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Research Report

Sustainability in the cocoa-chocolate global value chain: From voluntary initiatives to binding rules?

ÖFSE Policy Note, No. 39/2022

Provided in Cooperation with:

Austrian Foundation for Development Research (ÖFSE), Vienna

Suggested Citation: Grumiller, Jan; Grohs, Hannes (2022) : Sustainability in the cocoa-chocolate global value chain: From voluntary initiatives to binding rules?, ÖFSE Policy Note, No. 39/2022, Austrian Foundation for Development Research (ÖFSE), Vienna, <https://doi.org/10.60637/2022-pn39> , <https://www.oefse.at/publikationen/policy-notes/detail-policy-note/publication/show/Publication/pn39-sustainability-in-the-cocoa-chocolate-global-value-chain/>

This Version is available at:

<https://hdl.handle.net/10419/251779>

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Sustainability in the cocoa-chocolate global value chain: From voluntary initiatives to binding rules?

Jan Grumiller, Hannes Grohs

This policy note argues that the low income of cocoa farmers in the cocoa-chocolate global value chain (GVC) is not only a problem in itself, but also exacerbates social and environmental sustainability issues such as child labor and deforestation. The experience of the last two decades has highlighted that private-sector, private-public, and public initiatives were important, but – overall – had insufficient impact on the livelihood of the average cocoa farming household. During the last few years, a shift from voluntary initiatives towards binding rules has emerged in the context of debates on the Living Income Differential (LID) in producer countries and due diligence laws in consumer countries, creating a new window of opportunity. The policy note concludes that – in the current world market situation – higher producer income cannot be ensured without new pricing mechanisms.

The structure of the cocoa-chocolate global value chain (GVC) ¹

The sustainability issues related to chocolate consumption need to be understood in the context of the cocoa-chocolate global value chain (GVC). The cocoa-chocolate GVC includes the following key activities: i) the cultivation and production of cocoa beans, ii) cocoa grinding – i.e. producing the intermediate products cocoa liquor, butter, and powder – and iii) the manufacturing of chocolate and cocoa confectionary. Roughly three-quarters of global cocoa bean production is located in West African countries, with Côte d'Ivoire (44% of global production in the cocoa season 2019/20) and Ghana (16%) being the largest cocoa bean producers (ICCO 2022a). The production of cocoa beans is labor-intensive. It is estimated that approximately five million smallholders cultivate 95% of the cocoa bean production on farmlands between two and five hectare, contributing to the livelihoods of 40 to 50 million people (Anga 2016: 4; Huetz-Adams et al. 2016; WCF 2014).

Cocoa grinding, on the other hand, is capital-intensive and highly concentrated. Today, three multinational companies dominate the industry: Barry Callebaut (Switzerland), Cargill (USA) and Olam (Singapore) account for roughly 60% of the world's cocoa processing (Terazono 2014; Gayi/Tsowou 2016). Cocoa processing used to be located almost exclusively in key consumption markets (i.e. in Europe and the US). However, multinational grinders have increasingly built-up grinding capacities in producer countries (origin grinding) in the context of industrial policies supporting local processing, technological advances in transportation, and shifting strategies of lead firms (Grumiller 2018). In the cocoa season 2019/20, roughly 46% of the world cocoa bean harvest was processed in producer countries (esp. in Côte d'Ivoire 13%, Indonesia 10% and Ghana 6%) (ICCO 2022b).

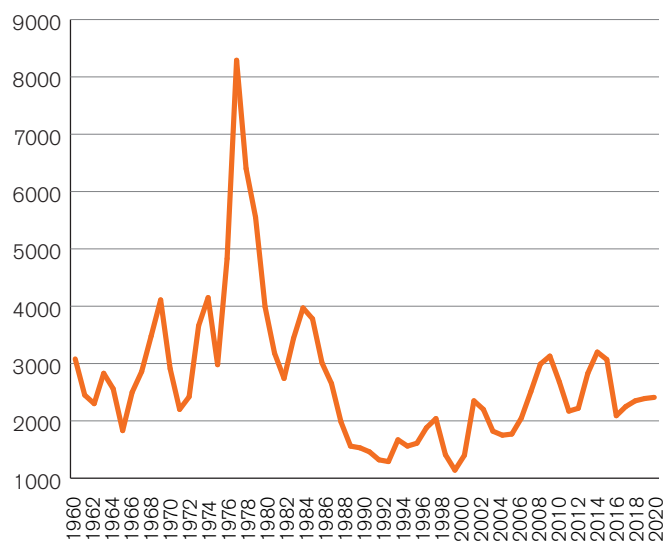
The chocolate manufacturing sector is also highly concentrated. Total sales of the world's top 100 chocolate manufacturers by revenue exceeded USD 132 billion in 2018. The six leading chocolate manufacturers Mars Wrigley (USA), Ferrero Group (Luxembourg/Italy), Mondelēz International (USA), Meiji Co. Ltd. (Japan), Hershey Co. (USA) and Nestlé SA (Switzerland) account for roughly 52% of global sales.² For some of these companies, chocolate production represents only part of their food portfolio (Nestlé, Mondelēz), while others (Mars, Ferrero, Hershey) specialize in chocolate-based products. The member states of the EU and the USA are by far the most important consumer countries of chocolate products. European countries, in particular Switzerland, Ireland, Austria, Germany and the UK, have the highest chocolate consumption per capita worldwide. However, Japan, Russia, Brazil and increasingly China and India are examples of important emerging markets for chocolate products (see Euromonitor 2017 in Lindt & Sprüngli 2018: 55).

Sustainability issues in the cocoa-chocolate GVC

The governance structure of the cocoa-chocolate GVC can be described as bi- or tripolar. For a long time, chocolate manufacturers and cocoa processing companies (grinders) were the most powerful actors governing the chain, even though chocolate manufacturers are generally able to extract higher economic rents (bipolar) (Araujo Bonjean/Brun 2016; Fold 2002; Fold/Neilson 2016). In recent years, the role of retailers increased in importance in the governance structure (tripolar) (Fold/Larsen 2011; van Huellen/Abubakar 2021: 231, 236). Retailers set the price of chocolate products and decide whether to include certain products in their range of goods, exerting (price) pressure on chocolate manufacturers. The rise of supermarkets' own chocolate brands and products has further elevated their role in the chain (Fountain/Huetz-Adams 2020: 32).

The asymmetric power relations in the cocoa-chocolate GVC, in which multinational companies source cocoa beans from smallholder farmers, are reflected in low cocoa bean prices and in the low and long-term declining value share received by cocoa bean producers. Gilbert (2006) estimates that the share of cocoa beans in the value of a bar of milk chocolate in the UK has dropped from an average of 27% between 1976 and 1985 to 9% between 1996 and 2005. In addition, a comparative study by FAO and BASIC finds that in the case of a plain dark chocolate bar in France in 2018, 70% of the total value and 90% of the total profit generated in the value chain goes to chocolate producers and retailers, and only 18.6% of the value and 7.5% of the profits are generated in the producing countries. The value share of smallholder farmers in the final price of a bar of dark chocolate averages 11%, and 7% in the case of milk chocolate (FAO, BASIC 2020: 6f.). Fountain and Huetz-Adams (2015: 29ff.) come to a similar conclusion and estimate that the value added of cocoa production is only 7% due to the particularly high shares of chocolate production (35%) and retailing (44%). Transportation and trade as well as processing amount to 6% and 8%, respectively. The low income of farmers, in addition, also needs to be seen in the context of relatively low cocoa prices in real terms since the 1990s (Figure 1). Many commentators have argued that cocoa prices would need to be above a minimum of USD 3,000 per ton to allow for a decent living (e.g., Fountain/Huetz-Adams 2019).

Figure 1: Real cocoa prices 1960-2021 (USD/ton, annual data, 2010 USD)



Source: World Bank commodity price data (retrieved: 21.03.2022).

The low income of farmers is one of the most pressing sustainability issues in the cocoa-chocolate GVC. According to Fountain/Huetz-Adams (2020: 39), almost no cocoa farmer in West Africa – the region with the by far biggest cocoa production – earns a living income from producing cocoa. This is not only a problem in itself, but causes and amplifies other sustainability issues such as child labor and deforestation. In the case of child labor, low income creates the necessity to increase yields, but also prohibits farmers from hiring qualified workers, which is why poverty is one

– though not the only – reason for child labor (Vigneri et al. 2016). Even though the problem received broad public attention since the early 2000s, leading to the emergence of a variety of initiatives, it persists until this day (Fountain/Huetz-Adams 2020: 61f.). According to the latest report by the National Opinion Research Center at the University of Chicago, there are roughly 1,6 million children working in cocoa production in Côte d'Ivoire and Ghana (NORC 2020).³ Almost all of these children work for their parents or relatives (94%) and are exposed to hazardous work, such as working with sharp objects or pesticides (95%) (NORC 2020; see also Thorsen/Maconachie 2021).⁴

Similarly, low income of cocoa farmers contributed to increasing cocoa production, a key driver of deforestation in Ghana and Côte d'Ivoire (Bitty et al. 2015; Kroegeer et al. 2017). Between the beginning of the 20th century and 2015, forest cover in Côte d'Ivoire dropped from 16 million to only 4 million hectares (Bitty et al. 2015: 96, 100f.). Moreover, primary forest cover in Côte d'Ivoire and Ghana decreased by 26% and 9.3% between the years 2002 and 2020, respectively.⁵ It is estimated that roughly 27% of total deforestation in Ghana between 1990 and 2008 was related to the cultivation of cocoa (Kroegeer et al. 2017). Drivers of deforestation include the absence of clear land and tree tenure regimes, weak legal systems and government policies promoting production increases. The increasing use of cocoa hybrids that allow for higher yields in the short-term – but also require more sun exposure – has also contributed to accelerated deforestation processes (ibid.). Today, in both countries – but in particular in Côte d'Ivoire – many cocoa plantations are located in formally protected areas (Asare et al. 2014; Bitty et al. 2015). The removal of these plantations – which have been tolerated for a long time – and their reforestation embodies a considerable social dimension, as they secure the livelihood of the farmers (Fountain/Huetz-Adams 2020: 71).

Industry initiatives and certification schemes

In recent decades, the institutional framework of the cocoa-chocolate GVC was largely characterized by private and voluntary regulations and standards. State sector regulations, price interventions and quotas, which were still common in the 1970s and 1980s, have lost their significance or have been pushed back in the context of liberalization policies and structural adjustment programs in most cocoa-producing countries (Fold 2002). This notwithstanding, Ghana never abolished its sector regulation, and Côte d'Ivoire re-regulated the sector since 2011 (Grumiller et al. 2018).

In this context, private sector actors increased their efforts to promote sustainability in the cocoa-chocolate GVC since the early 2000s, primarily as a reaction to increasing public pressure and reports about child labor in West Africa (Barrientos 2016: 213; Ollendorf 2021: 144). In addition, falling producer prices and low productivity and investment levels coupled with increasing demand posed a threat to the security of cocoa bean supply in the medium to long run (Barrientos 2016: 213f.). Firms therefore increased their efforts to promote cooperatives as well as cultivation

techniques and practices of farmers – contributing to farmer income and cocoa bean production – as well as increased their efforts to promote social sustainability. Large companies established in-house sustainability initiatives, increasingly used third-party certification schemes, and/or participated in sector-wide initiatives. The different measures resulted in a public-private hybrid character of the institutional set-up of the cocoa-chocolate GVC, in which industrial self-regulation was combined with selective cooperation with other stakeholders and state institutions (Fold/Neilson 2016).

In-house sustainability initiatives generally use different sustainability criteria and support farmers, cooperatives and their communities. However, since the late 2000s many firms also increasingly used third-party certification schemes to promote socioeconomic sustainability such as UTZ Certified, Rainforest Alliance and Fairtrade (ibid.: 204; Fountain/Huetz-Adams 2020: 34). Certified cocoa ensures that certain economic, social or ecological standards are fulfilled by smallholders, potentially enabling them to sell their certified cocoa at higher prices and profits (even though this must not necessarily be the case). During the 2018/19 cocoa season, roughly 50% of cocoa was certified by third-parties, and approximately 30% was sold as certified cocoa (ibid.: 34; Grohs/Grumiller 2021). Even though certifications have contributed to the capacities of cooperatives, increased transparency,⁶ decreased child labor and limited deforestation trends, standard-setting organizations have little influence on many other challenges faced by farmers (e.g., low cocoa prices, land use and tenure, impact of climate change, possibilities for crop diversification). Moreover, certifications put adaption pressures and investment risks on farmers (Huetz-Adams et al. 2016).

In addition to private firm-level initiatives, a variety of sector-wide initiatives were also created, including (i) the World Cocoa Foundation (WCF, established in 2000), a global umbrella organization for chocolate and cocoa companies (representing 80% of the global cocoa market), which aims at promoting sustainability in the cocoa sector, for example through the Cocoa Action Strategy launched in 2014;⁷ (ii) the International Cocoa Initiative (ICI, established in 2002), an association of the cocoa industry and civil society organizations to end the worst forms of child labor; and (iii) the Cocoa Forests Initiative (CFI, established in 2017), including industry members, major donors, and producing governments, that strives to create a common framework to prevent deforestation. While all of these initiatives had some success in reaching farmers and their communities,⁸ the effects on the cocoa sector remain limited in light of the scale of the challenges.

Recent initiatives: the living income differential (LID) and the call for due diligence legislation

In recent years, two additional initiatives emerged that could potentially have important effects on the sustainability of the cocoa-chocolate GVC, shifting the institutional framework from predominantly voluntary initiatives to more binding rules: (i) the living income differential (LID) targeting cocoa income

of farmers in Côte d'Ivoire and Ghana, and ii) due diligence legislations aiming at resolving a large variety of sustainability challenges, including child labor and deforestation.

Living income differential (LID)

In 2018, Côte d'Ivoire and Ghana signed a bilateral cooperation agreement that – above all – has the objective of increasing cocoa prices and farmer income. In both countries, the cocoa regulation boards – the Conseil du Café Cacao (CCC) in Côte d'Ivoire and the Cocoa Marketing Board (COCOBOD) in Ghana – strongly regulate the sector and have the ability to set and stabilize intra-seasonal farm-gate prices, although they have no direct control over export cocoa prices (see Grumiller et al. 2018; Tröster et al. 2019). This is because cocoa prices are determined on cocoa futures markets, with the latter providing the basis for setting government-controlled farm-gate prices and for individual contracts between buyers and sellers of cocoa (adjusted for quality, certifications, etc.).

In 2019, CCC and COCOBOD initially proposed the introduction of a common floor export price of USD 2,600 per ton, of which farmers would receive a minimum of 70%, independent of futures market prices (ibid.). However, multinational firms rejected this radical proposal, since it would have introduced a minimum price and de-linked cocoa export prices from futures markets. Instead, a LID of USD 400 per ton was introduced, requiring cocoa buyers to pay USD 400 per ton on top of cocoa futures prices and quality differentials. However, COCOBOD and CCC agreed to pay 70% of the floor export price of USD 2,600 per ton as a minimum producer price – independent of futures and export prices. As a result, CCC and COCOBOD need to pay the difference between the agreed minimum price and export prices in case of low world market prices (ibid.). In addition, the high vulnerability of the system was already revealed in the context of low cocoa prices during the COVID-19 pandemic, requiring CCC to lower minimum producer prices.⁹

Due diligence laws

Following national due diligence legislations in France and Germany (see Grumiller et al. 2022: 29ff.), the European Commission (EC) proposed a regulation on deforestation-free products (November 2021) and a directive on corporate sustainability due diligence (February 2022). Both legislations are expected to affect the cocoa and chocolate industry, making firms accountable for their due diligence practices. The proposals are partly a response to a lively debate on cocoa regulations. Already in 2019, large multinational companies, certification organizations, NGOs, and multi-stakeholder organizations formed a cocoa coalition calling for an EU due diligence legislation (Barry Callebaut AG et al. 2020; Fairtrade International et al. 2021 a). In particular firms with well-developed traceability systems and sustainability programs largely welcomed the EC's initiative, since it creates a level-playing field, requires all firms to invest, and shifts the burden of proof from farmers to companies. The cocoa coalition also called for bilateral cocoa partnership

agreements between the EU and cocoa producing countries in order to promote the enabling environment for sustainable cocoa production (Fairtrade International et al. 2021b). However, there is currently no sign that such agreements are currently planned.

The effectiveness of the EU legislation will depend on its concrete design, as has been highlighted in the controversial debates on the German and French due diligence laws (see Grumiller et al. 2022: 33ff.). With regard to the current proposal of the EC, civil society organizations have welcomed the scope of the regulation including the whole value chain, the inclusion of environmental issues and of civil liability of firms. However, they criticize that the burden of proof still rests with affected stakeholders in third countries, which generally suffer from a lack of participation.¹⁰ Contrariwise, industry representatives in the cocoa sector fear high administrative costs (esp. for small and medium-sized enterprises) and are often critical of the transfer of responsibility from governments to companies entailed by the regulation.¹¹

Policy conclusions

Social and environmental sustainability issues such as deforestation and child labor in the cocoa-chocolate GVC are complex phenomena, but also need to be understood in the context of farmers' income. Hence, in order to tackle the root causes of deforestation and child labor, not only due diligence regulation needs to be introduced, but the income of farmers also needs to increase – through higher income in cocoa production, or alternatives to cocoa. The experience of the last two decades has highlighted that private-sector, private-public, and public initiatives targeting the increase of productivity, quality, use of certification as well as promoting cooperatives, sustainability, traceability and more were important, but – overall – had insufficient impact on the livelihood of the average cocoa farming household. Increasing productivity of farmers, in addition, benefits the individual households, but has the downside of increasing supply and thus puts a downward pressure on cocoa prices.

During the last few years, a shift from voluntary initiatives towards binding rules has emerged in the context of the LID and due diligence laws. However, the LID further underlines the unequal power relations in the cocoa-chocolate GVC, with cocoa producing countries struggling to raise cocoa prices to a level that is required for a decent living. Due diligence laws – depending on their concrete design – will also affect social and environmental sustainability in the cocoa-chocolate GVC, but they will not affect prices and income of cocoa farmers directly.

Overall, we argue that – in the current world market situation – higher producer income cannot be ensured without new pricing mechanisms. In the cocoa sector, such a proposal is not entirely unrealistic, given the recent introduction of the LID and large cocoa firms signaling support for new cocoa regulations, potentially encompassing new price mechanisms (Fairtrade International et al. 2021b). New

pricing mechanisms on a global scale are important, since the LID only benefits cocoa producers in Côte d'Ivoire and Ghana, and because it remains questionable whether the current LID system can achieve a sufficiently high and stable income for cocoa farmers, as has been highlighted during the COVID-19 induced fall of cocoa prices.

In this context, a key game-changer would be to de-link export- and producer-prices from futures prices (see Tröster et al. 2019), since this would allow cocoa producers to sell cocoa independently from world market prices. The de-linking from futures prices has been proposed by COCOBOD and CCC during the LID negotiation process (the LID being a mark-up on futures prices), but the proposal has been rejected by multinational firms since it contradicts their pricing strategies.

However, to achieve a fully sustainable cocoa-chocolate GVC, the cooperation and willingness of all stakeholders is needed. The current debates on due diligence laws and the LID system arguably opened a window of opportunity for change. In a best-case scenario, the de-linking from futures prices would be accompanied by global (or regional) minimum cocoa bean prices (adjusted for variety, quality and certifications), which create income stability and ensure a decent living for cocoa farmers. Such a minimum price would require a governance system that includes all major cocoa producing countries, and is based on the cooperation with the largest chocolate manufacturers, grinders and traders. Above all, this would create a level-playing field among firms. On the downside, chocolate prices for consumers would likely increase. Given that chocolate is a mixed product, the increase of cocoa bean prices would however not be fully transferred to final consumer prices. In addition, the key cocoa producing countries would likely need to ensure that higher prices do not result in an oversupply of cocoa. Instead, public initiatives and development cooperation should strengthen their efforts for promoting alternatives to cocoa income for farmers. At the same time, the provision of social infrastructure and services for cocoa communities as well as training measures on good agricultural practices for farmers should be maintained and successful programs like Child Labor Monitoring and Remediation Systems (CLMRS) expanded.

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- 1 This policy note builds on Grohs/Grumiller (2021); Grumiller (2018); Grumiller et al. (2018); Tröster et al. (2019).
- 2 Own calculations based on Candy Industry (2021).
- 3 This represents 38% of all children living in agricultural households in the case of Côte d'Ivoire, and 55% in the case of Ghana (NORC 2020).
- 4 The NORC report (2020: 8) defines child labor as any child (5-17 years old) who works in cocoa farming and is a) economically active beyond allowable hours of work per age category; or b) taking part in hazardous activities (i.e., land clearing, carrying heavy loads, exposure to agro-chemicals, sharp tools use, long working hours, and night work). The report uses hazardous child labor as a proxy for worst forms of child labor as defined by the ILO Convention 182 (NORC 2020: 3).
- 5 See <https://www.globalforestwatch.org/dashboards/country/CIV/> and <https://www.globalforestwatch.org/dashboards/country/GHA/>
- 6 According to self-declaration information (2019), chocolate brands were able to trace between 44% to 100% of their cocoa purchases back to cocoa cooperatives/farms (for details see Fountain/Huetz-Adams 2020: 33).
- 7 See <https://www.worldcocoafoundation.org/about-wcf/vision-mission/>
- 8 For more details see ICI (2020), KPMG (2020) and <https://www.worldcocoafoundation.org/press-release/cocoa-forests-initiative-reports-progress-aims-to-expand-effort/>
- 9 See <https://www.reuters.com/article/cocoa-ivorycoast-idUSL8N2LT10E>
- 10 See e.g., <https://corporatejustice.org/news/dangerous-gaps-undermine-eu-commissions-new-legislation-on-sustainable-supply-chains/>
- 11 See e.g., <https://www.buinessurope.eu/publications/eu-companies-need-workable-rules-corporate-due-diligence>




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Gefördert durch die

 Österreichische
Entwicklungszusammenarbeit