

Liberia - Global Agriculture and Food Security Program Impact Evaluation 2018, Endline Survey

Development Impact Evaluation (DIME)

Report generated on: July 7, 2023

Visit our data catalog at: <https://microdata.worldbank.org/index.php>

Identification

SURVEY ID NUMBER

LBR_2018_GAFSPIE-EL_v01_M

TITLE

Global Agriculture and Food Security Program Impact Evaluation 2018, Endline Survey

COUNTRY/ECONOMY

Name	Country code
Liberia	LBR

STUDY TYPE

Other Household Survey [hh/oth]

SERIES INFORMATION

The continued development of Liberia's agricultural sector is crucial to Liberia's economic growth and food security. A focus on smallholder farmers helps to ensure pro-poor growth; over 70% of Liberia's population is involved in farming and the vast majority of this population practice cultivation at the subsistence level, utilizing traditional techniques.

The Smallholder Agricultural Productivity Enhancement and Commercialization project (SAPEC) aims to improve the productivity, income and nutritional outcomes of beneficiary farmers in 12 of Liberia's 15 counties. SAPEC provides farmers with agricultural technologies, constructs and rehabilitates infrastructure to support value-chains and market linkages, as well is working to improve the institutional capacity of the Ministry of Agriculture and associated research institutions.

The impact evaluation focuses most directly through the most rigorous methods on the input delivery component. SAPEC's design incorporates a focus on women, youth and the disabled to better integrate these groups into the agricultural sector and improve their capacity. Given Liberia's relatively low life expectancy and high youth population (42% below age 15; LISGIS 2011), it is particularly important to encourage youth participation in agriculture. Declining youth participation in the agriculture sector across Africa prompts concerns that if youth are the most open to new technologies, programs promoting new agricultural methods and varieties may struggle to convince farmers to try these new methods unless they can recruit young farmers.

ABSTRACT

The Global Agriculture and Food Security Program Impact Evaluation proposes to study the impact of seed and tool distribution on the take-up of modern farming inputs and the use of productivity enhancing tools, thereby resulting in higher agricultural yields and improved nutritional outcomes, as measured by dietary diversity scores. The wide geographic scope of SAPEC and its focus on smallholder farmers offer a unique opportunity to generate data that can be more robustly extrapolated to the wider Liberian population. We will use data from a 2016 registration of Liberian farmers to randomly select 1,000 Liberian farmers from 100 randomly selected communities in Liberian districts serviced by SAPEC.

Using a randomization at multiple levels, we seek to determine whether the provision of 91%-subsidized improved seeds, tools, and fertilizer promote the take-up of modern farming inputs and improve diets. We will also study whether particular beneficiary sub-groups (by age and gender) are more likely to respond to SMS messaging with an agricultural focus and whether small adjustments to the content of these messages can result in relatively greater improvements in take-up by youth.

Version

VERSION DESCRIPTION

v01. Edited, anonymized datasets for public distribution.

Scope

NOTES

The Global Agriculture and Food Security Program Impact Evaluation 2018 in Liberia covers the following topics:

- Household Identification
- Contact Information
- Household Member Roster
- Personality Traits
- Access to Extension and Other Trainings
- Key Agriculture Questions
- Farm Roster and Details
- Input Use
- Technology Use
- Labor for Basic Agricultural Activities
- Storage and Marketing
- Crop Production Cycle
- Farmer Organizations
- Kitchen (Backyard) Gardens
- Assets
- Informal Saving
- Bank Account
- Section M-3: Credit
- Food Security Section Respondent/Consent
- Dietary Diversity
- Global Food Insecurity Experience Scale- Individually Referenced (including Liberian English translation)
- Ebola Incidence

Coverage

GEOGRAPHIC COVERAGE

National

Producers and sponsors

PRIMARY INVESTIGATORS

Name	Affiliation
Development Impact Evaluation (DIME)	The World Bank

FUNDING AGENCY/SPONSOR

Name	Abbreviation
Global Agriculture and Food Security Program	GAFSP

Sampling

SAMPLING PROCEDURE

Sample size: 570 households

The core strategy for the evaluation is a cluster-randomized phase in of subsidy offers with individual assignment of input deliveries within treatment communities. What this means is that, because SAPEC can only provide a fixed quantity of inputs in a particular season due to capacity constraints, the study aims to randomly assign which communities are first in line to receive the inputs and which farmers in these communities are first in line to receive the inputs. Random selection of farmers and communities is a fair way to decide who receives inputs first that allows us to compare farmers who have been offered inputs with those who have not been offered yet without ultimately affecting which farmers receive benefits at the project closing date. Including some communities and not others in the first round allows to rule out spillovers of farmers who get inputs to other farmers in the same community by comparing to communities where no one has received any inputs. Randomly selecting farmers within communities in contrast also allows us to make comparisons between farmers who are very similar to each other. Finally, strategically make offers of inputs to youth vs older farmers in order to also make careful comparisons of impacts on these groups of particular interest.

There are two dimensions on which the offer of improved seeds, cuttings, and tools will be made in order to assess the impact of this offer on agricultural practices and outcomes, both in general and differentially by the age of the farmer.

First, we propose to compare households in communities where SAPEC will offer subsidized inputs against communities where subsidized inputs will not be offered during the evaluation year. Assignment to SAPEC input provision (treatment communities) or no provision (non-treatment) occurs at two levels. First, 100 communities in SAPEC treatment and control districts will be randomly selected to take part in the study, using the list of SAPEC-eligible communities in the LATA database as a sampling frame. Each community will have a minimum of 25 farmers. Of the selected communities, 50 will be treatment communities and 50 will be control communities. Since SAPEC can deliver inputs and technical assistance to a maximum of 5,000 farmers in a given year and the potential number of beneficiaries in all SAPEC-eligible communities is much larger than this 5,000, the random assignment of potential treatment communities to the set of controls only changes the order of who receives the benefits next, rather than withholding benefits from anyone in particular.

The second dimension to create a counterfactual for beneficiaries will be the random selection of specific beneficiaries within SAPEC treatment communities. From the list of all farmers from the randomly-selected treatment and control communities that have been registered in the e-platform system, we will randomly select an average of 10 per community to be SAPEC beneficiaries (or survey respondents, for control communities) in the upcoming round. This will allow us to sample farmers within treatment communities as well as farmers who were randomly selected to not receive them this year, allowing us to see the causal impact of this input provision on the delivery of tools.

Within the communities to be treated this year, we will start from the list of all households listed in the mobile phone registries who are eligible to receive SAPEC benefits in this year's wave of benefit delivery. In advance of distribution, we will stratify these eligible farmers by age and gender, and randomly assign 1,500 of them to be invited to report to a SAPEC office in order to be registered as beneficiaries, with equal proportions of male and female and under- and over-35-year-old farmers receiving invitations. All of the farmers who appear to be registered will receive the package of benefits from SAPEC. If less than 1,500 farmers reply, a corresponding number of additional invitations will be sent to randomly selected households who were not selected in the first round until 1,500 beneficiaries have been registered. When invitations are sent, the invitee will be randomly assigned to receive one of 5 different types of messages which emphasize different features such as the potential to earn higher income or to meet other farmers the invitee as described in section 5. This will allow us to test whether different types of farmers (young vs. older) respond to different aspects of program benefits or design.

WEIGHTING

Because an equal number of young and older farmers are selected to receive treatment in order to maximize power, the sample in the survey is not guaranteed to have the same proportion of young and older farmers that would be expected to be found in the population. This is important for interpreting the average effect of the treatment on the population as a whole. In order to recover population based estimates that are unbiased by sample selection, population based probability sample weights are applied to all regressions that estimate sample weights. Using weights allows to recover an unbiased estimate of the effect of the population on the overall treatment.

Data Collection

DATES OF DATA COLLECTION

Start	End	Cycle
2018	2018	Endline

DATA COLLECTION MODE

Computer Assisted Personal Interview [capi]

DATA COLLECTION NOTES

This data collection will be coordinated by the field coordinator based in Monrovia and carried out largely by the SAPEC focal persons in each county. The data collection will be based on a system of data entry sheets established by DIME during the preparation phase and currently in use by the project.

Questionnaires

QUESTIONNAIRES

The questionnaire is structured and available in English. It can be downloaded under the "Resources" tab.

Access policy

CONTACTS

Name	Affiliation	Email
Paul Christian	The World Bank	pchristian@worldbank.org

CONFIDENTIALITY

CITATION REQUIREMENTS

Use of the dataset must be acknowledged using a citation which would include:

- the Identification of the Primary Investigator
- the title of the survey (including country, acronym and year of implementation)
- the survey reference number
- the source and date of download

Example:

Development Impact Evaluation (DIME) (The World Bank). Liberia - Global Agriculture and Food Security Program Impact Evaluation 2018, Endline Survey (GAFSPIE 2018). Ref: LBR_2018_GAFSPIE-EL_v01_M. Downloaded from [uri] on [date].

ACCESS AUTHORITY

Name	Affiliation
Paul Christian	The World Bank

Disclaimer and copyrights

DISCLAIMER

The user of the data acknowledges that the original collector of the data, the authorized distributor of the data, and the relevant funding agency bear no responsibility for use of the data or for interpretations or inferences based upon such uses.

Metadata production

DDI DOCUMENT ID

DDI_LBR_2018_GAFSPIE-EL_v01_M_WB

PRODUCERS

Name	Abbreviation	Affiliation	Role
Development Data Group	DECDG	World Bank	Documentation of the study

DATE OF METADATA PRODUCTION

2023-07-07

DDI DOCUMENT VERSION

Version 01 (2023-07-07)

Data Dictionary

Data file	Cases	Variables
microdata_endline Global Agriculture and Food Security Program Impact Evaluation 2018 - Endline Survey Data	1379	5750