



Food and Agriculture
Organization of the
United Nations

BASIC

Comparative study on the distribution of value in European chocolate chains

Executive Summary

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, Executive Summary. 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.

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 farmers.¹

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.

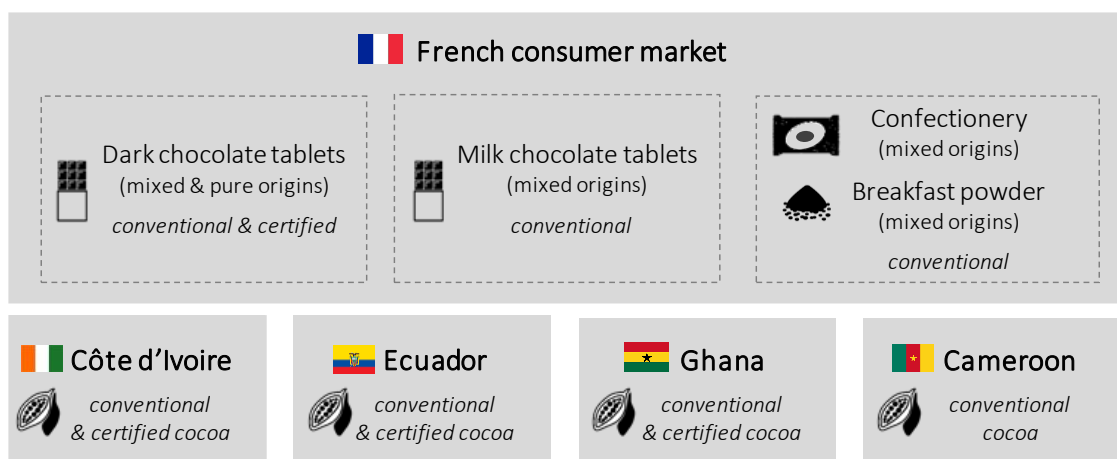


Figure 1. Scope of the study on the distribution of value in European chocolate chains. Source: BASIC

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.

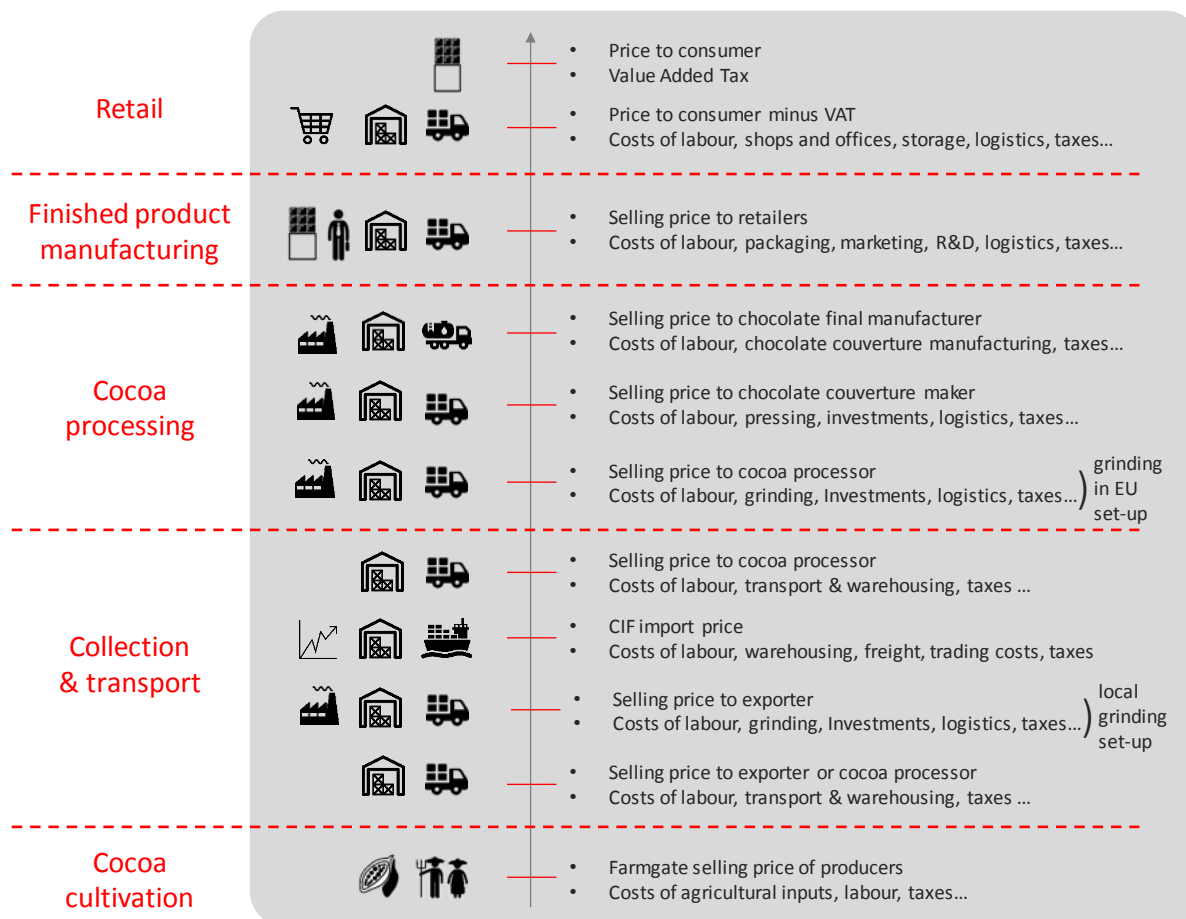


Figure 2. Main stages of cocoa/chocolate value chains investigated in the study. Source: BASIC

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 enable 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

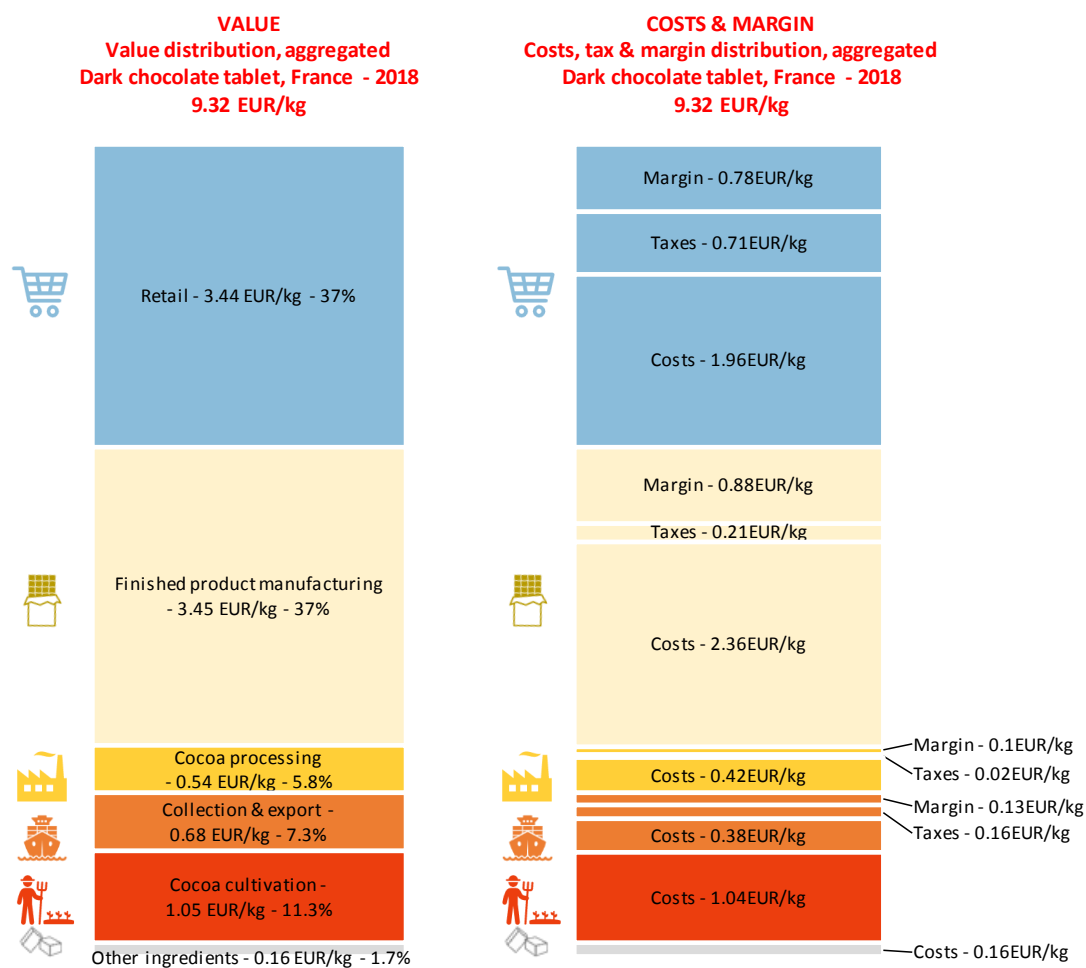


Figure 3. Distribution of value, costs and margins of plain dark chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC

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.

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).

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

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**.

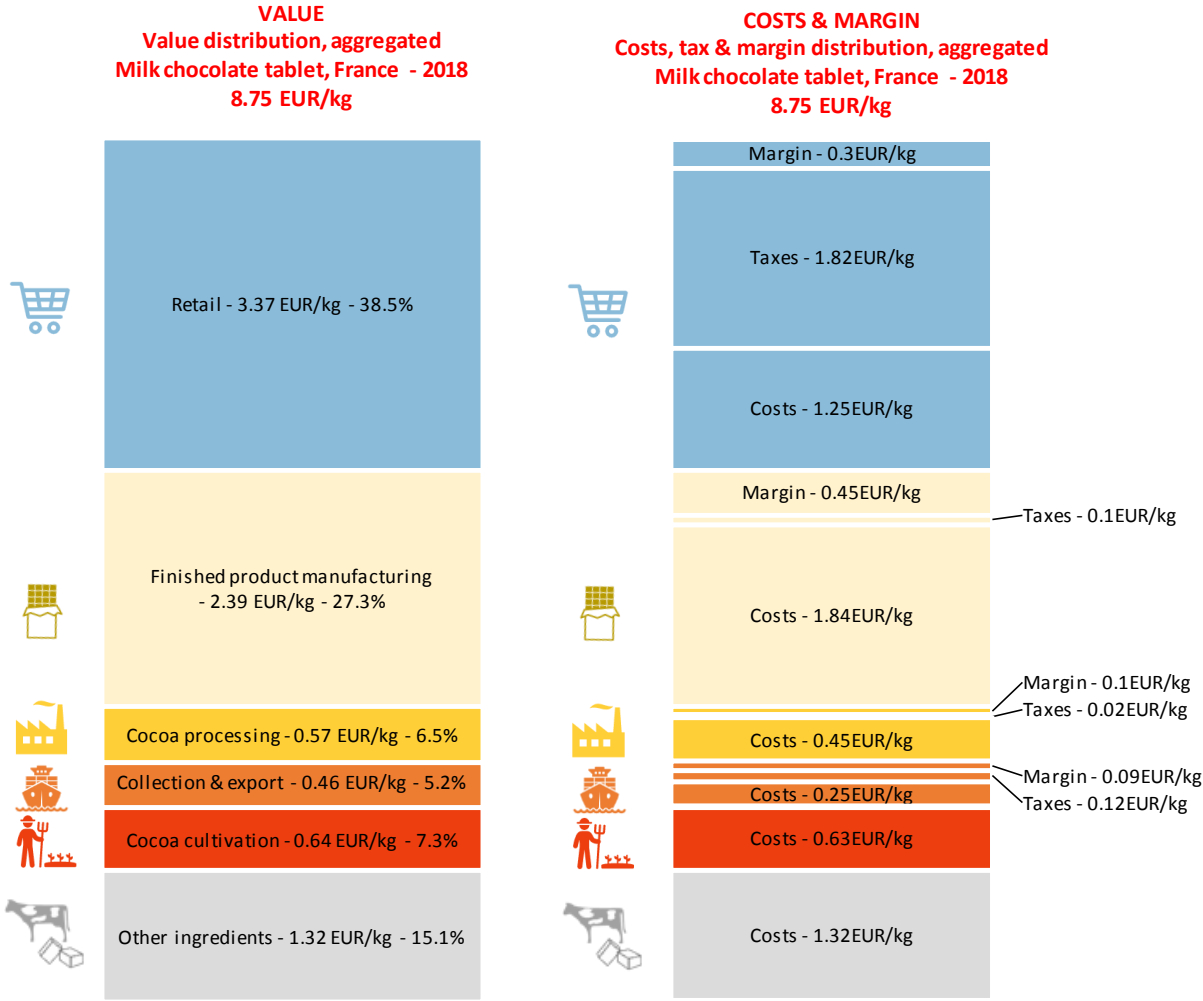


Figure 4. Distribution of value, costs and margins of plain milk chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC

These results also apply to **plain milk chocolate tablets** (which results are illustrated above) **and the other products analysed** in the study (countlines 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 democratize 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

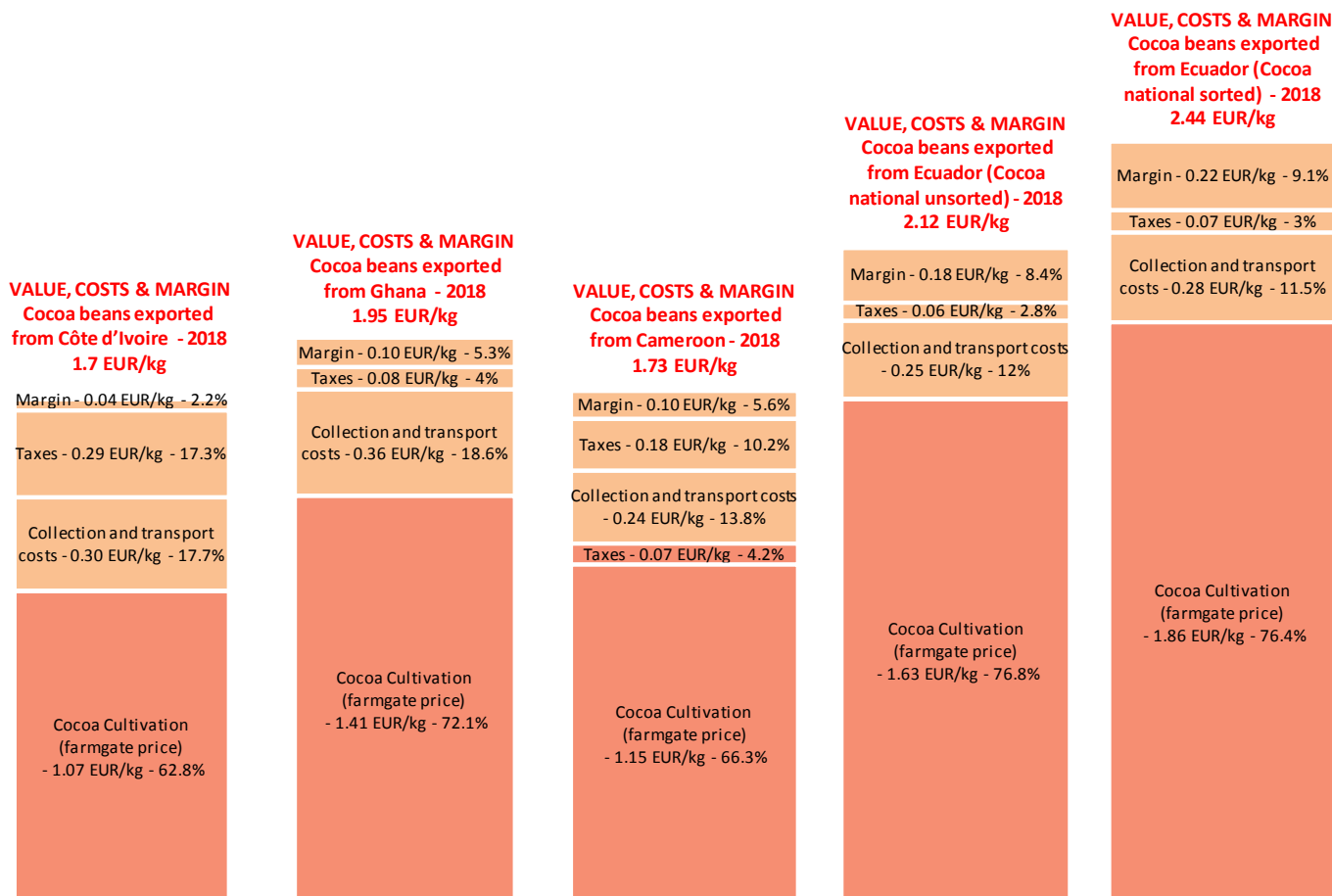


Figure 5. Breakdown of Free on Board value in Côte d'Ivoire, Ghana, Cameroon and Ecuador in 2018 (cocoa harvest 2017/18). Source: BASIC

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 organized 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 has to 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).

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 leverage 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 maintain 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 industrialized production of CCN51 generates an estimated net margin of +8-10%.

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

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 liberalized leaves room for greater potential of differentiation of cocoa production, but is associated with a quite polarized producer base between the farmers who can achieve it and all the others.

On the one hand, small to mid-size (industrialised) plantations and organized 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 organized smallholder farmers who produce the majority of exported cocoa volumes and remain for a large part below the poverty line. Cameroon, the other liberalized country analysed, also shows signs that such polarization processes are emerging and developing, but to a lesser extent, between certified and non-certified producers.

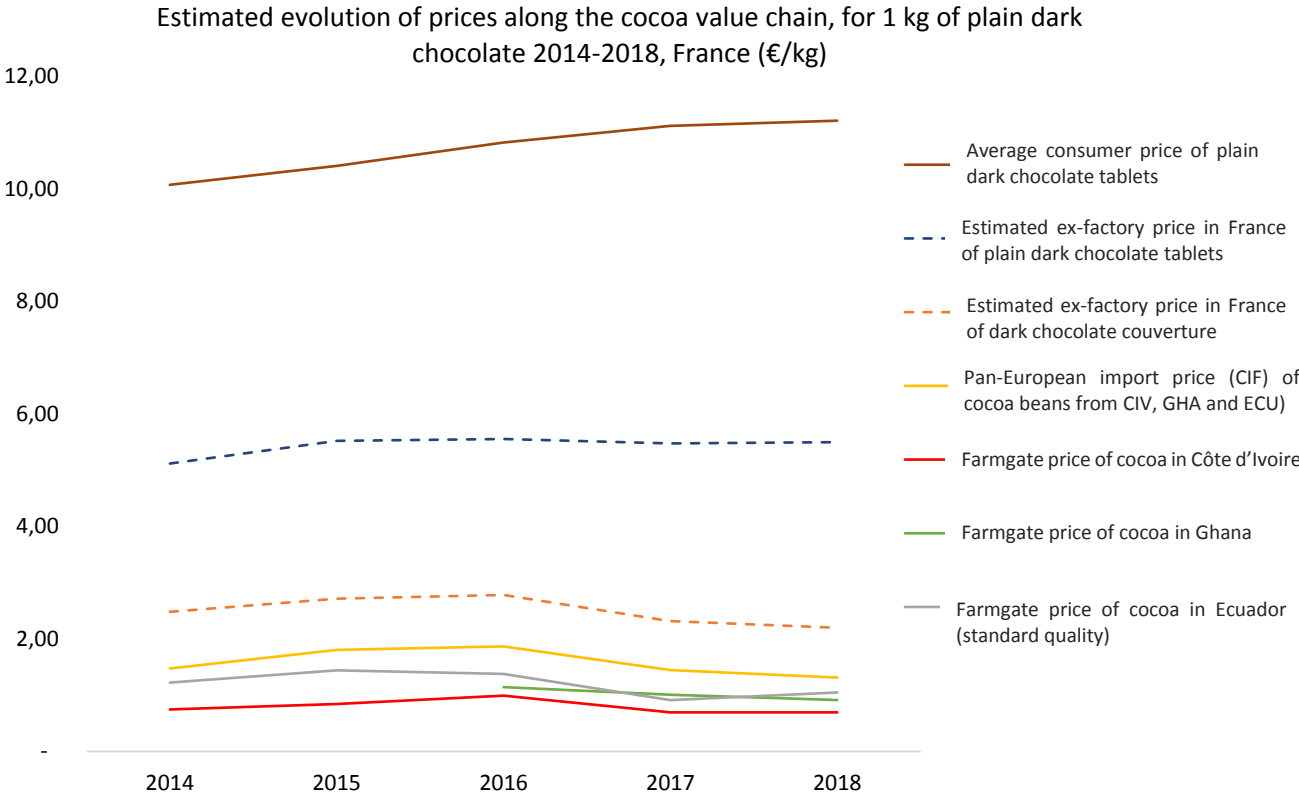



Figure 6. Evolution of the prices of the 'averaged' dark chocolate tablet at different stages 2014-2018. Source: BASIC

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 (albeit to some extent in Ghana where the Cocobod used its mitigation fund to buffer part of the price fall).

 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 objective to promote the production and consumption of products produced to higher social and/or environmental standards than the market norm.

The main ones 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.

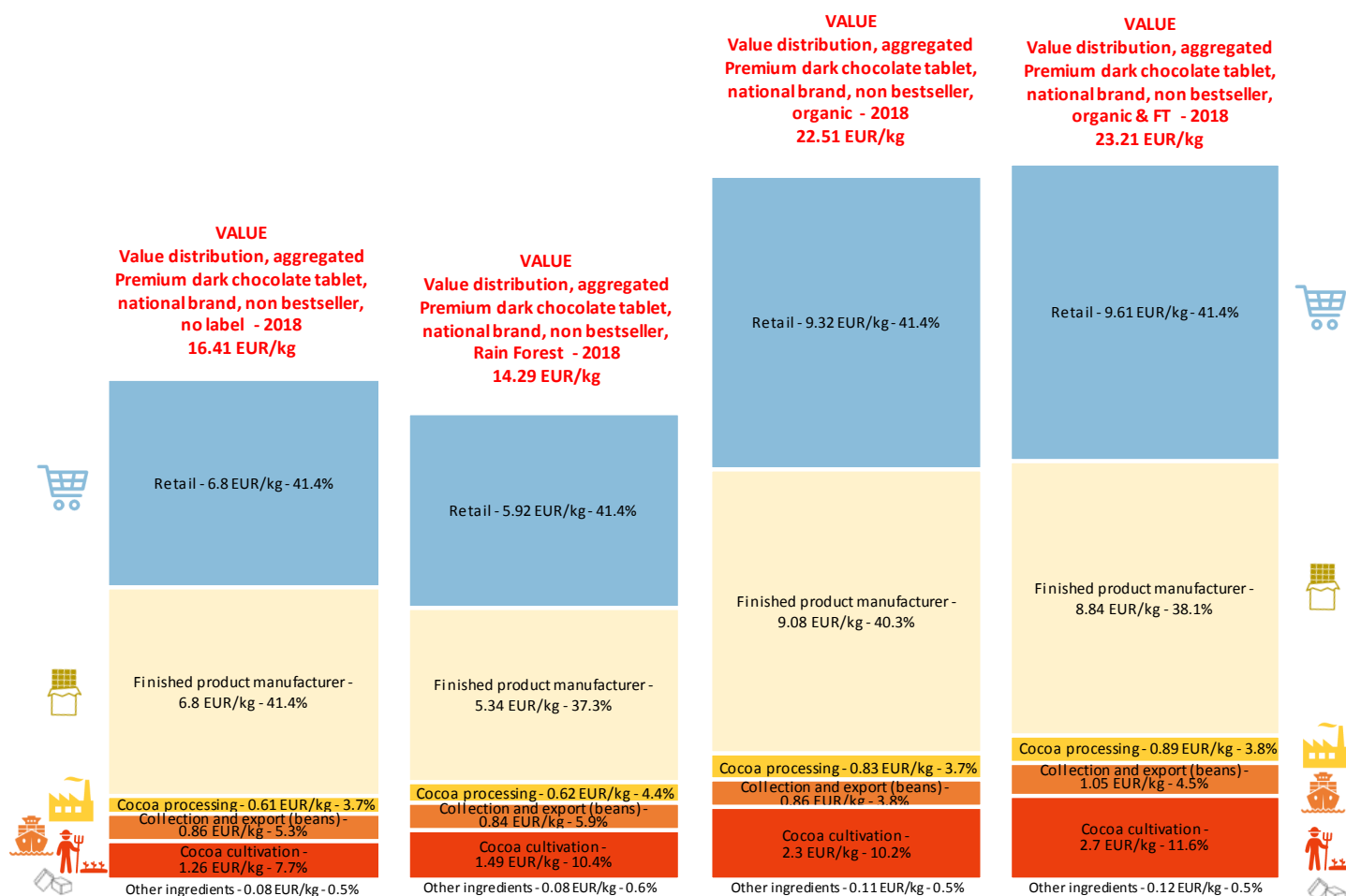


Figure 7. Distribution of value, for certified 'Premium' plain dark chocolate tablets in 2018 (cocoa harvest 2017/18). Source: BASIC

In all the cases analysed, the share of value of retailers and national brands are quite the same 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, apart in certain cases of association of certification schemes (in particular organic and fair trade).

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

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.

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-specialized 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' organizations in producing countries and help develop their capacity to differentiate cocoa varieties and improve their quality, their access to credit and their capacity to invest (in their business and their communities).**

This publication was produced with the support of the European Commission

