Tackling Impact Assessment of Business Enabling Environment Interventions: A case study from GROW Liberia's cocoa sector work

A step-by-step approach to impact assessment
can often turn impossible challenges into possible solutions.

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May 2022

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Synopsis:

Successful interventions targeting the business enabling environment can have a profound effect on markets and the target group. Yet, practitioners often struggle to assess the impacts of these interventions within market systems development programmes. This paper explains how to tackle impact assessment challenges for business enabling environment interventions using the case of a GROW Liberia intervention focused on regulations in the cocoa sector. It provides a step-by-step approach, outlining what information to gather, how to gather it and how to use it to describe and estimate intervention impacts. It discusses how to report results and concludes with practical lessons learned applicable to common impact assessment challenges.

Acknowledgements:

This case was discussed at the 2021 Advanced Training Workshop in Results Measurement for Private Sector Development. Thanks are due to the Donor Committee for Enterprise Development (DCED), the Ministry of Foreign Affairs of the Netherlands (MoFA) and the Swiss Agency for Development and Cooperation (SDC) for sponsoring both the workshop and the resulting publications. A big thank you to the GROW Liberia team for sharing this case at the Advanced Results Measurement Training Workshop and providing further information and support to develop it for publication. Thanks also to Hans Posthumus, Phitcha Wanitphon and Lara Goldmark for their valuable input and feedback. Finally, thanks to Isabelle Gore for editing the case.

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Acronyms

BEE	Business Enabling Environment
DCED	Donor Committee for Enterprise Development
GoL	Government of Liberia
LACRA	Liberia Agricultural Commodities Regulatory Authority
LPMC	Liberia Produce Marketing Corporation
USD	United States Dollar

1 Introduction

Many monitoring and results measurement practitioners struggle to assess the impacts of interventions related to the business enabling environment (BEE) within market systems development programmes. Indeed, there are only a few examples to provide lessons and guidance. Yet practitioners also recognise that successful interventions related to the BEE can have a profound effect on markets and the target group. Assessing these impacts not only enables programmes to report more comprehensively, but also enables them – and the wider field – to gain valuable lessons about BEE interventions and how they complement other interventions.

While programme managers commonly want to assess the impacts of a BEE intervention, both on the market system and for the target group, they are often concerned it will be too complicated or costly. Monitoring and results measurement practitioners worry whether the impacts on the target group will be sufficiently discernible given the other factors influencing the particular aspect of the BEE the programme targeted, as well as the other factors influencing the target group.

The GROW Liberia programme faced these challenges for a key BEE intervention in the cocoa sector that the programme team implemented in 2019. This case presents solutions to the challenges, illustrating how the impacts of the intervention could be assessed on the cocoa sector regulations in Libera, the cocoa exporters immediately affected, the cocoa industry structure in Liberia and the smallholder cocoa farmers who GROW targeted. The Donor Committee for Enterprise Development (DCED) provides guidance on impact assessment as part of the DCED Standard for Results Measurement. This paper supplements that guidance, particularly related to BEE interventions.

GROW Liberia is an agri-business and investment advisory programme that partners with businesses, investors, associations and government agencies to accelerate inclusive economic growth. It uses a market systems development approach and has targeted five agricultural industries over its eight years in operation. Programme activities have improved incomes for 39,200 households, created 5,600 full-time equivalent jobs, and leveraged USD 3.8 million in additional investments. GROW is funded by Sida and implemented by Adam Smith International. The programme ends in June 2022.

2 GROW's Work in the Cocoa Sector in Liberia

There are close to 30,000 smallholder farmers currently involved in cocoa farming in Liberia. For most of them, cocoa farming is their main source of income. Cocoa has been grown in Liberia for more than 60 years. However, years of neglect due to conflict and a challenging trade environment have led to a decline in both productivity and profits. Nevertheless, cocoa is still one of Liberia's key export crops.

GROW started working in the cocoa sector in 2016. The programme's strategy focuses on positioning Liberia for trade in premium cocoa markets. Premium markets incentivise quality improvement and also provide an opportunity to align incentives for economic growth with poverty alleviation and environmental conservation imperatives. GROW's strategy includes three intervention areas:

1. Improve yields and the quality of cocoa beans produced by smallholder farmers
2. Increase export of cocoa beans to international premium buyers
3. Support cocoa sector stakeholders to improve the enabling environment for cocoa

The strategy is summarised in a simplified sector results chain in Figure 1. Work started with the first intervention area in 2016; the second was added in 2018. Efforts to address the enabling environment were initiated in late 2018.

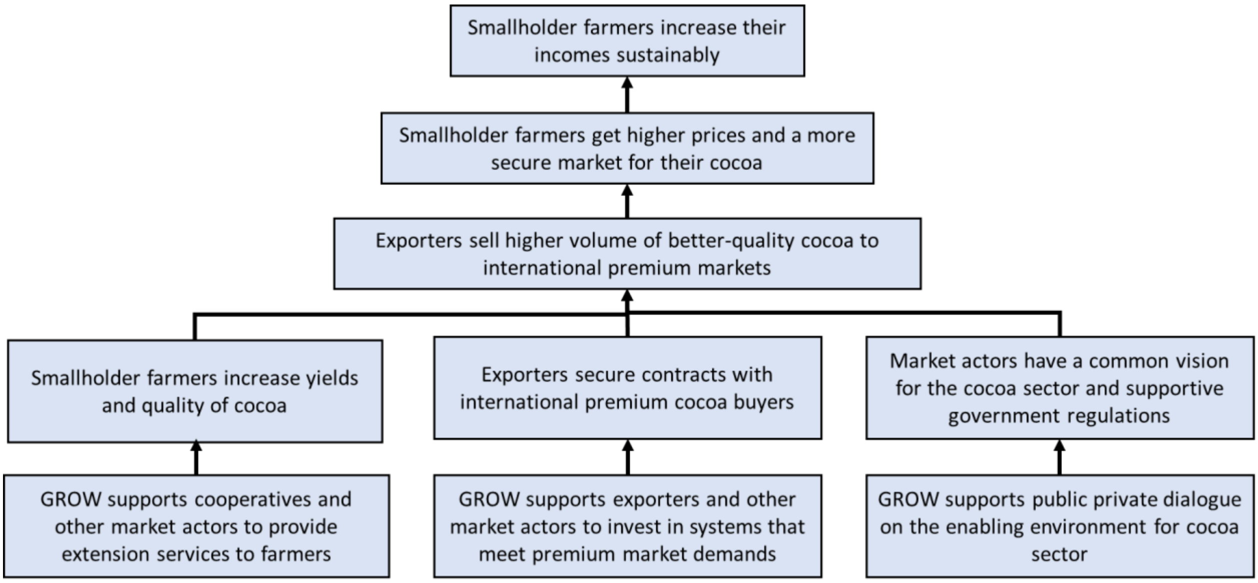

Figure 1: Simplified sector results chain showing GROW's strategy in the cocoa sector

3 The Intervention

3.1 A new policy direction

In late 2018, GROW worked with cocoa sector stakeholders to outline an approach to improving the BEE. It centred on dialogue among both public and private sector actors to create a shared vision for the Liberian cocoa industry and support to the Liberia Agricultural Commodities Regulatory Authority (LACRA) to engage market actors in reviewing and improving cocoa sector regulations. However, in March 2019, before GROW had started any interventions related to the enabling environment, LACRA announced a new proposed set of regulations for the cocoa sector. The unanticipated announcement strongly advised all exporters who wanted to do business in the cocoa sector in Liberia to adhere to the proposed regulations. LACRA submitted the regulations to the legislature to be enacted into law. Table 1 summarises the proposed changes.

Table 1: Summary of proposed changes to regulations affecting cocoa exporters in Liberia

Regulation	Proposed Regulations	Existing Regulation
Minimum bank balance required to be an exporter (USD)	$2,500,000	0
Collateral bond required in Government of Liberia account (USD)	$250,000	0
Exporter license fee (USD)	$10,000	$3,000
Royalty fee per tonne of cocoa exported (USD)	$50	$10
Minimum export volume required per year (Metric tonnes)	3,000	100
Mandatory use of LACRA warehouse	Required	Not required

3.2 Likely implications of the proposed regulations

The proposed regulations contrasted sharply with the existing, liberalised approach that encouraged competition in cocoa trade in Liberia. The likely implications of the new regulations can be divided into short-term effects on exporters and longer-term effects on the structure of the industry and smallholder farmers. Liberia's cocoa exports were dominated by one foreign exporter who controlled approximately 70% of cocoa exports. Ten to twelve smaller, Liberian exporters contributed the remaining 30% of exports. The proposed regulations would have immediately increased costs for all exporters. More importantly, almost all the Liberian exporters were concerned that they would not be able to operate under the proposed regulations. They could not afford the new USD 250,000 collateral bond required and would not be able to aggregate the minimum annual volume requirement of 3,000 metric tonnes of cocoa. They expected that they would have to shut down almost immediately if the proposed regulations were enacted.

Box 1: The history of regulation in the Liberian cocoa sector

The Liberia Produce Marketing Corporation (LPMC) was an agency of government, created by an act of legislation in 1961, to market Liberian produce (cocoa, coffee, palm kernel and palm products). The LPMC was a parastatal organisation and had a monopoly over the purchase and export of coffee and cocoa. LPMC had management issues throughout its existence, often running into financial difficulties. It only sporadically set fixed cocoa prices, which still resulted in farm gate prices as low as one third of neighbouring countries. By 2006 it is estimated that LPMC had not paid farmers at least USD $3.5 million for produce it had purchased and owed a much larger amount to foreign buyers for not delivering the produce for which advance payment had been received. By 2010 LPMC had no capacity to procure locally and had resorted to transferring its statutory mandate for local procurement of agricultural commodities to local traders. The insolvency of the LPMC led to its collapse in 2014, leaving debts unpaid. It was succeeded by the Liberia Agricultural Commodities Regulatory Authority (LACRA).

With smaller exporters shutting down and the regulations discouraging others from starting, the market would have moved towards a monopoly, with the one existing foreign exporter controlling most, if not all of the market. This would have left the market open to common challenges of trading monopolies, including inefficiency and low prices for producers. Additionally, in Liberia it was the smaller exporters who were interested in investing in supply chains to reach premium markets. If these exporters had shut down, their investments over previous years in aligning the Liberian cocoa sector with premium markets would have been lost, and Liberia's position as a producer of only low-quality bulk cocoa would have been further cemented.

These changes in the structure of the market would have also affected farmers. Many smallholder farmers were concerned that they would not be able to sell all their cocoa or that farm gate prices would drop due to increased regulatory costs and reduced competition among exporters. A trading monopoly might have also decreased farmers' cooperatives' bargaining power in the cocoa sector. These concerns were informed by farmers' experience with Liberia's previous, state-owned, trading monopoly that went bankrupt and was abolished in favour of a more liberalised market in 2014. (See Box 1 for details.)

3.3 GROW's response

The proposed regulations came as a surprise to GROW, other donors and most market actors in the cocoa sector. In response, GROW adapted its plan and worked closely with the cocoa exporters association to implement several activities to support public-private dialogue on the new regulations:

- **Analysis:** GROW studied the strengths and weaknesses of other cocoa-growing countries' regulatory models and outlined lessons relevant to LARCA and the Government of Liberia (GoL).
- **Organisation:** GROW assisted the emerging cocoa exporters association to formalise and register.
- **Dialogue:** GROW supported the cocoa exporters association to gather information from members and other market actors, including farmers and traders, on the likely impacts of the proposed regulations, and to develop a position statement to share with LACRA and the GoL.
- **Coordination:** GROW worked with other donors targeting the cocoa sector including discussing the concerns of Liberian exporters, traders and farmers regarding the proposed

regulations and contrasting the proposed regulations with those in other countries that sell to premium markets.
- **Publicity:** GROW strategically raised awareness of regulations in other countries with similar volumes of cocoa as Liberia and also that target premium markets, such as Peru.

3.4 The outcome

The cocoa exporters association presented its position statement to LACRA and the GoL, requesting a public hearing on the proposed regulations. Other market actors and key donors also pushed for public consultation. After pressure from almost all market actors, LACRA then agreed to conduct a public hearing on the proposed regulations. During the hearing, all the market actors present strongly opposed the proposed regulations. Following the hearing, the national legislature dropped the bill.

4 Assessing the Impact of the Intervention

To understand the impact of the intervention, the GROW team needs to assess not only what happened, but also why it happened - particularly the contribution of GROW's intervention. Assessing the impacts of this intervention is tricky for two reasons. First there were significant other factors affecting smallholder farmers, the regulations and the structure of the cocoa industry, in addition to the effects of the intervention. Second, the intervention aimed to prevent a negative change rather than catalyse a positive one. A structured set of steps can enable GROW to assess what happened and why, and then use that information to describe and estimate impacts on the cocoa sector regulations, exporters, the structure of the cocoa industry and smallholder farmers. These steps are:

Step 1: Assess to what extent, why and how changes happened
Step 2: Understand the counterfactual
Step 3: Determine how to compare what happened with the counterfactual
Step 4: Use the comparison to describe and estimate impacts

A research plan format for an impact assessment is provided in Annex 1.

4.1 Step 1: Assess to what extent, why and how changes happened

To assess impacts, the GROW team needs **information on to what extent, why and how expected changes actually happened**. Although GROW had to quickly shift its activities, the team still made a results chain showing how they envisioned the new set of activities would contribute to maintaining the current regulations and how maintaining the current regulations would affect market actors. The GROW team recognised that the cocoa sector regulations have impacts at different levels:[1]

- exporters' costs, their ability to continue operating, and their willingness to invest in reaching premium markets
- the structure of the cocoa industry, particularly the competitiveness of the trading function
- smallholder farmers' revenues and market access

[1] For more information on results chains and indicators for BEE interventions, see Goldmark, L, Majumdar, T. and Špur, K. of Just Results (2022) *Enhancing the use of evidence and results measurement in business environment reform programming; Research Report*, Donor Committee for Enterprise Development, Cambridge UK.

A simplified results chain summarising the GROW team's thinking is presented Figure 2.

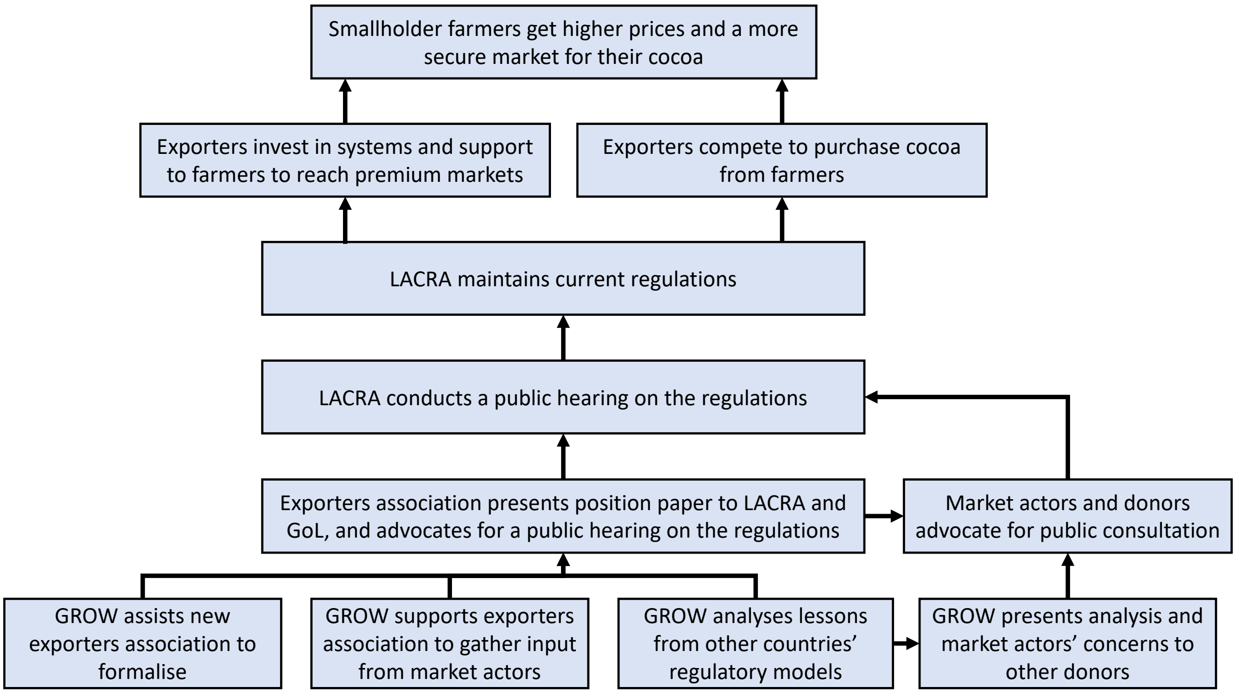

Figure 2: Simplified results chain for the intervention

The GROW team had already gathered much of the information on these changes through its regular intervention monitoring. They had observed market actors' behaviours during the intervention activities and leading up to the proposed regulations being dropped. They had also talked with individual exporters, the exporters association, traders, farmers' groups, farmers and other market actors as well as key informants in the sector about how and why changes happened after the intervention. As part of monitoring other interventions, they had gathered information on how the sector operated under the current regulations. Their findings from this monitoring are presented in Table 2.

Table 2: GROW's findings on how and why changes happened

Findings on how changes happened	Findings on why changes happened
The exporters association formalises.	
Prior to this intervention, GROW has been working with the exporters to position themselves for premium markets. The exporters knew each other and had grouped together informally. GROW was directly involved in helping the nascent exporters association to develop a formal structure and to register themselves as an association.	Exporters said that the proposed changes to the regulations provided the push to formalise the association and that GROW's assistance was key to their ability to quickly formalise.

Findings on how changes happened	Findings on why changes happened
The exporters association gathers input from market actors.	
With support from GROW, the exporters in the association talked with cocoa traders, smallholder farmers and commercial farmers in their networks. These market actors were almost universally against the proposed regulations. The exporters association ensured that these viewpoints were represented in their position statement.	The exporters in the association already knew many traders and farmers as part of their businesses. However, they said that the proposed regulations provided the catalyst for them to proactively seek out the perspectives of these market actors on government regulations. They said that GROW's support helped them think through how to systematically gather input, reach beyond their business networks and structure the information they gathered in a position statement.
The exporters association presented a position paper to LACRA and GoL, and advocated for a public hearing on the regulations.	
GROW trained and supported the exporters association so that they could clearly present their position. GROW worked with them to ensure that the views of farmers' cooperatives and traders were considered in the association's position statement. The exporters association used the information they had gathered from market actors and GROW's analysis of regulatory models in other countries to develop its position statement on the proposed regulations. The position statement also formally asked the GoL for a consultative, public hearing on the proposed regulations. The exporters association also held a press conference on their position regarding the proposed regulations.	The exporters said that GROW's support was very important in understanding the regulatory environments in other countries supplying premium markets and how the proposed regulations might affect the Liberia cocoa sector. The exporters also said that GROW's support was very useful in understanding how to effectively present their findings in the position statement.
LACRA conducted a public hearing on the proposed regulations.	
After the exporters association delivered their position statement and held a press conference, LACRA scheduled and conducted a public hearing on the proposed regulations. During the hearing, many stakeholders voiced negative views on the proposed regulations.	Cocoa industry stakeholders commented that LACRA had not originally planned to conduct a public hearing on the proposed regulations, and that the pressure from the exporters association was important in persuading it to do so.
LACRA maintained the current regulations.	
After the public hearing and press coverage on the issue, the national legislature dropped the bill with the proposed regulations without any formal announcement. Since then, LACRA and the GoL have taken no further actions on cocoa industry regulations.	It is likely that there were several factors that contributed to the legislature's decision to drop the bill. However, cocoa industry stakeholders maintain that the public hearing and press coverage were important factors in dropping the bill.

Findings on how changes happened	Findings on why changes happened
Exporters support farmers and invest in systems to reach premium markets.	
GROW had already been working with selected exporters to support farmers – for example by providing quality guidelines, and by investing in systems such as traceability and organic certification - to help them reach premium markets. During the uncertainty around the regulations, exporters paused their investments in upgrading supply chains. After the proposed regulations were dropped, two of GROW's export partners continued to invest in organic certification and two others invested in central processing.	Exporters felt that their voice was heard when the proposed regulations were dropped. This gave some of them the confidence to continue to invest in systems to target premium markets. Others, however, were concerned that LACRA could try to bring back the proposed regulations sometime later. This uncertainty was holding them back from making investments in reaching premium markets.
Exporters compete to purchase cocoa from farmers.	
In 2018, several international investors started planning scoping missions to Liberia to assess the potential for investing in systems to meet premium market demands together with producer groups and local exporters. However, all the scoping missions were put on hold when LARCA announced the proposed new regulations. After they were dropped, investors restarted their planning. While missions were delayed due to COVID-19, one international investor travelled to Liberia in 2021 and two others conducted virtual missions. Support from international investors would increase competition among exporters, particularly for good quality cocoa.	Cocoa sector experts in Liberia maintain that a liberalised regulatory environment is important to encourage competition and new investment in the sector. While international investors paused their plans when the new regulations were proposed, they felt confident to resume their plans when the current regulations were maintained.
Smallholder farmers get higher prices and a more secure market for their cocoa.	
With exporters' investments in organic certification and central processing facilities, farmers are able to further improve the quality of cocoa and premium buyers are starting to purchase cocoa from Liberia. Farmers are able to access price premiums for better quality cocoa.	Farmers could not get a price premium for their cocoa until quality improved and premium buyers were ready to purchase high quality cocoa from Liberia. Exporters and farmers agree that, with these two changes now in place, farmers can get higher prices for quality cocoa.

This analysis indicates that GROW's activities were instrumental in the exporters association effectively advocating for a public hearing and presenting clear concerns at that hearing. Recognising that there were likely other contributing factors, the exporters association's advocacy influenced LACRA to conduct a public hearing and the public hearing contributed significantly to the GoL dropping the proposed regulations. The analysis also suggests that some local exporters and international investors restarted their planned investments in supply chains largely because the proposed regulations were dropped. However, investments by others are still being hampered by uncertainty. GROW had already established, through previous monitoring, that the existing regulations did support competition among exporters. Investments from exporters and investors, supported by GROW's other interventions, were enabling farmers to improve the quality of their cocoa. Together, these changes attracted premium buyers, which then allowed famers to get a price premium for producing quality cocoa. The monitoring findings indicated that maintaining the current regulations would encourage continued investments that supported farmers to produce quality cocoa and exporters to offer farm gate price premiums for quality cocoa. In short, the analysis showed that the changes in GROW's results chain happened, and that GROW's activities were an important contributor to the changes.

4.2 Step 2: Understand the counterfactual

To describe and estimate impacts the GROW team needs to **understand the 'counterfactual.'** In other words, what would have happened to the regulatory environment if GROW had not implemented the intervention and what would have happened to exporters, smallholder farmers and the structure of the cocoa industry if the proposed regulations had been enacted.

The actual situation with the maintenance of existing regulations and the counterfactual situation with the proposed regulations are summarised in Table 3.

Table 3: Explanation of the existing and counterfactual situations for each level of analysis

Level of Analysis	Actual Situation (existing regulations)	Counterfactual Situation (proposed regulations)
Regulations	The existing regulations are maintained.	The proposed regulations would have been enacted.
Exporters (see Table 1 for details)	Compliance costs and regulatory requirements are manageable for large and smaller cocoa exporters.	Compliance costs for all exporters would have increased substantially. Compliance costs and regulatory requirements would have likely forced most or all smaller exporters out of business.
Cocoa industry structure	The trading function is competitive with multiple exporters purchasing cocoa from farmers and selling to foreign buyers.	Existing smaller exporters would have exited and it is unlikely that any new exporters would have entered the market. The trading function would likely have become a monopoly with only one foreign-owned exporter. This exporter would have continued to focus wholly, or primarily, on the bulk cocoa market rather than targeting premium markets.
Smallholder cocoa farmers	Smallholder farmers sell their cocoa to traders or to smaller exporters, either directly or through farmers' cooperatives. Those who have relationships with exporters serving premium markets receive more stable and higher prices.	Smallholder farmers would have sold their cocoa to traders selling to the monopoly exporter. Prices would have likely dropped and some smallholder farmers, particularly those in remote areas, might not have been able to sell their cocoa. Prices for all farmers would have continued to be volatile as the bulk cocoa market prices are more volatile than premium market prices.

The GROW team used **three complementary methods** to outline the likely counterfactual situation described above.

1. **Re-examination of the history of cocoa in Liberia**

Prior to 2014, Liberia had a state-owned monopoly in cocoa trading and exporting (See Box 1 for details). Understanding how the cocoa sector operated and how farmers fared under this system provided insights into what the counterfactual situation under the proposed new regulations would have been. To understand the situation prior to 2014, the GROW team conducted a desk review using existing studies and talked with traders and farmers who were already operating prior to 2014.

2. **Analysis of other countries operating under monopoly trading models**

GROW's analysis of the regulatory environments in other countries, such as Ghana and Ivory Coast, showed how the cocoa sector and farmers in those countries were affected by regulations that mandated or encouraged a cocoa exporting monopoly. The experiences of other countries indicated how the Liberian cocoa sector and Liberian smallholder farmers would have likely been affected by the proposed change in regulations. Box 2 provides an example from Ghana.

Box 2: A summary of the impact of cocoa regulations in Ghana

Ghana's regulations mandate that the Ghana Cocoa Board (COCOBOD), a state-owned company, buys and exports almost all cocoa produced in Ghana. COCOBOD focuses on the bulk cocoa market. While Ghana is the second largest exporter of cocoa globally, volumes did not increase between 2011 and 2018 (the last year data was available at the time of the study). In addition, COCOBOD has been running at a loss for the last eight years. A study conducted by IMANI Centre for Policy Education in 2019 on the Revenue Management and Producer Pricing Mechanism in Ghana's Cocoa Sector, included the following conclusion:

"The analysis, which was based on the financial reports covering the period 2008 to 2017, suggests a declining level of profitability, worsening conditions in terms of liquidity and a change in COCOBOD's debt structure accompanies with declining performance which is linked to increasing levels of long-term liabilities in the debt structure."

3. Asking cocoa sector market actors their opinions

The GROW team talked with local market actors – exporters, traders, commercial farmers and lead smallholder farmers – to get their opinions on how the regulations would likely affect the cocoa sector and the different market actors within it. The team particularly sought out market actors who were already operating under Liberia's previous regulations as they had first-hand experience of similar regulations.

Exporters: As part of the intervention, GROW talked with all the Liberian exporters about what would happen if the proposed regulations were enacted. The Liberian exporters emphasised that the consequences of the proposed regulations were much more serious than just an increase in costs. They said that they would not be able to operate because they could not afford the collateral bond requirement. Their scale of operations was currently too small to manage the required 3,000 metric tonnes per year and the minimum bank balance, and they could not grow fast enough to meet these requirements. The GROW team realised that the new regulations would drive out all but the single biggest exporter in Liberia.

Traders: All the exporters have their own traders and agents to source cocoa. The exporters explained that the proposed new regulations would not only push them out of the market but also affect their traders and agents, possibly forcing many of them out of business as well. The GROW team also sought out the opinions of local traders directly, both those associated with the Liberian exporters and others. The traders were afraid that the monopoly would reduce local cocoa prices and that more cocoa would be smuggled out of Liberia to be sold in neighbouring countries such as Sierra Leone.

Lead Smallholder Farmers, Cooperatives and Commercial Farmers: Facilitated by GROW, the exporters association gathered input from lead smallholder farmers, cooperatives and commercial farmers regarding the proposed regulations. GROW was able to use this information to understand the counterfactual. Farmers who had operated under Liberia's previous exporting monopoly emphasised that farm gate prices would likely drop without competition among exporters. Farmers in remote areas were concerned that a single exporter with higher costs would not have an incentive to pay traders to purchase cocoa from remote areas. Commercial farmers who were already investing in systems for premium markets were also worried about possible price drops and that they would not be able to directly export their cocoa and would need go through a third-party exporter. Farmers cooperatives who had started working with exporters were concerned that their investments to increase the quality of their cocoa would not be rewarded with higher prices. These opinions helped the GROW team develop a picture of how farmers could be affected by the proposed regulations.

Cocoa Sector Experts: As part of analysing the likely effects of the proposed regulations, the GROW team discussed the regulations with several cocoa sector experts including other donors working in the sector. These experts used their understanding of other cocoa-exporting countries, the history of the sector in Liberia, and the current situation, to outline a likely scenario for Liberia under the proposed regulations. These informed opinions allowed GROW to triangulate their understanding of the counterfactual from other sources.

4.3 Step 3: Determine how to compare what happened with the counterfactual

To determine how to **compare the actual situation with the counterfactual**, the GROW team can use a decision tree to think through the appropriate method for each level to be assessed: the regulations, exporters, the cocoa industry structure and smallholder farmers. The decision tree (Figure 3) helps to select the method to determine how much change is due to an intervention based on the other factors besides the intervention influencing the change, who the change affects and the data available.[2]

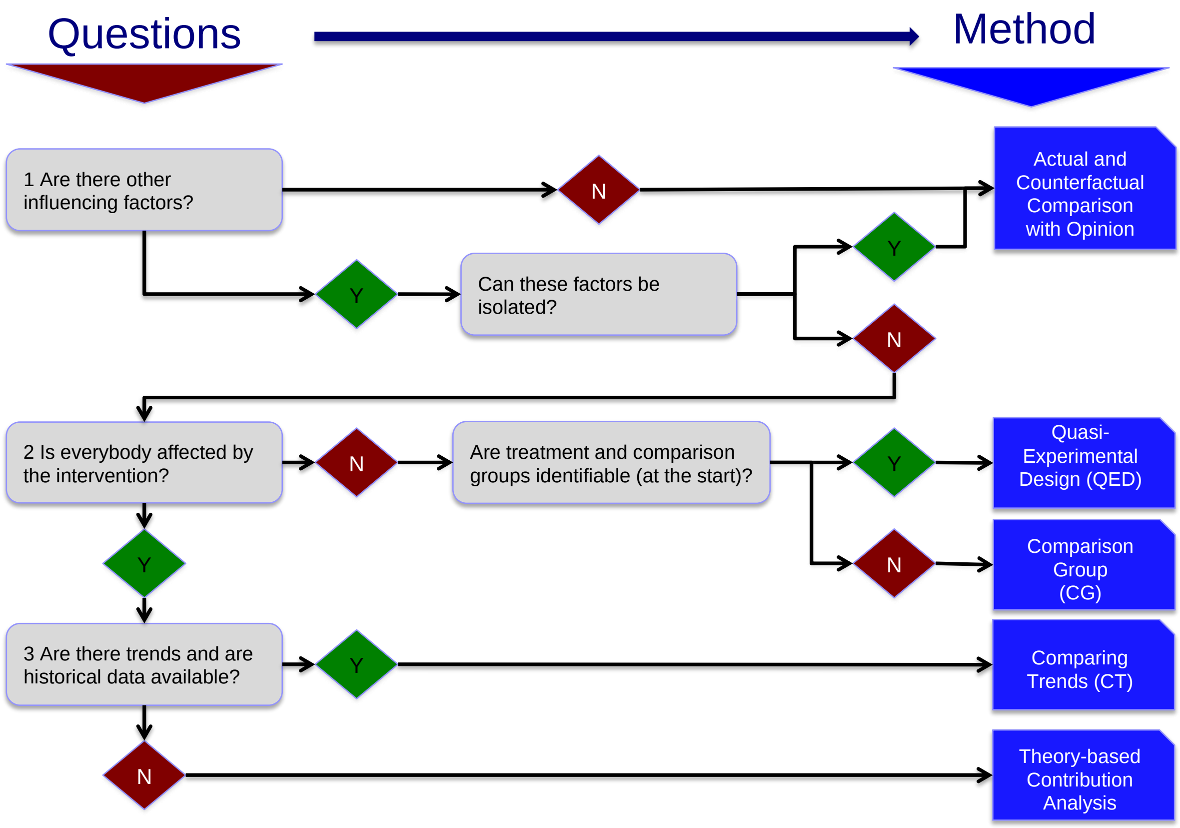

Figure 3: Decision tree to determine the appropriate method for comparing the actual situation with the counterfactual

Table 4 applies this decision tree to each of the levels of analysis GROW was interested in.

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[2] Adapted from Posthumus, H. and Wanitphon, P. (2015) [Measuring Attribution: a practical framework to select appropriate attribution methods](), Donor Committee for Enterprise Development, Cambridge UK.

Table 4: Applying the decision tree for each level of analysis

Question/Level	Regulations	Exporters	Cocoa industry structure	Smallholder farmers
Change to be assessed	The GoL dropped the proposed regulations.	Exporters' compliance costs stayed the same rather than increasing under the proposed regulations.	The cocoa trading and export functions continued with the same costs and a competitive structure instead of moving to a monopoly structure with higher costs.	Smallholder farmers continued to get current prices and market access instead of lower prices and reduced access. Those selling to premium markets got higher prices and greater price stability than they would have if there was a cocoa trading monopoly.
Are there other influencing factors?	Yes, there were likely several factors that influenced the legislature's decision to drop the bill with the proposed regulations.	No – the regulations are the only factor influencing exporters' compliance costs.	Yes, the structure of the cocoa trading and export functions is also influenced by international cocoa markets and economic trends in Liberia.	Yes, global prices, weather, cocoa pests and diseases, climate and the behaviour of other market actors influence farm gate prices and market access.
Can these factors be isolated?	No, it is not possible for GROW to gather information on all the factors that contributed to the decision, nor to quantify and isolate their influence.		No, the influence of these factors cannot be quantified and isolated.	No, the influence of these factors cannot be quantified and isolated.
Is everybody affected by the intervention?	Yes		Yes	Yes
Are there trends and are historical data available?	No, this was a one-time decision made by the legislature.		Yes, there is data that can help to describe what the counterfactual structure would look like.	Yes, there is data that can help to describe the counterfactual situation and estimate prices.
Method	Theory-based contribution analysis	Actual and counterfactual comparison with opinion	Comparing trends	Comparing trends

4.4 Step 4: Use the comparison to describe and estimate impacts

Using the methods above, the GROW team can explain the impacts of the intervention on the cocoa regulations, exporters, the industry structure and smallholder farmers. The GROW team can make a quantitative estimate of some types of impacts; other types can only be described qualitatively. Both the quantitative estimates and the qualitative descriptions are useful for understanding the impacts of the intervention.

Regulations

Based on the information gathered during Step 1, the GROW team can analyse its contribution to the proposed regulations being dropped. While the GROW team cannot know all the factors that influenced the decision, the sequence of events and the opinions of stakeholders indicate that GROW's activities made a significant contribution to the regulations being dropped.

Exporters

The GROW team can quantify the compliance costs exporters save because the proposed regulations were dropped using the information in Table 1. The table compares the compliance costs for exporters under the actual situation – with the existing regulations and the counterfactual situation – with the proposed regulations. This information can be combined with data on volumes exported annually to estimate the costs exporters save annually because the proposed regulations were dropped. However, this analysis does not consider that the smaller exporters would have exited the market if the proposed regulations had been adopted. This aspect is addressed below in the structure of the sector.

Cocoa industry structure

By comparing the actual situation with the likely counterfactual situation as outlined in Table 3, the GROW team can describe the impact of the intervention on the structure of the industry. The intervention contributed to ensuring that the trading and export functions remain competitive, that smaller exporters are able to continue operating and that investments in shifting from bulk to premium markets continue rather than stop.

Smallholder farmers

The GROW team can estimate impacts on farm gate price for smallholder farmers and describe impacts on market access.

To estimate impacts on price, the GROW team can use historical data on prices and the information gathered on the likely counterfactual. Figure 4 illustrates a trend line for the actual farm gate prices for cocoa. The trajectory changed in 2014 when Liberia moved from a monopoly to a liberalised regulatory environment for cocoa exports. The information the GROW team gathered indicates that farm gate price gains made under this model would continue or accelerate if existing regulations are maintained because they encourage competition among exporters. In addition, the Liberian exporters and international investors can be expected to continue investing in reaching premium markets under the current regulations. The "Intervention" line shows when the new regulations were proposed and then dropped. The red line shows an estimated price trend line in the counterfactual situation if the proposed regulations had been adopted. The difference between the actual trendline and the counterfactual trendline is the impact of the intervention on farm gate prices.

The GROW team has access to historical and current price data on cocoa in Liberia from secondary sources and its own monitoring since the programme started. The team can make a rough estimate of what prices would likely be under the proposed regulations based on the methods it used above: historical data from Liberia's previous time with a monopoly exporter, historical and current data from other countries (e.g. Ivory Coast) with a similar regulatory environment as the proposed regulations, and market actors' opinions. The comparison between actual farm gate prices and the estimated counterfactual prices will provide a rough estimate of the impact of the intervention on farm gate prices. This difference can then be multiplied by the annual volume of cocoa currently sold by smallholder farmers based on secondary sources and GROW's monitoring data, to arrive at a rough estimate of the impact of the intervention on smallholder farmers' annual revenues. As no change would have been expected in farmers' costs from the regulations, additional revenues provide a rough estimate of the impact of the intervention on smallholder farmers' annual incomes from cocoa in this case. It would be useful to 'sense test' and refine the estimate by discussing it with a few key informants in the cocoa sector who experienced the previous period with a monopoly exporter in Liberia.

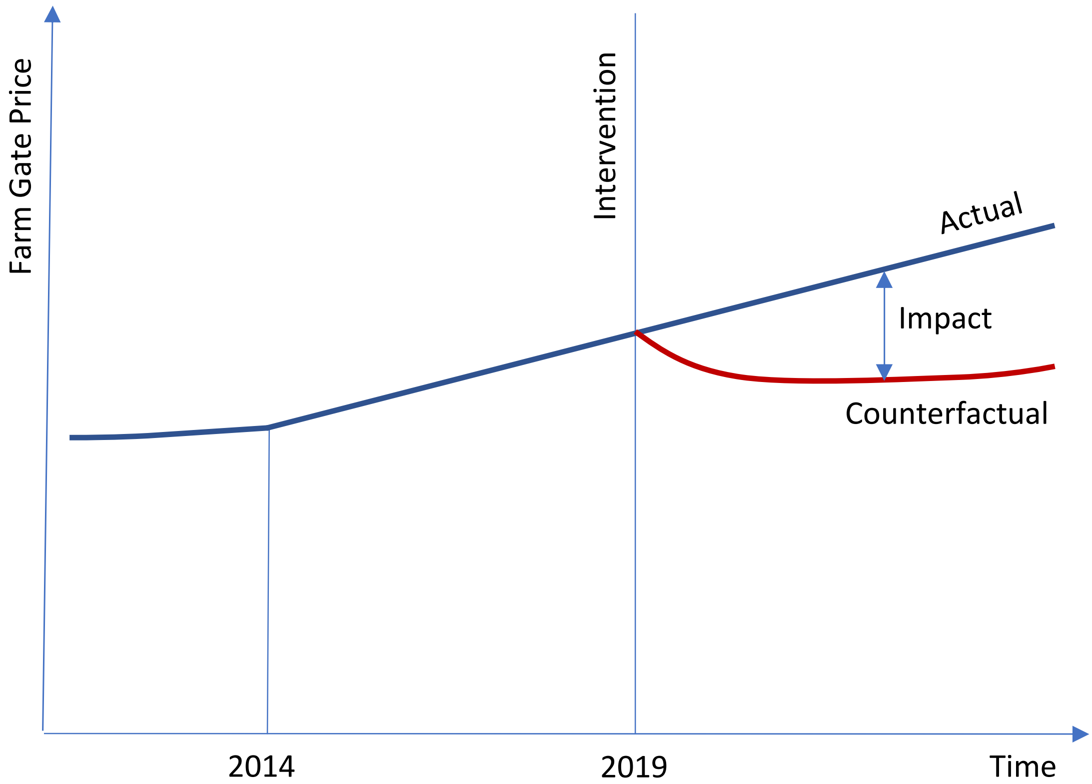

Figure 4: An illustration of how to estimate the impact of the intervention on farm gate prices by comparing the actual and the counterfactual situations

The GROW team can describe the other impacts for smallholder farmers by comparing the actual and counterfactual situations as outlined in Table 3. The intervention contributed to remote farmers maintaining market access as well as more stable farm gate prices for those farmers selling to premium markets.

5 Using the Findings

Both the clear descriptions and quantitative estimates of the impacts of this intervention can help the GROW team assess how important this intervention was to its overall sector strategy. The explanations of impact can help the GROW team analyse how this intervention complimented its work in other intervention areas to catalyse a shift in Liberian cocoa from bulk to premium markets that would benefit smallholder farmers. The evidence presented indicates that avoiding the proposed regulations did have an important impact on the cocoa sector and smallholder farmers in Liberia. Perhaps, more importantly, it was also instrumental in ensuring that other interventions had a positive and sustainable impact on the cocoa sector and smallholder farmers in Liberia because it allowed Liberian exporters who were driving the shift to premium markets to continue operating and investing in their supply chains, systems and marketing to premium buyers. Recognising that LACRA may try to propose the regulations again, it is important to also analyse the capacity of the exporters association and other cocoa sector actors to effectively advocate with the GoL.

An important question is how the GROW team should report the findings of an impact assessment on this BEE intervention. The GROW team can confidently report its contribution to maintaining the current regulations, and the immediate cost savings for exporters from avoiding them. However, these impacts are less important to GROW's sector strategy than the intervention enabling Liberian exporters to keep operating, maintaining a competitive industry structure and allowing smallholder farmers to get higher prices and more market access. Indeed, as the contribution of this intervention to GROW's overall sector strategy and impacts was clearly critical, it is important to report the impacts at all levels. Nevertheless, the information available to estimate the counterfactual for the industry structure and smallholder farmers, while triangulated, may be considered less rigorous than what is possible to obtain for other interventions.

Given this dilemma, an appropriate approach to reporting the impacts of the intervention could include:

- a full, qualitative description of the impacts of the intervention on the industry structure and smallholder farmers when discussing the overall impact of GROW's sector strategy in Liberia; and
- the rough estimate of the impacts on smallholder farmers' incomes together with a brief description of how the estimate was developed, provided separately, rather than aggregated with the impact on smallholder farmers' incomes from other, more rigorously assessed interventions.

This approach does justice to the importance of the intervention in reporting, while acknowledging the limitations of the available data to estimate the counterfactual. As with other interventions, it would be appropriate for GROW to only report on several years of impacts, acknowledging that the situation could change in the future.

6 Lessons Learnt

This case generated robust debate at the 2021 Advanced Training Workshop in Results Measurement. Facilitators and participants debated if the GROW team could assess the impacts of the intervention, at what levels and whether it was worth trying, given the challenges. Ultimately, the group agreed that the likely significant impacts of the intervention on the structure of the cocoa industry and smallholder farmers should not be ignored, particularly given their importance to the overall sector strategy. Having resolved to try, the group found that by taking a step-by-step approach, they could develop a doable and worthwhile approach to assessing the impacts of the intervention not only on the regulations and exporters, but also on the structure of the industry and smallholder farmers. In the process, the group identified important results measurement practices in GROW that made an assessment of the impacts possible, as well as valuable lessons for assessing the impacts of BEE interventions:

Understand the baseline situation: The GROW team has information on the cocoa sector when the programme started as well as detailed information on the situation of specific market actors, including farmers, traders, exporters and the government regulatory body. This understanding provided the foundation for assessing impacts.

Monitor throughout intervention implementation: The GROW team regularly monitored changes as they happened. Consequently, the team had a lot of information about what changes happened, how and why, that could be fed into the assessment of impacts.

Use information gained during implementation: As part of the intervention activities, the GROW team and the exporters association conducted an analysis of the likely effects of the proposed regulations on Liberia's cocoa sector and the market actors within it. This provided much of the information that the programme needs to assess impacts.

Understand the counterfactual: Most interventions aim to catalyse a positive change. This one aimed to help prevent a negative change. Therefore, it was important to carefully outline the actual situation – a continuation of the existing regulations - and the counterfactual – adoption of the proposed new regulations. There are parallels with other interventions that aim to prevent a negative event - such as preventive medicines for livestock.

Value both qualitative and quantitative analysis: It is possible to make a rough, quantitative estimate of the impact of this intervention on smallholder farmers' incomes. This is useful information to indicate the magnitude of impacts and compare with other interventions, but it is not the whole story. The qualitative comparison of the actual structure of the cocoa industry, compared with how it would have likely changed under the proposed regulations, reveals the importance of the intervention to GROW's overall sector strategy and the sustainability of impacts from earlier interventions.

Take a step-by-step approach: Assessing the impacts of this intervention initially looked daunting. However, taking a step-by-step approach revealed that it was not only possible, but that much of the information needed had already been gathered as part of the intervention activities and monitoring. A step-by-step approach to impact assessment can often turn impossible challenges into possible solutions.

Annex 1: Research Plan Format for an Impact Assessment

Aims: what do we want to find out?

Main Aims
 	
• What is the counterfactual (key boxes/key indicators) we are assessing and for which levels?
  • **Partner level:** key indicators e.g. usage, turnover or employment
  • **Intermediate level:** key indicators e.g. usage, turnover or employment
  • **Target group level:** key indicators e.g. access, usage and income or employment
 	
Bonus Aims
 	
• Are there any other data needs we could address at the same time, such as:
  • **poverty assessments** or
  • **systemic changes**?
• Do we need to assess **unintended effects**, and if so which unintended effects?
• Do we need to verify if there are **overlaps with other interventions**, and if so, how?

Purpose: why do we need to conduct this impact assessment?
• Will the findings of the assessment be reported? And if so, how? • How will they be reported: as early signs of impact, or reported as impact achieved? • What level of rigour do we need to achieve our purposes? Why? • Are there limitations that need to be considered and reported? **Ethics:** data sharing, data privacy, consent, contextual ethics notes, etc.

Attribution methods: how do we assess attribution?
Partner level: • Who and which attribution method? • Baseline information available? (users/non-users where applicable) • End-line information already or partly available? (users/non-users where applicable)
Intermediate level: • Who and which attribution method? • Baseline information available? (users/non-users where applicable) • End-line information already or partly available? (users/non-users where applicable)
Target group level: • Who and which attribution method? • Baseline information available? (users/non-users where applicable) • End-line information already or partly available? (users/non-users where applicable)
What do we already know and what else do we need to decide?
• Baseline information? (users/non-users where applicable) • Secondary information? (users/non-users where applicable) • Monitoring reports? (users/non-users where applicable)

• **What else do we need to disaggregate?** *Other sub-groups such as gender, ethnicities or regions, besides users/non-user groups?*
• **When does it start and when will it be completed?**
  ○ Start and duration of the assessment:
  ○ Data analyses report to be completed by:

Data collection plan					
Source	**Geographical Location(s)**	**Sampling Frame and Method**	**Data Collection Tools** e.g. survey, FGD, interview, secondary data, etc.	**Sample Size**	**Sample Size Justification**