 14% of the country's total export earnings.⁴⁰⁸

The production, processing and export of cocoa in Cameroon generate an added value (direct and indirect) of 202 billion FFC francs and contribute around 0.9% of Cameroon's GDP (a significant drop from the benchmark figure of a 2% contribution from this sector to GDP, mainly due to the low cocoa prices and the overall decrease in volumes produced and exported since 2016).⁴⁰⁹

3.4.1. Conventional cocoa

3.4.1.1. The Cameroun cocoa sector and its main characteristics

Brief introduction to the historical aspects of cocoa-chocolate sector within the country

Cocoa production was introduced to Cameroon around 1910 by the German colonial power in the Littoral region and spread east and north in the decades that followed. There was a significant increase in cocoa production and the areas devoted to it between 1910 and 1963, especially in the Littoral and Center-Sud provinces. In the 1950s and 1960s, cocoa farming was a very important income for many rural households.⁴¹⁰

The end of the colonial era and the start of independence were the periods when most farmers planted large cocoa plantations which are still active today but at the end of the cycle. During this golden age of Cameroonian cocoa farming enjoyed massive support and supervision from the State. **The National Office for the Marketing of Commodities (ONCPB) was set up to control all aspects of trade, marketing, quality control and price formation from production to export.** In order to maintain farm incomes and stabilise commodity prices, a number of domestic support measures have been adopted, including in the form of guaranteed minimum prices paid to farmers for their crops, subsidised fertilisers, and the provision of agricultural services. popularization.⁴¹¹

However, this model encountered limits from the mid-1960s: between 1963 and 1993, total cocoa production in Cameroon remained relatively stable, around 110,000 tonnes per year, but this stagnation came at the expense of an expansion of the area planted in the cocoa basin of South West

⁴⁰⁷ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴⁰⁸ Nlend Nkott Anny Lucrèce, Déterminants institutionnels et organisationnels du développement de la certification du cacao au Cameroun : cas du système de certification UTZ dans la région du Centre – 2017

⁴⁰⁹ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴¹⁰ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴¹¹ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

Cameroon which compensates for the drop in production experienced during this period in the old cocoa basin of the Centre-South.⁴¹²

The global economic crisis of the 1980s and the drop in commodity prices marked the start of significant sectoral reforms. **Structural adjustment measures were introduced in the early 1990s in Cameroon with:**

- **the dissolution of the ONCPB in 1991, offset by the creation of the National Cocoa and Coffee Office (ONCC)** and the creation of the Interprofessional Council of Cocoa and Coffee (CICC)
- the liberalisation and deregulation of marketing,
- the privatisation of quality control for export.

The removal of public support measures and the opening of the market has resulted in **unprecedented exposure of producers to world market price volatility and increased competition caused by the emergence of new, highly competitive exporters.**⁴¹³

However, after a long period of stagnation between 1963 and 1993, cocoa production in Cameroon was revived and **the volume sold doubled between 1993 and 2013**. This production exceeds 200,000 tonnes from the 2009 crop year. The increase in production does not go hand in hand with an improvement in the quality of the beans sold. Maintenance and improvement of product quality are limited by a large number of factors: the lack of financial means available to small producers, the scarcity of agronomic and technical skills, the lack of knowledge of standards and regulations, the aging of the plantations, the low availability of plant material, and the lack of confidence between producers and between producers and their respective professional organisations.⁴¹⁴

Even liberalised, the cocoa sector is the subject to the attention of public authorities.

A first recovery plan was drawn up in 2002 which allowed the sector to be strengthened and which resulted in a moderate but constant increase in production, supported in this by a significant rise in cocoa prices from 2006. At the end of the 2000s, the cocoa and coffee sectors in Cameroon represented around 3% of national GDP and 15% of the GDP of the primary sector. The Strategy Document for Growth and Jobs in 2009 placed the productive sector at the heart of government concerns and encouraged in 2014 to draw up a new Recovery and Development Plan for the Cocoa and Coffee sectors in Cameroon by 2020.

These initiatives, however, face the reversal of the international cocoa price from 2017 and the political unrest in the Southwest region, which was then the main production area.⁴¹⁵

The deregulation of the sector for twenty-five years, the significant competition from other producing countries on the international market, the regional specificities of cocoa production and the importance of cocoa trees in the imagination of many Cameroonians as in agricultural areas are the main factors explaining the current state of the sector in Cameroon.⁴¹⁶

⁴¹² VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴¹³ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴¹⁴ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴¹⁵ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴¹⁶ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

Key facts on Cameroun cocoa production

Cocoa cultivation in Cameroon brings together more than 50% of the agricultural population and covers between 400,000 and 600,000 hectares.⁴¹⁷

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.**⁴¹⁸

Cocoa production in Cameroon experienced a growing trend until 2016 but was affected by the fall in international prices and unrest in the Southwest region. Since then, the production has stagnated at around 250,000 tonnes of dry beans per year.

The yields are between 350 and 450 kg / ha. In general terms, Cameroon's cocoa farming essentially uses the Trinitario variety (hybrid of Forastero and Criollo)⁴¹⁹.

In 2018, 86% of cocoa production in Cameroon is provided by small producers (less than 3 hectares per household), the majority (84%) cultivate cocoa under shade. Depending on the support and the cultivation techniques, three subcategories of small producers can be identified, as well as a category of medium producers (approximately 12 hectares per household) and large producers (approximately 25 hectares per household, a model that apparently does not manage to reach its breakeven point)⁴²⁰.

| Caractéristiques | Petits planteurs | | | 4-Moyens planteurs | 5-Grands planteurs | TOTAL | Données officielles (MINADER, ONCC) |
|--|------------------|--------------|--------------|--------------------|--------------------|--------------------|-------------------------------------|
| | sous ombrage | | plein soleil | | | | |
| | 1-sans appui | 2-avec appui | 3-avec appui | | | | |
| Surface moyenne (ha/foyer) | 1,5 | 2,5 | 3,0 | 12,0 | 25,0 | | |
| Rendement en fèves sèches (kg/ha/an) | 280 | 600 | 500 | 700 | 150 | | |
| Nombre de foyers | 200 000 | 45 000 | 45 000 | 3 000 | 300 | 293 300 | 300-500 000 |
| Total de la surface en production (ha) | 300 000 | 112 500 | 135 000 | 36 000 | 7 500 | 591 000 | 600 000 |
| Total de la production de fèves (t/an) | 84 000 000 | 67 500 000 | 67 500 000 | 25 200 000 | 1 125 000 | 245 325 000 | 241 029 519 |

Figure 155 : Typologies of cocoa farmers in Cameroon.

Source : VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun

Most of the work carried out within the cocoa sector is in the informal economy and concerns three categories of workers.

First, **there are about 293,000 producers who directly live from the cultivation and sale of cocoa beans.** Their profit constitutes the main income for the family/household. **These producers do not depend solely on their own labour force** to carry out cocoa activity and also use two types of workers:

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

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

419 IDH, WWF, Programme territoire cacao vert au Cameroun – 2019

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

- On the one hand, they pay local workers for all or part of the cultivation work, and this cost exceeds 51 billion FFC francs nationwide. With a rural salary of 2,500 FFC francs per working day and 280 working days per year, this sum represents the equivalent of 73,000 full-time jobs in rural areas.
- On the other hand, a significant part of cocoa production activities is also carried out by members, friends and relatives of the household. This work represents an economic cost of around 20.5 billion FCFA per year. This domestic work amounts to 29,200 full-time equivalent jobs.⁴²¹

Internal marketing

The lesser presence of the State in rural areas has greatly contributed to the complexification of internal cocoa chains. This is reflected in the now minor role of the 13 cooperatives in the sale of cocoa and the proliferation of private commercial intermediaries, generating strong competition for the purchase of beans from primary producers. **This competition mainly focuses on payment times to producers and does not lead to increases in the purchase price of cocoa in rural areas.**⁴²²

Since the 2010s, the average price offered to producers corresponds to roughly 66% of the FOB price. However, this ratio appears to have deteriorated in recent years.

In parallel, there is also a **strong desire on the part of companies to increase export volumes, which partly prevents a too strong downward pressure on the prices** offered to producers but does not militate to improve the quality of the product as **quantity remains the preferred criterion.**

At the export stage, 4 multinationals play a growing role in the direct and indirect purchase of cocoa beans, which has not prevented national firms from continuing their activities in more specific niches.

Trading of cocoa beans for exports

The product of the cocoa value chain for export amounted to 273 billion FCFA in 2018.⁴²³

Cameroonian cocoa has a discount of 200 FCFA / kg on the world market, due to its poorer-quality reputation (high humidity, smoky smell...)⁴²⁴

About 90% of the cocoa is exported to Europe, particularly the Netherlands.

The final destination of cocoa production in Cameroon can be divided into the following 4 categories⁴²⁵ :

- 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;

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

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

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

424 Investir au Cameroun, Le Cameroun, l'autre pays du cacao – 2018

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

- 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).

There is an export tax levied by the Government, which in particular finances the recovery plan for the cocoa and coffee sectors (which has not had much effect since its launch in 2014-15).

In total, tax revenue produced directly and indirectly by the cocoa sector is estimated at CFAF 25.1 billion per year. Beyond specific cocoa taxation, general taxation also applies to the cocoa sectors. This general taxation has been very high in recent years because VAT is no longer reimbursed to formal businesses and where turnover tax has replaced profit tax.⁴²⁶

In this context, the decision was taken by the Government in 2018 to decrease the cocoa tax from 150 to 75 FCFA/kg in order to encourage actors in the sector to continue their activity and not to lower the prices paid to producers.⁴²⁷

In addition, a significant proportion of small producers receive technical and financial support from private companies, notably through the certification processes (UTZ-Rainforest or the cocoa sustainable plans developed by cocoa companies).

Grinding activities in Cameroon

Cocoa processing in Cameroon has increased from 33,023 tonnes of beans in 2016-17 to 53,403 tonnes in 2017-18 and is projected to reach 130,000/150,000 tonnes per year within the coming three years.⁴²⁸

10,000 families are apparently involved in the cocoa processing sector in Cameroon.⁴²⁹

The major obstacles to the development of local processing are in terms of equipment, training, expertise and packaging techniques.

3.4.1.2. Structure of the cocoa-chocolate value chain in Cameroon

Cocoa farmers in Cameroon almost always 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.⁴³⁰

⁴²⁶ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴²⁷ Investir au Cameroun, Le Cameroun, l'autre pays du cacao – 2018

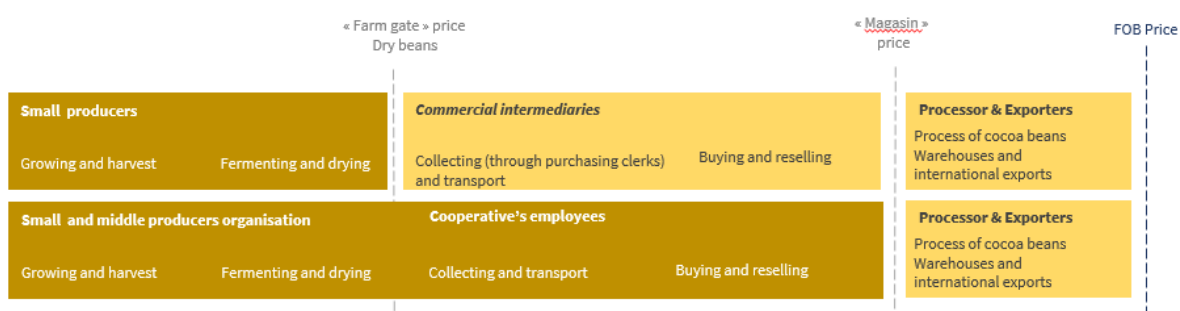
⁴²⁸ allAfrica, Cameroun : transformation du cacao – l'activité s'enracine – 2018

⁴²⁹ Investir au Cameroun, Le Cameroun, l'autre pays du cacao – 2018

⁴³⁰ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020



Supply chain organisation – Export of cocoa beans – High quality beans (high crop beans) : 77% of cocoa production



Supply chain organisation – Export of processed cocoa products : 23% of cocoa production

Companies with international capital dominate the buying, exporting, and processing of beans. However, Cameroonian players are still present and have specialised in specific niches and in particular undemanding markets.⁴³¹

3.4.1.3. Economic strategies and business models of the main actors in the Cameroonian cocoa sector

Cocoa producers' economic strategy

The majority of farmers associate cocoa trees with fruit trees or forest species interesting for their wood or their medicinal properties (as in Ghana).

As a result, cocoa family farmers are able to maintain an adequate supply of basic products:

- on the one hand, through the association of cocoa trees in complex agroforestry forms with fruit trees (avocado, plantain and fruit bananas mango, palm, safoutier, colatier...) achieving a density of 50 to 100 food trees/ha of cocoa
- on the other hand, through the ability of farmers to maintain agricultural plots of cassava, macabo, yams, etc..⁴³²

⁴³¹ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴³² VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

Role played by the State

Cameroon has opted for a state disengagement from the cocoa sector.

While State support was massive until the 1980s, it was replaced by a series of public organisations that have parafiscal 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.⁴³³

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.⁴³⁴

In the 2000s, following an increase in cocoa prices, **the Cameroonian government has decided to increase cocoa production by improving productivity in order to stimulate exports and the inflow of foreign exchange.** In 2006, it embarked on a program to “modernise” cocoa farms, with the following components:

- (1) raising farmers' awareness of the need to reinvest in cocoa growing,
- (2) funding research for to produce varieties of cocoa more resistant to diseases,
- (3) the multiplication of improved varieties and their distribution to farmers at subsidised prices
- (4) the organisation of farmers in cooperatives.⁴³⁵

More recently, the cocoa production has been affected by the drop in international prices and unrest in the Southwest region.⁴³⁶

⁴³³ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴³⁴ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

⁴³⁵ Nlend Nkott Anny Lucrèce, Déterminants institutionnels et organisationnels du développement de la certification du cacao au Cameroun : cas du système de certification UTZ dans la région du Centre – 2017

⁴³⁶ VCA4D, Analyse de la chaîne de valeur du cacao au Cameroun - 2020

3.4.1.4. Key results/figures on value distribution from production to FOB

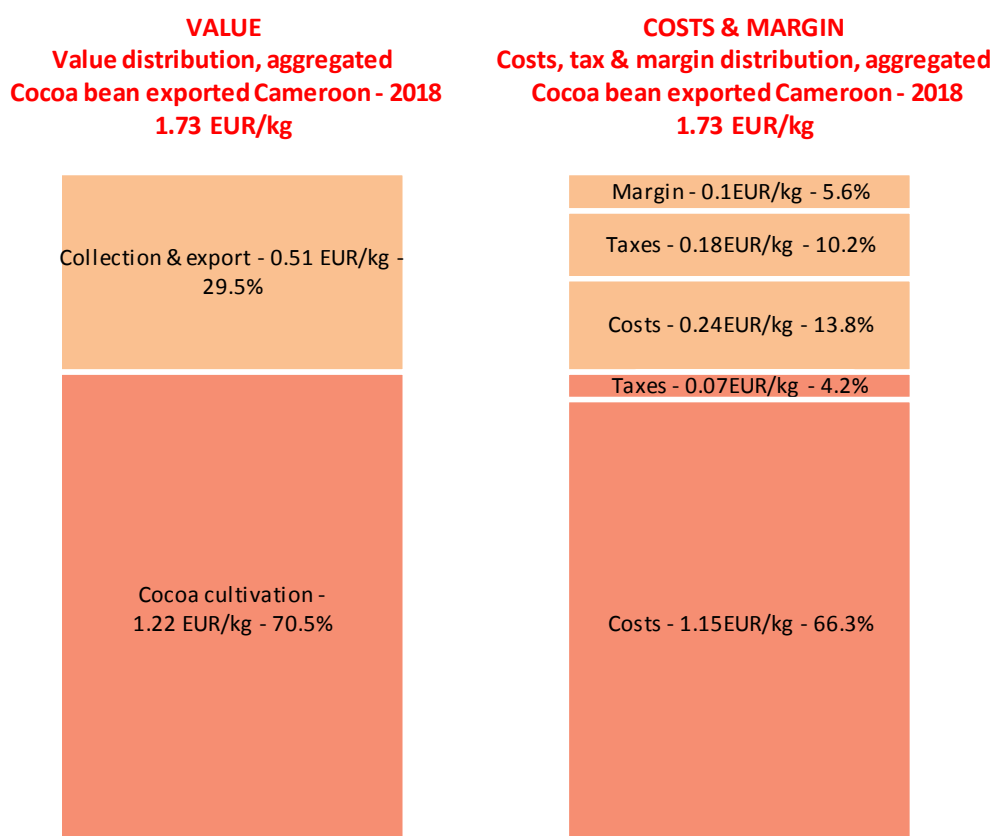


Figure 156. Distribution of value, costs & margins in Cameroon (from farmers to export) in 2018 (cocoa harvest 2017/18).
Source: BASIC

We have firstly assumed that the share of value associated with cocoa cultivation in 2018 was in line with 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 Commission⁴³⁷).

As described in the analysis of the context, the **level of taxation is quite high**, 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**⁴³⁸ (the second highest among the 4 countries analysed).

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

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

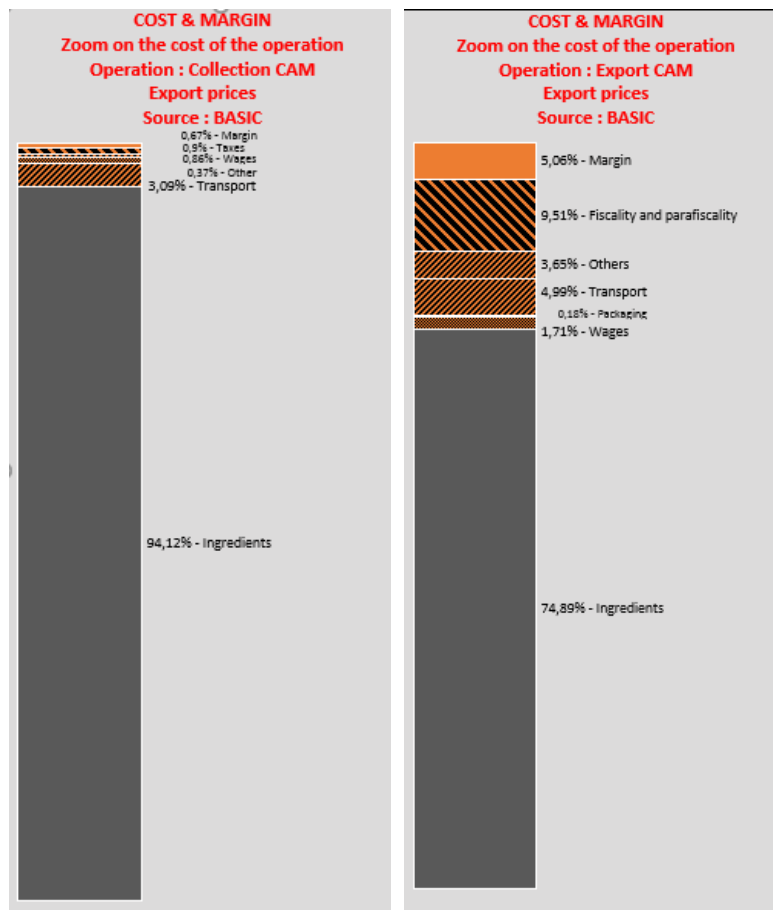


Figure 157. Distribution of costs & margins of collection, transport, warehousing and exports in Cameroon in 2018 (cocoa harvest 2017/18). Source: BASIC

Downstream in the chain, our analysis of the cost breakdown shows the following key elements:

- The **collection and transport stage operates at very low margins** of approximately 0.67%, probably linked to the presence of cooperatives and the recent proliferation of small independent local intermediaries. Transport costs is the second biggest expense after the procurement of dry cocoa beans.
- The **export stage is the one who bears the essential part of fiscality and para-fiscality** (9.51% of its turnover), **but nonetheless manages to generate a limited margin of 5% which is quite comparable to the other West African producer countries analysed**. Transport is at this stage too an important cost factor, right after the fiscality.

3.4.2. Certified cocoa

The analysis of certified cocoa was not included in the Terms of References of the current study. A supplementary research work in this area might be interesting due to the recently increasing importance of certified schemes in the Cameroonian cocoa sector.



3.4.3. Main learnings on the case study of Cameroon

Cameroon is the 5th largest cocoa producing country (after Côte d'Ivoire, Ghana, Ecuador and Nigeria). It produced 241,000 tonnes of dry cocoa beans in 2018-19 (a stable production for the past 3 seasons). 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.

In 2018-19, 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.

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.

Cameroon has opted for a state disengagement from the cocoa sector. While State support was massive until the 1980s, it was replaced by a series of public organisations that have parafiscal and budgetary revenue to carry out certain public service missions or lead projects for more ad hoc interventions.

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.

Since the 2010s, the average price offered to producers corresponds to roughly 66% of the FOB price. However, this ratio appears to have deteriorated in recent years and most recently, the cocoa production has been affected by the drop in international prices and unrest in the Southwest region.

As in the case of Ecuador, **the fact that the cocoa sector is totally liberalized in Cameroon seems to be associated with a certain level of polarization between certified and non-certified cocoa farmers** (but not to the same extent).

The analysis of certified cocoa was not included in the Terms of References of the current study. A supplementary research work in this area might be interesting due to the recently increasing importance of certified schemes in the Cameroonian cocoa sector.

4. Chapter 4: Comparison with other non-cocoa products

In order to put the above described results in a wider context, we have compared the results obtained for cocoa farmers' share of value and income in Côte d'Ivoire, Ecuador, Ghana and Cameroon, with equivalent estimates for other food products.

4.1. Comparison between chocolate and other mass-consumed food products produced & sold in France

In order to make meaningful results, the chosen benchmarks are other mass-consumed food products sold in French supermarkets which are substantially processed by major industry actors and branded (as it is the case for chocolate products), and for which value breakdown estimates are already calculated each year by the "French Observatory on Prices and Margins of Food Products".

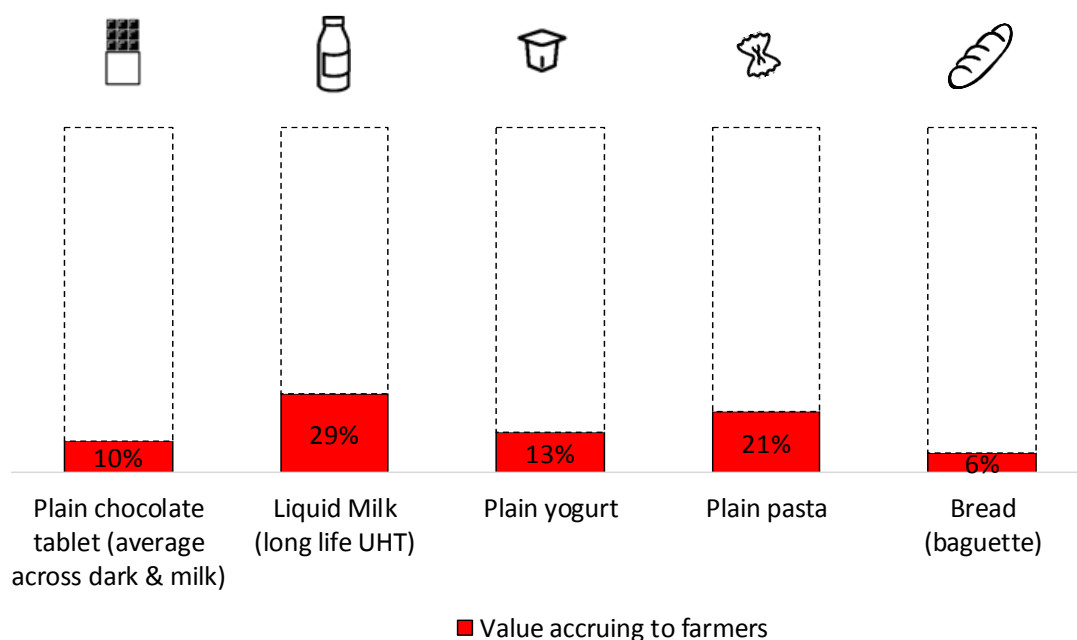


Figure 158. Comparison of price received by farmers across 5 different food products sold in French retailers. Source: BASIC

As illustrated above, we have thus compared the results obtained for cocoa farmers (calculating averages among dark & milk chocolate tablets) with :

- the income of dairy farmers in France (in comparison with average national income) and their share of the value of mass-consumed liquid milk sold in France
- the income of dairy farmers in France (in comparison with average national income) and their share of the value of mass-consumed yogurt sold in France
- the income of durum wheat farmers in France (in comparison with average national income) and their share of the value of mass-consumed pasta sold in France

4.2. Comparison between the cocoa/chocolate value chain and the coffee value chain

Given the (high) differences between these different products in terms of number of stages of processing in the chain and the conversion ratio between the primary product and the finished good, we have decided to compare cocoa with another commodity cultivated in the tropical countries which is incorporated in mass-consumed products sold in French supermarkets.

Arabica coffee was selected, given the number of similarities with cocoa, both in terms of:

- key characteristics (geographical scope, predominance of small-holder farmers, parallel history in many countries, similarity of regulation systems at the national as well as international levels...
- issues (low income of farmers below poverty line, deforestation, child labour...)

Based on the study we have conducted on the coffee sector in 2018⁴³⁹, we have drawn comparisons with the present cocoa research.

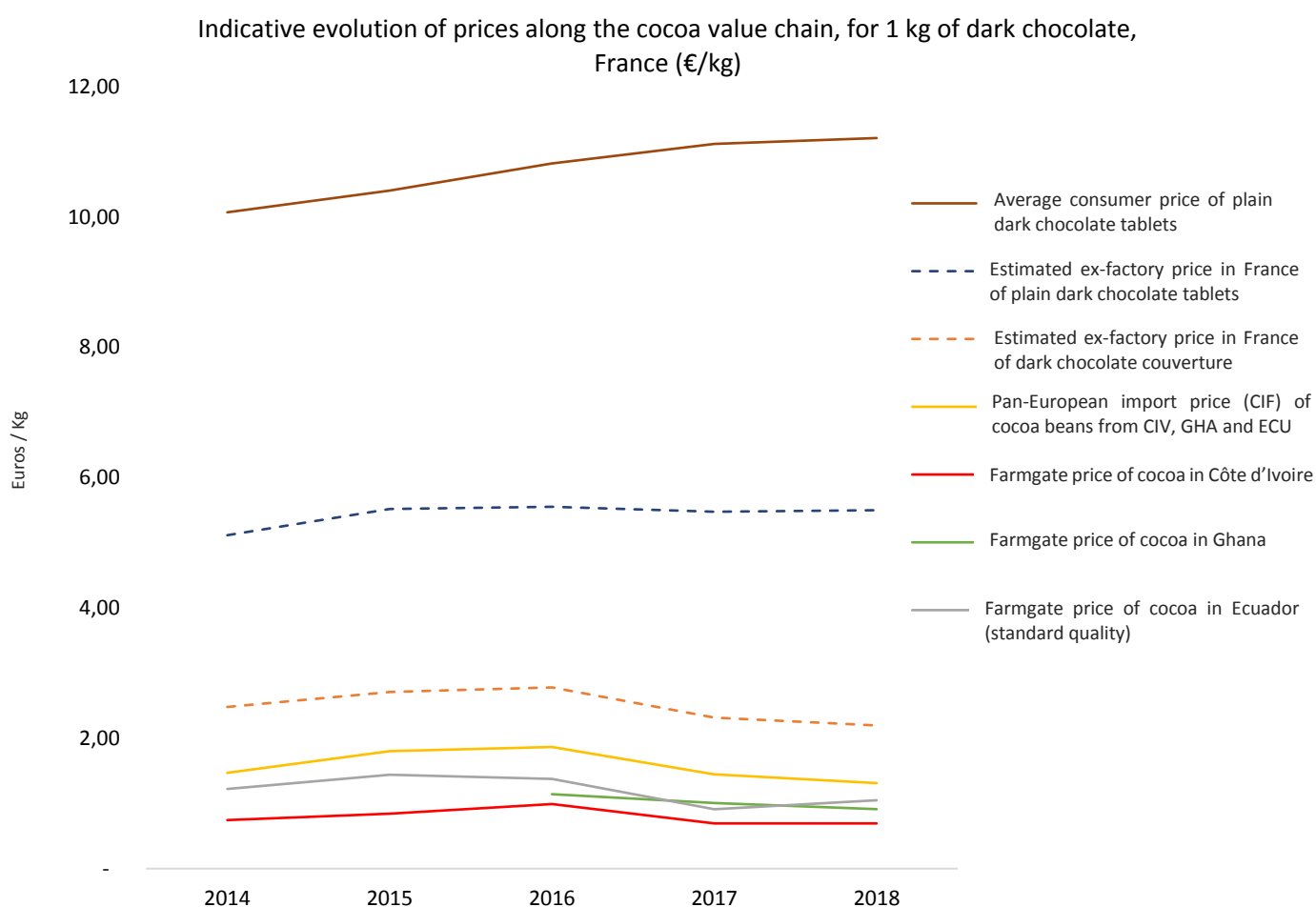


Figure 159. Main results of value chain studies on cocoa – evolution of prices along the chain since 2014. Source: BASIC

439 BASIC, Coffee: Behind the Success Story, 2018

Evolution of arabica coffee consumer prices in French retailers and farmgate prices for the 3 producer countries analysed - Euros/kg (green coffee equivalent)

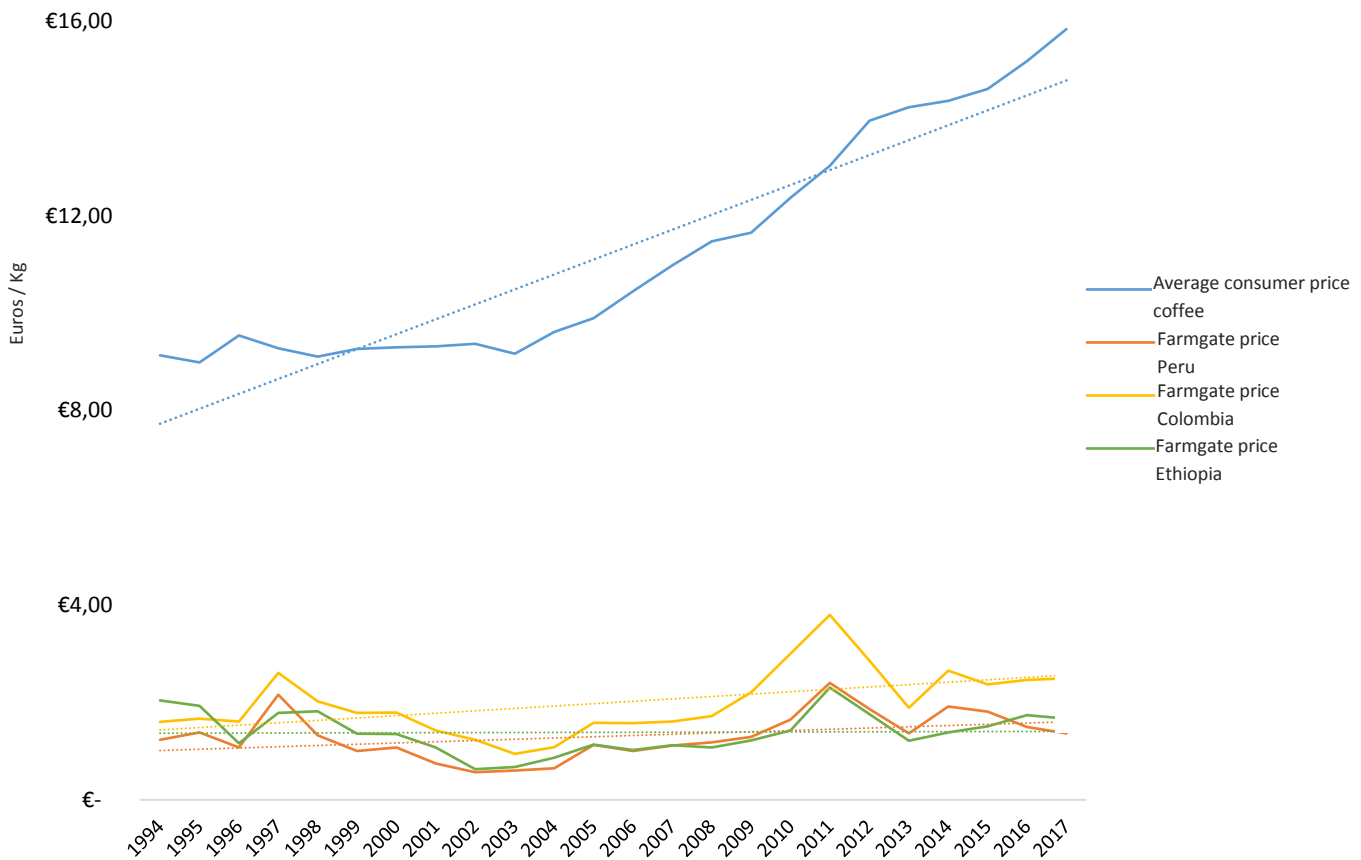


Figure 160. Main results of value chain studies on coffee – evolution of prices along the chain since 1994. Source: BASIC

Although the producer countries analysed are different for the two studies, they represented the main origins of the raw material in both cases, and significant commonalities can be identified between the regulation systems adopted:

- **Ghana for cocoa and Colombia for arabica coffee** have in common a strong regulation system with public operators of the chain and a long-lasting strategy on quality,
- **Côte d’Ivoire for cocoa and Ethiopia for arabica coffee** have in common a hybrid regulation mechanism whereby all activities in the chain are undertaken by private companies which are regulated through a system of auctions and minimum price,
- **Ecuador for cocoa and Peru for arabica coffee** are totally liberalised countries with very little involvement of the State in the sector.

A significant number of common learnings can be drawn out of the two studies:

In both cases, **the large majority of the total value** (from farmers to end consumers) **accrues to the 2 last actors in the chain, retailers and brands: 70% in the case of cocoa and 80% in the case of arabica coffee.** This can be largely explained for cocoa as for arabica coffee **by the growing importance of the intangible dimension of the end products** which is now predominant over the intrinsic quality of the product, and more importantly over the origin/terroir and the specific work of farmers which are rarely valued.

On the other side of the chain, **farmers only receive 10% of the total value**, both for arabica coffee and cocoa (although coffee is a lot less processed than cocoa), **and the large majority of them are below the poverty line in all the countries analysed**, with very little capacity to differentiate their products and get value for it.

In terms of evolution, **the gap between the two sides of the chain (agricultural production Vs final product manufacturing & retail) has widened further in recent years**, with an increase of consumer prices on one side that contrasts with a decrease of the world market price for the raw material – and hence the farmgate prices – on the other. **This trend has been much more pronounced for arabica coffee than for cocoa**, thanks to the boom of coffee pods over the past ten years. **In both cases, this evolution seem to have mainly benefited to brands and retailers.**

In this context, even the more regulated systems had great difficulties to buffer the consequences of these evolutions for small holder farmers.

Beyond public regulation systems, **certifications (organic, fair trade, UTZ/Rainforest) have also tried to address the social and environmental challenges faced by both sectors, apparently with mixed results.**

The biggest impacts in terms of benefits for farmers are observed when Fair Trade and organic are combined, and in cases of greater partnership between actors along the chain and greater value for all thanks to the promotion of terroirs and product specificities which are valued by consumers. However, **even in these situations, the overall value distribution from raw material to end consumption is not profoundly changed.**

Apart from these commonalities, key specificities arise from the comparison

They firstly stem from the **higher complexity of the cocoa/chocolate chain** which is associated with **greater industrialisation at the processing stage with large economies of scale** (since the mid-20th century) **which have enabled to largely democratise the consumption of chocolate** around the world thanks to achieving a relatively low price level at the consumer end (chocolate is often describe as the ‘only luxury’ that almost anyone can afford).

In this context, **the barrier to entry for new business actors is much higher in the cocoa sector, which hampers the possibility to have newcomers** that bring forward new models of value chains. This can explain why the **‘bean to bar’ sector** only emerged lately in chocolate and develop at a much lower pace than in arabica coffee (notably because of the lack of low-scale processing infrastructure to make chocolate, the related high investment costs, and the consequently (too) high price differential of the final product for consumers when compared to what is possible in coffee).

In addition, at the producer level, there appears to be a **higher potential to differentiate between varieties and terroirs in the arabica coffee chain than in the cocoa one**, not only technically but also because of simpler and less costly processes/changes in coffee, and notably because of a longer tradition of differentiation in most arabica coffee producer countries as well as consuming countries which is exemplified by the worldwide success of the Colombian Coffee origin.

However, this is much less true of robusta coffee which appears to have the same difficulties as cocoa to achieve differentiation on the market (even higher ones to some extent), due to its perceived poorer flavour and subsequent lack of incentive for quality differentiation in producer countries.

In the chocolate sector, although there is a much bigger 'Premium' market than for robusta coffee, **this potential for differentiation is greatly hampered by fact that consumers mostly value the percentage of cocoa** as a sign of quality for plain dark chocolate tablets (and more recently even for plain milk chocolate tablets), regardless of the origin and the specific work of cocoa farmers at origin. As a result, **there is very little incentive for cocoa producing countries to develop product differentiation strategies, and the sector is somehow locked up.**

Last but not least, there is a large and widening gap of value creation at the end of the chain between chocolate on one side, and arabica coffee on the other.

In the arabica coffee sector, the development of a new consumption format (coffee pods) combined with the valuation of pure origin coffee and the creation of dedicated high-quality distribution channels have **enabled certain actors to generate a very substantial increase of the price to consumers, with a higher capacity to better redistribute it along the whole value chain (although in the majority of cases, little of the additional value created trickles down to producers).**

An equivalent trend is yet to be seen in the chocolate sector.

5. Chapter 5: Transversal analysis & recommendations

5.1. Transversal analysis

The first main result of our research on conventional products is the **asymmetry of value creation along the cocoa/chocolate chains analysed**: plain dark and milk chocolate tablets as well as confectionery bars and breakfast cocoa powder which are sold in French supermarkets' stores and made of a mix of cocoa, conventional and certified, grown in Côte d'Ivoire, Ghana, Ecuador and Cameroon (as illustrated above)

In the case of plain dark chocolate tablets, 70% of the total value and 90% of the total margins from cocoa farmers to end consumers are associated on average with the two last actors in the chain, brands and retailers. Upstream, only 18.6% of the total value and less than 7.5% of the total margin are generated by actors in cocoa producing countries (from cocoa cultivation up to bean exports), and cocoa farmers only receive on average 11% of the final price.

The results are similar for plain milk chocolate tablets and confectionery bars. The only major differences are the higher level of Value Added Tax applied in France (20% instead of 5.5% for plain dark chocolate) and higher value of other ingredients (milk being as expensive as cocoa), which create a stronger pressure/squeeze of all stages of the chain, as plain milk chocolate tablets and confectionery bars are sold to French consumers at a slightly lower price per kilo than dark tablets..

These results seem to be mostly explained by the combination of three key elements:

- firstly, the main leverages **for value creation in the cocoa/chocolate chain appear to be the intangible assets developed by brands, and to a lesser extend retailers. They enable these two actors to achieve higher selling prices** to final consumers, thanks to heavy investments in advertisement and R&D that strengthen their brand and product reputation, which is in the end what consumers seem to value more than the intrinsic features of the chocolate they eat.
- secondly, the capacity of upstream cocoa processors and chocolate manufacturers to **offer a wide variety of qualities of semi-processed products while keeping low costs per kg, thanks to their large industrial capacity and high economies of scale, which have enabled to democratise quite largely the world consumption of chocolate over the past decades.**
- the **consumers**, because of the marketing and advertisement made by major brands, **consider that the percentage of cocoa is what matters most and defines the quality of chocolate tablets sold by retailers** (especially in the premium segment) **and not the terroir or the work of farmers.**

Consequently, **there is very little incentive for cocoa producing countries to develop product differentiation strategies.**

Our research also shows that **this situation is quite inertial**:

- **while downstream factors** (type of brand, market segmentation and sales performance) can **generate important changes on the price to consumers and on the distribution of value and margins between the two last stages** of the chain (brands and retailers),
- the **value and costs associated with all other upstream stages** (from cocoa cultivation to chocolate couverture manufacturing) **are much less changeable** in most cases, except when the world cocoa market price is unstable, **and the upstream factors** (cocoa content, pure origin, quality, processing in producer countries...) **have very limited impact, if any**, on the distribution of value and costs.

At the level of cocoa farmers, the main differences in value & costs distribution stem from 2 main factors: the world price of cocoa and the type of regulation and State's involvement in the sector.

The case studies of Côte d'Ivoire and Ghana show that stronger regulation systems enable more stable prices for producers (especially in times of negative price shocks) and are associated with a quite homogeneous cocoa producing base, but are also associated with a relatively lower part of the export value of cocoa accruing to farmers.

In contrast, the case study of Ecuador is the example of a liberalised system characterised by:

- **a polarised production between on the one hand, specific cocoa varieties** that are either linked to **higher quality of aroma** (Fine and Flavour Cocoa) or **higher productivity** (CCN51) that both require important work and costs, and **on the other hand, a standard to lower quality cocoa and unsorted varieties** which represent the majority of volumes.
- **a polarised producer base linked to these two categories: on the one hand, small to mid-size (industrialised) plantations and organised small-holder farmers** benefiting from public and private support, which produce the high(er) quality and high(er) yield varieties, and manage to make their living out of it, **and on the other, non-organised small-holder farmers who produce the bulk of cocoa volumes, do not make ends meet** and remain largely below the poverty line.

Cameroon, the other liberalised country analysed, also shows some signs that such polarisation processes are taking place, but to a lesser extent.

To improve the situation of cocoa farmers, certification systems have emerged over the past decades, with mixed results:

- while **the organic certification, especially in combination with fair trade, is associated with a higher valuation of the work of farmers and of the terroir of cocoa**, which is transmitted along the chain down to end consumers who increasingly signal that **they are willing to pay a higher price for a differentiated "green and fair" chocolate from identified origins**,
- the UTZ/Rainforest certification, and the Fairtrade certification when it is not combined with organic, appear to **serve mainly as "licences to operate" in the eyes of many brands and retailers willing to demonstrate their conformity with social and environmental criteria** while ensuring productivity (for UTZ/Rainforest), **but with great difficulty to value these commitments and additional costs towards consumers.**

And in all cases, even in the case of organic when combined with fair trade, **the overall value distribution from raw material to end consumption is not profoundly changed, although significant improvements can be observed at the level of cocoa farmers in the case of organic certification especially when combined with fair trade**, but only a minority of cocoa farmers are able to enter the demanding certification systems.

Where significant changes of value and costs distribution are identified, they are linked to cases of **greater partnership between actors along the chain** and greater value for all, thanks to the promotion of terroirs and product specificities towards consumers.

In this context, Côte d'Ivoire and Ghana have decided to bring a more systemic and radical change by establishing a concerted "living income differential" (LID) of 400 USD per tonne for the 2020/21 season, with the objective of improving the livelihood of their cocoa farmers.

In order to investigate the consequences of this decision on the sector in France, we have used the calculation tool we have developed on cocoa/chocolate value chains in order to **build simulations of the potential price transmission of the LID on the different actors of the cocoa-chocolate value chain** (consumers, retailers, brands, manufacturers, processors, traders, transporters...) for the French market of plain dark and milk chocolate tablets.

Our modelling shows that the cost transmission of the LID introduced at origin by Côte d'Ivoire and Ghana could result in a consumer price increase of +1.5% for milk chocolate tablets and +2.0% for dark chocolate tablets (under the assumption that the value distribution model from cocoa farmers to end consumers remain the same and that the differential is directly transmitted but not amplified).

These economic issues and their implications would need to be discussed more in-depth through an inclusive process among all stakeholders of the cocoa sector (public authorities, farmers, processors, brands, retailers, consumers and NGOs) **that would be based on informed/objectified data.**

This would also need taking into account that the capacity to adapt differs among business actors and product categories.

Retailers have a transversal an important role to play, but their business model is more and more questioned and chocolate and confectionery products have become one of their few sources of profitability, hence changes to the value distribution within cocoa chains would probably impact their wider business model.

With regards to the other actors in the chain between farmers and retailers, our analysis tend to show that **there is a need to take into account the two very distinct business models that exist and which have potentially contradicting orientations:**

- low(er) volumes/high margins (for certain international brands, smaller national brands but also smaller processors and quality-specialized farmers)
- high volume/low margins (transporters, traders, processors, main international brands and private label manufacturers).

Finally, regarding public authorities, our estimates tend to show that there is a need for significant public investments in essential services (roads, education, health...) to ensure sustainable living conditions in cocoa producing regions, acknowledging that taxes leveraged on cocoa in the countries analysed are not enough to cover the related investment requirements.

Looking at product categories, although the value distribution appears more constrained in the cases of plain milk chocolate tablets and confectionery bars, the lower content of cocoa used for their manufacturing reduced the potential impact of the LID in terms of additional costs to be transmitted in the chain. As a result, **our analysis does not show significant barriers to change for any of the product categories analysed.**

5.2. Recommendations

- 5.2.1. For International organisations in partnership with stakeholders of the sector: proposal of creation of a permanent ‘observatory’ on prices and costs in cocoa

The current study, and more notably the modelling of cocoa/chocolate value chains that has been elaborated, could be expanded to include more consumer countries and final products. On this enlarged basis, it could serve as a proof of concept for developing a simple and user-friendly information tool (“observatory”) which would make the full results accessible to the stakeholders of the sector, together with complementary information on alternative value chain models and best practices.

The objective of such a platform would be to:

- publish open information on the distribution of value and costs along the chain,
- articulate these findings with information on social issues, in particular living income for farmers, and environmental issues
- share best practices on how to build alternative value chain models and disseminate the result of their analysis across the related sectors

The goal of this permanent observatory, to be hosted by an existing institution, would be to **support public decision makers and economic actors** who are currently lacking information **so as to develop synchronised strategies and policies**, at both the national and international level, **aiming at ensuring that everyone in the chain can make their living and that the sector as a whole gets more sustainable.**

To achieve this objective, **data on prices and costs evolution along the chain would be combined with qualitative analysis** on business models of economic actors, governance structures of value chain and alternative chain models.

The **necessary data to create such collaborative platforms would come from existing public databases, and from participatory dynamics among engaged actors from the sector** in order to consolidate and share the best available information to date.

For cocoa producing countries, such an observatory would constitute a valuable business intelligence tool and enable them to develop impactful strategies to improve the valorisation of the cocoa they produce and increase the revenue of farmers thanks to a better understanding of the business dynamics in consumer countries. In the mid-term, it could also help cocoa producing countries define strategies targeting emerging consumer markets and inform their investment decisions in order to develop chocolate manufacturing capacities and produce final chocolate products for their domestic consumers.

5.2.2. For business operators (upstream & downstream)

Based on the analysis developed in the current study, we also propose the following recommendations for business operators:

- Leverage on the experience of tripartite agreements implemented for example by supermarkets with the dairy industry and milk farmers over the past 3 years in France so as to develop similar agreements in the cocoa sector to guarantee decent prices for producers and promote the origins and terroirs of cocoa in chocolate products.

5.2.3. For the EU

Based on the analysis developed in the current study, we also propose the following recommendations for the EU:

- Support the development of the concept of a permanent 'observatory' on prices and costs in the cocoa/chocolate sector.
- Support large-scale initiatives and programmes to promote cocoa as a key ingredient of chocolate products, in particular the diversity of its origin and potential 'terroirs' in the product offering to consumers.
- Revise the guidelines of implementation of the EU competition law to secure and support the development of tripartite agreements between farmers' organisations, industry players and retailers that aim at guaranteeing decent prices for producers and protecting the environment (in particular the fight against deforestation).
- Initiate and/or support large-scale initiatives to educate consumers on the sustainability issues of the cocoa sector, particularly the close links between economic, social and environmental problems at the level of farmers as well as along the whole chain down to the consumer.

5.2.4. For producer countries

Based on the analysis developed in the current study, we also propose the following recommendations for producer countries

- Develop / strengthen sectoral roundtables on cocoa in order to allow the diversity of producers, traders and processors to discuss together, and with public authorities, the economic challenges of the industry and its social and environmental issues.
- Develop dynamic cooperatives in the cocoa sector, including through the implementation of investment programs in strengthening producer organisations and their capacity to differentiate cocoa varieties and improve quality, improving their access to credit, and developing the participation of women within them.
- Increase the control mechanisms of the internal governance of producer organisations.

This publication was produced with the support of the European Commission

