Can policy achieve a Living Income for Cocoa Farmers in Côte d'Ivoire and Ghana? And its implications.

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Introduction

While chocolate is a luxury food for better-off consumers predominantly in industrialized countries, most of the cocoa farmers in the largest cocoa growing countries Côte d'Ivoire and Ghana are living in poverty or even extreme poverty. This contrast in context with the prevalence of deforestation and child labour problems associated to cocoa growing have pushed cocoa high up the agenda of civil society organizations and created calls for government action in chocolate consuming countries, as illustrated, e.g., by the EU Sustainable Cocoa Initiative launched in 2020 or the ongoing discussions about human rights and sustainability due diligence legislation covering the cocoa sector by the EU, Germany, Netherlands and other countries.

While the poverty problem in cocoa farming has long been acknowledged, past initiatives to increase cocoa farmers' incomes, such as by national governments of cocoa producing countries, international agreements or sustainability and organic certification schemes, have failed to achieve a broad-based and substantial improvement. Also, the recent joint initiative of the governments of Côte d'Ivoire and Ghana, the Cocoa Living Income Differential, has shown limited success. This, however, needs to be considered in context with a global record harvest and depressed demand due to the COVID-19 pandemic.

Moreover, to reach the level of a "living income", that is the income necessary to allow a decent standard of living, much higher increases are necessary than those which have been targeted previously by governments or certification schemes. According to a study by Waarts et al. (2021), this would require an increase of the average cocoa farmer's income of about in Ghana 50% and Côte d'Ivoire 100% or, according to Fountain and Hütz-Adams (2020), the cocoa price at the farmgate to more than double compared to the 2019 of the two countries.

As cocoa is an economically important sector in both countries and together they produce over 60% of the global cocoa supply, such large interventions in the sector would create repercussions throughout the national economy as well as the international cocoa market. One aspect that is largely neglected in the current discussions are the inevitable impacts on other agricultural sectors, including farmer incomes and costs originating from these leakage effects, and on farmers in third countries.

Acknowledging these aspects, this study develops a model framework to quantitatively investigate the potential of existing and alternative policy options to drive the envisaged income changes for cocoa

farmers in Côte d'Ivoire and Ghana. The framework facilitates not only the analysis of the direct impacts on the domestic cocoa farmers in each country but also accounts comprehensively for simultaneous policy changes in both countries and for repercussion effects through the global cocoa market. Importantly, it allows the assessment of interactions with other agricultural sectors and their farmers' incomes as well.

Methods and Data

The analysis is based on a model system integrating a partial equilibrium (PE) model for the global cocoa market with one national computable general equilibrium (CGE) model for Côte d'Ivoire and another CGE model for Ghana. This framework has been chosen as the small country assumption does not hold for the cocoa sector of Côte d'Ivoire and Ghana and thus the international market price needs to be endogenous. Moreover, given that cocoa is linked to a substantial share of GDP, employment and export revenue in both countries, any changes in the cocoa market environment clearly have effects on other agricultural markets as well as on the wider economy. Finally, in 2020, the two countries founded the joint body "The Ivory Coast-Ghana Cocoa Initiative", thereby institutionalizing their intent to influence the cocoa market via coordinated policies. Hence, the importance of examining policy changes in both economies in tandem.

The model system proceeds in an iterative manner. At the beginning, the PE model solves for equilibrium in the global cocoa market determining the international cocoa market price. The price change is then fed into each CGE model separately as a shock to the exogenous cocoa export price. The CGE models then each solve for equilibrium and return the change in domestic cocoa output which enter the PE model as shocks to the fixed supply variables of Côte d'Ivoire and Ghana. The loop between the PE and the CGE models continues until the change in all supply variables between iterations is sufficiently small and thus the system has converged.

The PE model is a comparative-static, multi-regional model of the global cocoa market based on iso-elastic supply and demand functions and net trade. The PE model is calibrated on 2019 data obtained from the International Cocoa Organization (ICCO) and elasticities from the literature.

The CGE models have been adapted for the present purpose starting from the comparative-static version of the DEMETRA CGE model, a derivative of the STAGE CGE model suite. A particular strength of the model for the analysis of smallholder farms is the representation of non-separable household production and consumption through household activities. The Ghana CGE model is calibrated on a 2015 social accounting matrix (SAM) for Ghana which has been modified to distinguish households, factors and household production activities between rural and urban dwellers across 10 regions (20 households in total) and to disaggregate the cocoa processing sector from other food processing. Moreover, all cocoa-related data has been updated to correctly represent the cocoa activities in 2015.

The Côte d'Ivoire CGE model is similar and calibrated on a 2015 SAM which underwent an analogous treatment like the Ghana SAM. Here, households, factors and household production activities are distinguished between rural and urban dwellers across 14 regions and the cocoa processing has been disaggregated from the coffee processing sector.

The counterfactual simulation scenarios explore a range of international and national policy interventions in the cocoa market to move towards the goal of a living income for cocoa farmers as calculated for Côte d'Ivoire and Ghana by several NGOs. The scenarios are planned to consider current policy initiatives like the Côte d'Ivoire's and Ghana's joint Living Income Differential, or supply management agreements discussed under the umbrella of the ICCO, as well as alternative options for domestic support and supply management.

Expected Results

The analysis allows to contrast the costs and benefits of the different policy options and to identify the trade-offs among them. The main focus of planned policy interventions are cocoa farmer incomes and government revenues from cocoa in Côte d'Ivoire and Ghana. However, while in the current discussions among stakeholders the cocoa market is largely treated in isolation, the proposed study also widens the view and traces the impacts of such large cocoa market interventions on farmers in other sectors in both countries and the wider economy, in addition to cocoa incomes in other countries.

The study's outcomes should be of interest for all stakeholders in the cocoa market. Moreover, the framework developed could be useful to support the discussion on the upcoming concrete policy proposals.

References

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