Impact Evaluation Summary
The continued development of agricultural sector is critical to Liberia’s economic growth. Over 70% of the population is involved in farming, but the majority still uses outdated techniques.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, with a special focus on youth and women.

The Liberia Global Agriculture and Food Security Program Impact Evaluation seeks to study the SAPEC project by analyzing the impact of seed and tool distribution on the take-up of modern farming inputs and the use of productivity enhancing tools on agricultural yields and nutritional outcomes. Based on a sample of 1,000 Liberian farmers from 100 randomly selected communities, the study will determine: i) whether providing a 91% subsidy on improved seeds, tools, and fertilizer promotes take-up of modern farming inputs and improves diets, and; ii) whether beneficiary sub-groups, particularly young groups, are more likely to be involved in agricultural improvement programs when invited through SMS messaging.

Policy Issue
Liberia’s agriculture sector has been at the core of peace-building and reconstruction efforts following civil war. However, access to assets and infrastructure continue to be key constraints for the vast majority of smallholders in order to increase production beyond a subsistence level and improve food security. Given Liberia’s relatively low life expectancy and high youth population (42% below age 15), it is particularly important to encourage youth participation in agriculture.

The lack of available and robust data on the Liberian agricultural sector is a major obstacle to assess present policies and create improved, evidence-based policy frameworks. This study is designed to help fill the existing data gap by assessing a core activity of SAPEC, a major agricultural project in Liberia, while also assessing a potentially convenient method of targeting youth within the program.

Context
Between 2009 and 2013 Liberia had a strong economic growth (5.3% to 8.7%), well above the average among developing countries in Sub-Saharan Africa. However,
the Ebola crisis that began in 2014 enormously affected Liberia’s economic prospects, bringing GDP down to 0.7% that same year and to 0.3% in 2015. Despite Liberia’s generally strong economic performance, poverty rates have remained high, particularly in rural areas. About 55% of the population falls under the poverty line. Lack of poverty reduction has been attributed to a failure to increase smallholder farmer production.

SAPEC was established as a pillar of the Liberia Agriculture Sector Investment Program (LASIP), with funds from the Global Agriculture and Food Security Program (GAFSP), the African Development Fund (ADF) and the Government of Liberia (GoL). Its long-term goal is to increase yields and improve nutritional outcomes in beneficiary communities. One feature of SAPEC’s model is that at least 30% of beneficiary farmers should be under 35 years of age. But the assumption that younger beneficiaries are more likely to adopt new technology for better crops has not been well founded in theory, and a rigorous experiment of recruitment strategies is needed in order to be certain.

**Intervention**

This study evaluates input delivery of seeds and tools, and targeted messaging to recruit youth in agriculture, two aspects of SAPEC’s activities to facilitate sustainable crop production intensification. On one side, SAPEC distributes a highly-subsidized package of materials needed for modernized farming, including 50 kg of improved rice or cassava and harvesting tools, and provides follow-up knowledge support on how to use them efficiently. On the other side, the program will use the Ministry of Agriculture’s e-platform system to recruit 30% of participants under 35 years old, through targeted messaging delivered via SMS. Ultimately the intervention can influence the removal of supply, finance, information and targeting constraints that deter farmers from adopting improved varieties of seeds, tools, and modern farming methods.

**Evaluation Methodology**

To assess whether access to materials and evidence of the effectiveness of new varieties is the key constraint, the impact evaluation team will compare farming households who receive SAPEC benefits with households that do not. One hundred communities with at least 25 farmers will be randomly selected to a set of 50 treatment communities and 50 control communities. Then an average of 10 SAPEC beneficiaries will be randomly selected per community to receive next wave of inputs, allowing to see the causal impact of this input provision on beneficiaries and non-beneficiaries.

To test whether messaging can help recruit youth to farming, the team will send SMS messages inviting farmers to register locally in order to receive subsidized inputs. A minimum of 1,500 text messages will be sent to a randomly selected set of farmers in the e-registry, with at least 20 farmers being recruited in each treatment community, a minimum of 10 farmers under age 35 and 10 farmers above age 35. Then a regression incorporating indicators for age and gender, will allow to identify whether different messages are more or less effective in encouraging different kinds of members to sign up.

**Results TBD**

**Policy Lessons TBD**

**Information Box**

- **Country:** Liberia
- **Theme:** Agriculture
- **Topics:** Fragility conflict,
- **Timeline:** January 2017–February 2018