The Cocoa Living Income Differential (LID)

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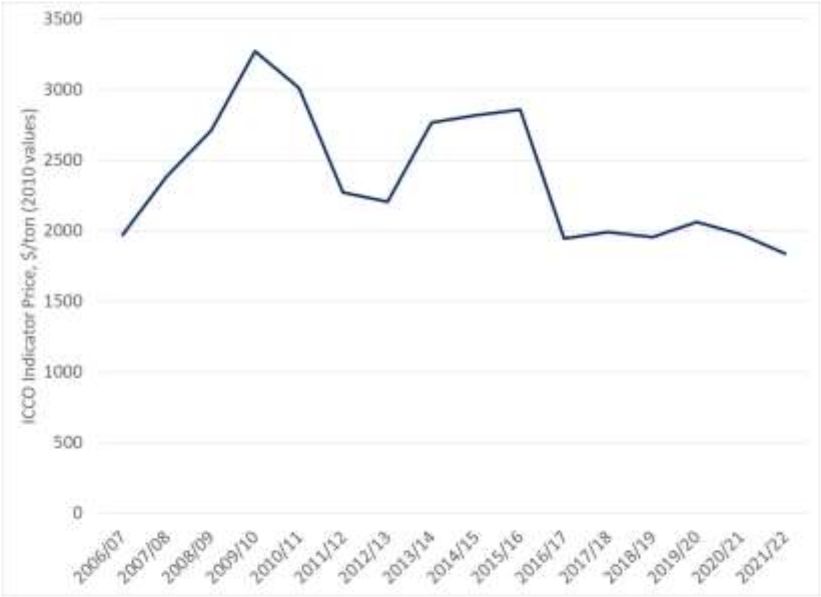
The Abidjan Declaration

- Cocoa prices have been weak since 2008/09.
- March 2018: Côte d'Ivoire and Ghana signed the Abidjan Declaration.
- The two countries agreed to collaborate on cocoa policy with the objective of raising the prices obtained by their producers.

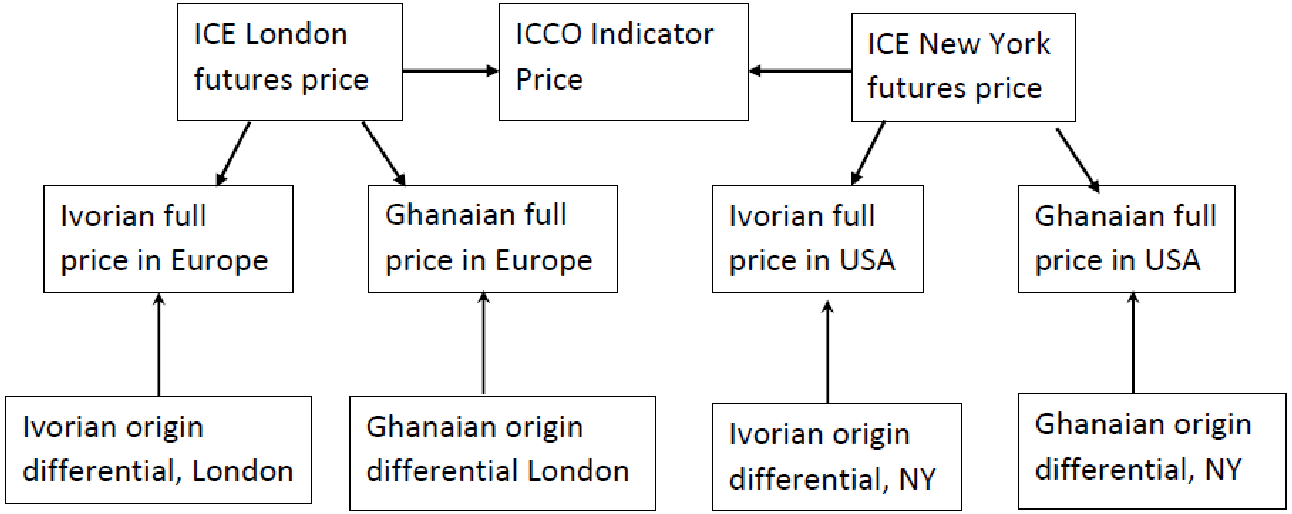


- July 2019: The two governments stated that they would seek a Living Income Differential (LID), of $400/ton differential over benchmark prices (16½% over the then prevailing price).

Questions

1. How have the prices obtained for cocoa bean exports from Côte d’Ivoire and Ghana evolved since the introduction of the LID?
2. Are these changes in realized prices attributable to the LID or are they due to changes in market conditions?
3. Specifically, what has been the impact on Ivorian and Ghanaian origin differentials?
4. How has the LID affected exports from other origins, in particular Cameroon and Nigeria?
5. How has the LID affected farmgate (producer) prices?
6. How might producers hope to obtain higher prices in the future?

Cocoa prices



Origin differentials reflect two factors:

- avoidance of taking delivery from the futures exchange,
- differences in bean quality across origins.

The LID was seen as additional to market differentials.

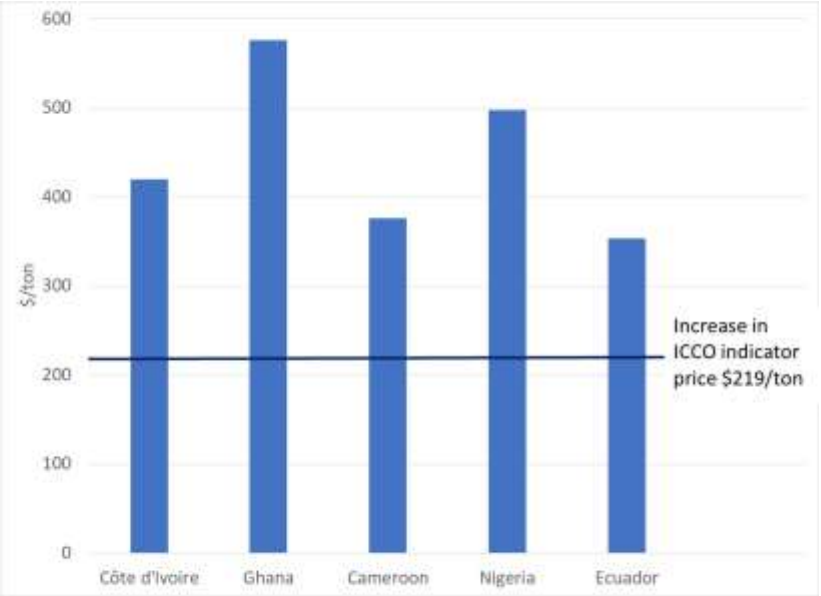
Cocoa futures prices are the prices of futures contracts, not of the physical cocoa itself.
Prices in commercial transactions are negotiated against two benchmark prices.

- the futures price (London or New York),
- the origin differential.

The ICCO Indicator Price is an average of London and New York futures prices

How have prices changed?

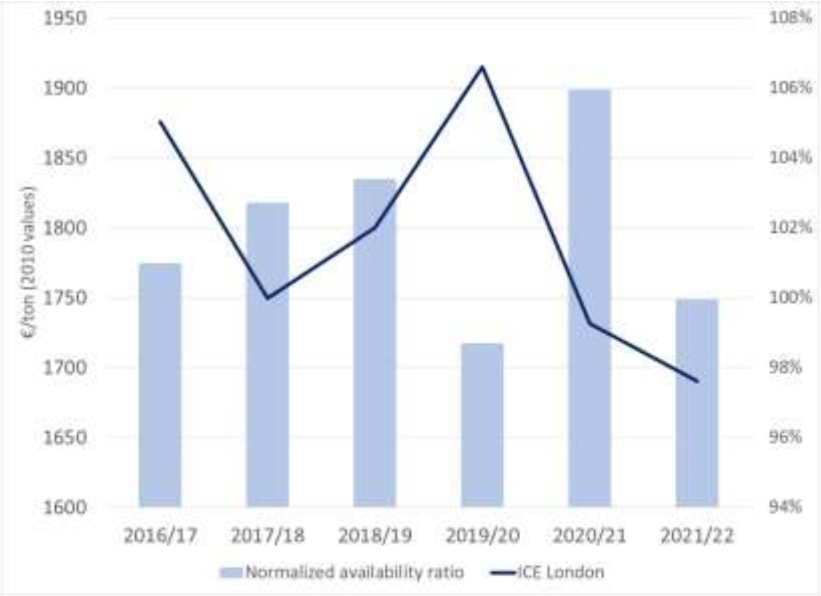
- I start by looking at realized full prices over the LID period by analyzing import unit values (ratio of declared values to weight).
- Europe accounts for 36.4% of world cocoa grindings. I focus on EU import data – source Eurostat.
- Realized Ivorian prices in the EU rose by an average of \$420/ton post-LID, and Ghanaian prices by \$576/ton – so by more than the LID.
- The prices obtained by Cameroon, Nigeria and Ecuador rose by the same order of magnitude.
- Realized prices have fallen back in 2022 (Jan-Aug). Ivorian and Ghanaian import unit values have fallen to \$103/ton and \$186/ton above the 2018-19 average. Averages for Cameroon, Nigeria and Ecuador have also fallen back to around \$200/ton over the 2018-19 average.



US$ change in EU cocoa bean import unit values, average calendar 2020-21 relative to average 2018-19.

Market fundamentals

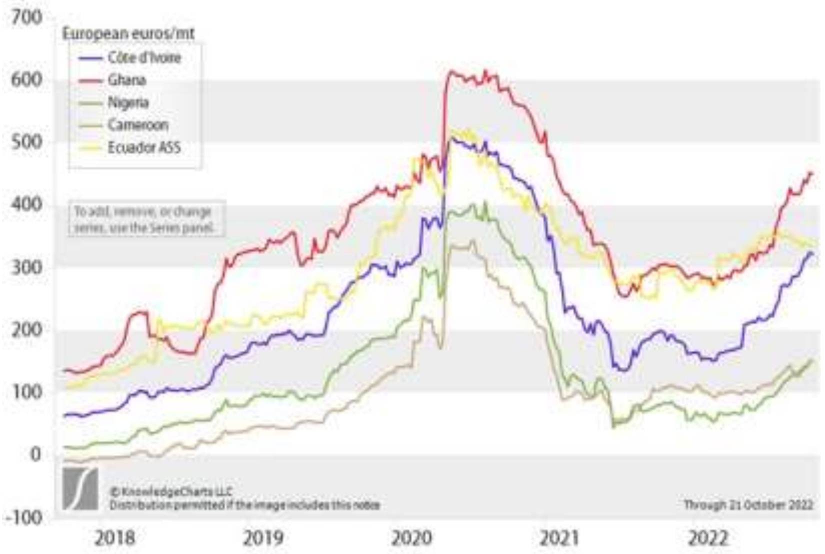
- It would be tempting to jump to the conclusion that the higher 2019 and 2020 prices were due to the LID.
- The cocoa market was very tight in crop year 2019/20 but exhibited substantial excess supply in 2020/21 due to an exceptional Ghanaian crop.
- A standard model in agricultural economics relates prices to availability (crop plus carryover from the previous crop year). The blue line in the chart shows the ICCO Indicator Price in terms of euros/ton while the light bars show a normalized measure of cocoa availability.
- I construct a regression-based counterfactual of no change in availability from 2017/18 + 2018/19.
- Relative to the counterfactual, changes in availability resulted in a 10%-15% price rise in 2019/20 and a 3%-4% fall in 2020/21.
- The unit value of EU imports from Côte d’Ivoire and Ghana rose by somewhat more than this – evidence that the LID had some effect.



The increased value of the US dollar has also been important, particularly in 2021/22, reducing $ and increasing € prices.

Origin differentials

- The rise in import unit values exceeded both the rise in the futures price and the rise that might have been expected given market fundamentals. This points a finger to a rise in origin differentials.
- Price discovery agencies survey broker transactions and publish weekly and monthly averages which act as benchmarks for future transactions. These published differentials include the LID, where paid.
- CRA figures show differentials for all origins jumping sharply in the summer of 2020 when the LID was introduced but then sliding back to their earlier levels through 2021.
- I also calculate realized differentials on the London market by subtracting (lagged) futures prices from the impost unit values. The correlation between the CRA differentials for Côte d'Ivoire (lagged 6 months) and the differentials implied by EU import unit values is 0.86



London origin differentials, €/ton. Commodity Risk Analysis (CRA), LC.

USD origin differentials in New York show that same pattern but the 2020 jump is less marked.

The Côte d’Ivoire-Ghana Cocoa Initiative (CIGHCI)

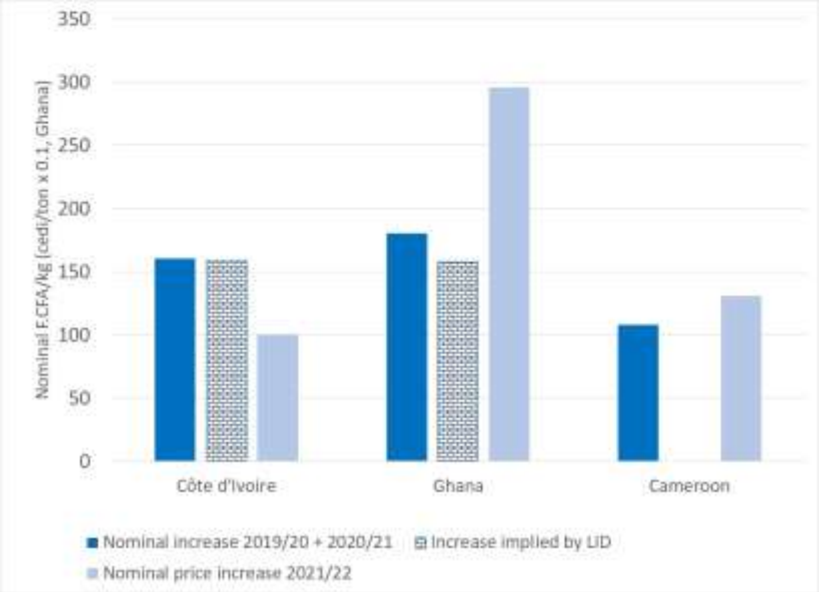
- Both the CRA numbers and the EU unit values show Ivorian and Ghanaian origin differentials rising in 2020 and 2021 but not by as much as the $400/ton LID; and then declining in 2022.
- Starting in May 2022, the CIGHCI has started to publish indicative differentials defining the minimum prices at which the two countries would sell.
- The Ghanaian differential has now risen to meet this objective but the Ivorian differential on the London market is still well short.
- Implicitly, the Ivorians are now seeing the LID as the minimum origin differential and not additional to the market differential.

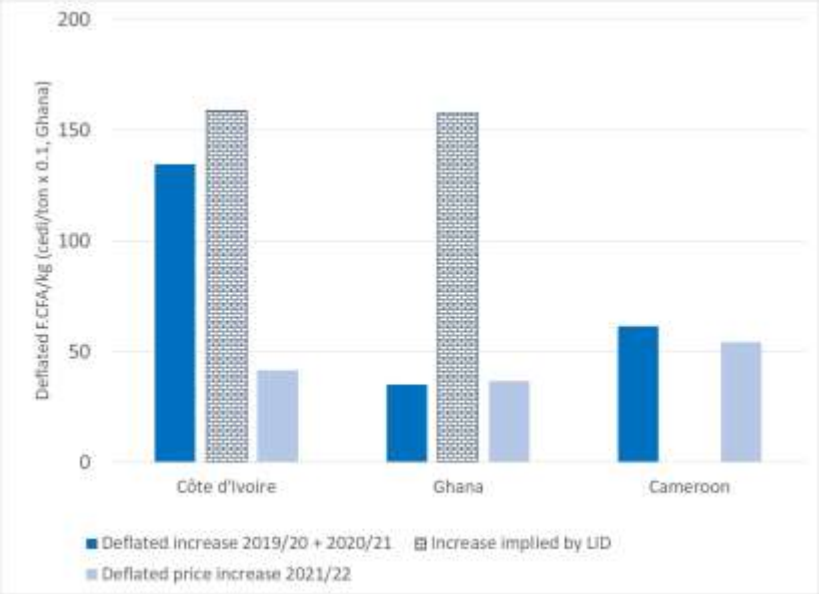
	Côte d ‘Ivoire		Ghana	
2022	Objective	Market	Objective	Market
June	-158	-158	-60	-121
July	-152	-167	-50	-102
August	0	-141	20	-43
September	0	-98	20	-18
October	0	-82	20	40

Columns 1 & 3 show that CIGHCI minimum differentials as announced at the end of the previous month. Columns 2 & 4 show the differentials, net of the $400 LID, reported by CRA.

Producer prices

- How did increased prices in 2019/20 and 2020/21 translate into the prices received by farmers.
- I look at official numbers on producer prices for Côte d’Ivoire, Ghana and Cameroon. It is unclear how well these supposedly minimum prices are enforced in Côte d’Ivoire, and Cameroon.
- The darker blue bar shows the nominal local currency increase in the producer price between 2017/18+2018/19 and 2019/20+2020/21.
- The hatched bar shows the increase implied by a 70% pass-through of the LID to farmers and the increases in 2021/22 (relative to pre-LID prices). The 2019/20+2020/21 Ivorian increase was in line with the LID; the Ghanaian increase was slightly in excess of that.
- The two governments did pass the LID through to farmers.
- The Ivorian producer price was reduced in 2021/22 in line with falling market prices. The Ghanaian price was further increased in nominal terms but in real terms it was little different from its pre-LID level.





The LID – overall assessment

1. Both Côte d'Ivoire and Ghana obtained higher realized prices in Europe over the 2019/20 and 2020/21 crop years. Increases in the US were less dramatic.
2. A large part of these increases was due to the tight situation in the physical market but it appears that the LID also had some impact.
3. These higher prices resulted from a transient increase in origin differentials following the introduction the LID.
4. The increases carried across to other bulk cocoa origins, probably as purchasers attempted to avoid paying the LID.
5. They permitted increased producer (farmgate) prices although in Ghana these were eroded by fast inflation.
6. The increased differentials disappeared in the 2021/22 crop year leaving prices and differentials close to pre-LID levels.

➢ The LID generated benefits to cocoa farmers over the 2019/20 and 2020/21 crop years but it left production and consumption unaffected so the higher prices evaporated.

Lessons for the future

- The LID was a unilateral attempt to raise prices by the two most important producers. However, the LID did nothing to reduce production or exports and so did not affect market fundamentals.
- Cocoa processing exhibits a high degree of market concentration. The LID may have been based on a belief that the large exporter-processors could determine origin differentials. However, these companies work on the margin between farmgate and product prices – they both pay and receive the origin differential and so have little interest in their level.
- Differentials are determined by largely residual transactions on the broker markets.
- The history of commodity control shows that prices are either raised by restricting production and/or exports (difficult in cocoa) or through cooperation between producers and consumers.
- Chocolate consumers are concerned about sustainability. It is worth asking if consumers would pay more for chocolate and cocoa confectionary produced from sustainable cocoa.
- Sustainability relies on traceability.

Thank you for your attention