

RWANDA: PROGRAM BRIEF



Background

DIME's work with the Government of Rwanda (GoR) that began in 2011 under the Global Agriculture & Food Security Program (GAFSP) is an exceptional example of how governments can take a sector-wide approach to impact evaluation (IE). Through support from the European Union through a contribution to the World Bank's i2i trust fund, the portfolio of evaluations has moved from project-level impact evaluation to a national research program to study the rural transformation. The work has evolved into a large portfolio of cross-sectoral IEs, driven by priorities from senior policy-makers to systematically learn from robust evidence. The work spans two long-term longitudinal studies of large-scale infrastructure investments in hillside improvements and rural road development, combined with RCTs that seek to address complimentary constraints.

This program of IEs contributes to building the science of delivery in a number of areas: investment in large infrastructure (terracing, irrigation and feeder roads), rural finance, accountability in extension service delivery, as well as understanding mechanisms for operation and maintenance of rural roads and of irrigation projects. The scale and life-cycle varies across each of the research areas, and has led to studying several unique but intertwined questions in a close partnership where research feeds into program design and operations.

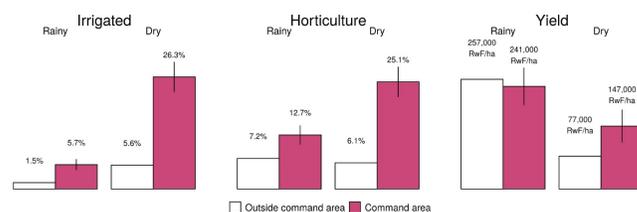
Country Research Program

Over the past seven years, DIME has developed a country research program in Rwanda to support the World Bank's portfolio of agricultural and infrastructure investments in the rural economy. A collaboration with the Rwanda CMU, multiple World Bank Operational teams, and line ministries, evidence from this portfolio of evaluations have been used in the new CPF, the recent SCD, and in overall support of Bank operations in Rwanda – as documented most recently in [IEG's 2019 Country Program Evaluation](#) for Rwanda: "The Bank Group's involvement in agriculture, for example, saw a steady production of analytics, some of

which provided essential foundations for lending. In agriculture and rural development more broadly (including rural transport and finance), work under the World Bank's Development Impact Evaluation (DIME) initiative provided valuable analysis regarding the impact of Bank Group-supported interventions."

Evidence for Actionable Policy

Working closely with operational colleagues and senior policy-makers, DIME has delivered a range of outputs that document the impact of large-scale investments in the rural sector that have fed into policy and project design for new grant and IDA-funded operations in Rwanda. A multi-year partnership with the Rwanda's Ministry of Agriculture (MINAGRI) on the flagship Land Husbandry, Water Harvesting and Hillside Irrigation (LWH) project resulted in multiple policy-focused outputs including the study of the [overall impact of LWH](#) and a recently published [WB Working Paper](#) documenting the impacts of farmers' access to irrigation.



[The evaluation finds](#) that farmers who adopt irrigation see their on-farm cash profits increase by 70%. At the same time, irrigation use remains stagnant at 30% 4 years after the system came online. This, and other findings from the evaluations related to LWH have informed scale up/down decisions within the project itself and addressing this inefficiency underlies a new grant and IDA-funded investments in the sector. These operations will be complemented by experimentation with potential policy instruments to maximize returns to irrigation development. In addition, findings from the evaluation were cited in the most recent national sector strategy for agriculture ([PSTA IV](#)) towards efficient use of irrigation, thus establishing a link between rigorous research and policy design.

Experimentation & Adaptive Programming

A core feature of DIME's operational model in Rwanda has involved close partnerships with Rwanda's Ministry of Agriculture and Animal Resources and Ministry of Infrastructure to design rigorous evaluations and innovative implementation modalities, roll out Randomized Controlled Trials (RCTs) within government programs, and collect data on an ongoing basis. The LWH, and Rural Feeder Roads projects are examples of large investments with goals to profoundly transform the rural economy.

Alongside long-term evaluations that evaluate the impact of these large-scale investments, DIME has taken a lead in designing IEs aimed at answering questions related to delivery modalities, implementation mechanisms and sustainable maintenance of these programs with an eye towards optimizing the efficiency of the underlying investment.

One example of this is a collaboration between DIME, One Acre Fund (OAF) and MINAGRI to design, introduce, and test innovative farmer feedback tools within the extension services offered under the LWH project. The RCT was motivated by a need to understand the potential trade-offs of offering private extension and its cost-effectiveness. Together, the [team set up a large field experiment](#), randomly assigning two types of feedback tools to groups of OAF clients. The team added a twist to learn more about the underlying mechanisms: to separate out pure monitoring effects from user empowerment effects, an announcement was made to some extension workers that their work is being monitored, in both treatment groups ("true" announcement) and control groups ("false" announcement).

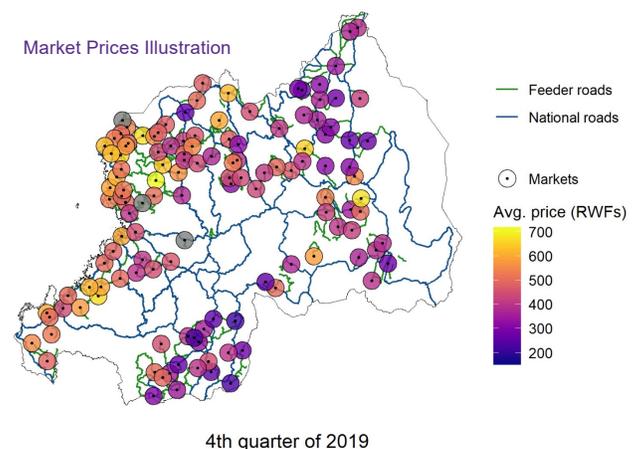
The experiment led to a series of [actionable results](#). First, feedback tools help sustain demand for the service among current clients. Farmer groups offered the opportunity to provide feedback were half as likely to have members leave the service the following year as control groups. Second, and more surprisingly, this demand effect spills over to non-users in the vicinity of the treated groups, who are more likely to sign up in the following season. Third, feedback is particularly effective in getting women to start interacting with a field officer. Following the [several positive results from the study](#), the most cost-effective feedback mechanism (a hotline) was adopted and scaled up by OAF throughout Rwanda the following season. In the years since, OAF has piloted and implemented the hotline in other countries where they operate.

Building Data Systems for Evidence

A core pillar of the Research Program – in moving from evaluating individual programs and projects towards developing a data-driven evidence ecosystem – is investment in a national data system. The data ecosystem is a rich integration of survey,

administrative and sensor data. Households' surveys allow for tracking multiple welfare dimensions, and innovative high-frequency market data allows tracking market responses (e.g., price and availability of inputs and consumption products). The integration of a series of administrative data will allow for a more compressive understanding of changes that result from higher market integration.

The team has also developed dashboards to facilitate access to data and data analytics and trained government officials, in a continuing effort to strengthen their monitoring and evaluation function. This system informs policymakers on the impacts of policies at-scale, helps operational partners coordinate evidence-based policy-actions, and allows fast response in times of crisis such as the ongoing COVID-19 pandemic.



Sector-Wide Engagement

DIME's portfolio of IEs in Rwanda has evolved over time, with several short and medium-term outputs that have already begun to shape the government's approach to a rural transformation agenda. Through support from the EU, DIME has and will continue to closely align with MINAGRI's sector-wide approach. It will support program implementation by testing alternative delivery mechanisms, and building knowledge feedback loops under key pillar of MINAGRI's poverty reduction and agricultural strategies. In practice, this is happening through three main channels: (1) an impact evaluation team that merges research, operations and project management, implements the work, with the day-to-day technical support of a field coordination team based in Kigali; (2) the impact evaluations will focus on key policy areas agreed on with MINAGRI, and are specifically designed to yield actionable recommendations that back operational decisions with hard evidence; and (3) wider capacity building for evidence-based policymaking government institutions, as well as the National Institute of Statistics (NISR) and the local research community.