The Impacts of the Cocoa Living Income Differential Policy on Ghana

Ole Boysen, Emanuele Ferrari, Victor Nechifor, Pascal Tillie[1]

DRAFT – PLEASE DO NOT QUOTE

Introduction

In Ghana and Côte d'Ivoire, which together account for over 60% of global cocoa bean production, cocoa farming is a very important activity in terms of agricultural value added and generates substantial shares of the countries' total export earnings. Despite of this, poverty is widespread among cocoa farmers and the production is associated with prevalence of child labour and clearance of tropical forest areas. In an effort to combat poverty among cocoa farmers and to increase the farmers' share in the value added of the highly valuable global chocolate market, the governments of Ghana and Côte d'Ivoire introduced the Living Income Differential (LID) policy in 2019. The two countries agreed to charge an extra premium of $400 per tonne on all cocoa sales starting with the 2020/2021 harvest season. The objective is to guarantee their farmers a fixed price of $1,820 per tonne for the season which corresponds to a rise in the government institution-controlled annually fixed farmgate prices of roughly 20% to 30%. This LID premium is complemented by a price stabilisation fund to buffer against international cocoa price drops, allowing to sustain the target farmgate price.

Nevertheless, while the sales of the first harvest under the new policy have progressed, many details of the further implementation of the LID policy remain unknown. Moreover, it remains to see how the players in the rather concentrated global market will react to it in the long run. The present study investigates how the LID policy might play out under differing assumptions for the implementation of the policy and for market's behavioural reactions under prevalence of varying international price levels, especially with respect to the important issues of cocoa farmer poverty and deforestation. Specifically, the following main research questions are investigated: How do cocoa farmgate prices change? How are cocoa farmers' incomes changing? What is the impact on the government budget? To what extend does the LID drive additional deforestation? What impacts will the policy have for the international cocoa market and other producers?

Experimental Setup

The comparative-static, long-run analysis is based on a framework which integrates a single-country Computable General Equilibrium (CGE) models for Ghana with a newly developed global, multi-regional cocoa partial equilibrium (PE) model in an iterative manner to account for the impact of the world market price effects of the joint policy change by the two large producers. The Ghana CGE model

[1] Joint Research Centre, European Commission, Seville

is based on the DEMETRA CGE model and is calibrated to a 2016 social accounting matrix, updated to 2019, with particularly high detail on agricultural sectors and household groups. Moreover, agricultural production and household groups are differentiated regionally. These features facilitate a detailed analysis of the LID policy's impacts on the domestic economy but particularly on agricultural activities and household incomes. For assessing the extent of forest clearing, the CGE model has been extended to represent deforestation by regions as driven by land prices, thereby allowing expansion of cocoa plantations into forest areas in addition to usual crop substitution.

The main simulation scenarios are defined explicitly acknowledging the uncertainty surrounding the policy's implementation details and market player behaviour. The LID scenario assumes transmission of the full LID amount to the cocoa farmers without deductions, no supply control, no passing on of the cocoa bean price increase to consumers by chocolate producers and benevolence of chocolate producers towards the farmers in Ghana and Côte d'Ivoire so that they ignore the LID premium in their sourcing decisions. Additional scenarios vary these assumptions including the introduction of different forms of supply management.

All scenarios are simulated under various international cocoa price levels to shed light on costs of reaching the objective under differing market situations. To this end, starting from the 2019 economy, a pre-simulation is conducted to set the international price of cocoa to a predefined level by adjusting global cocoa productivity. The result then serves as one starting and reference point for the set of main scenario simulations.

Preliminary Results

First results indicate that the LID in the long run might have strong impacts on all players in the cocoa markets including governments and lead to a substantial drop in the international cocoa price of up to 12% at the current international price. But the results also differ strongly by the details of the policy setting and market behaviour but particularly depend on potential supply control measures and their effectiveness.

While at the current international price the $400 LID might suffice to reach the target farmgate price, at a lower international price it would require additional subsidies from the price stabilisation fund or the government budget, again strongly depending on the effectiveness of potential supply control measures. Incomes of cocoa-producing households would increase by 4% in the best case.

The results provide governments and other stakeholders with information on the benefits and costs of alternative policy options according to how the market and participant behaviour develop.