**CAPABILITY STATEMENT**

# Quantitative Impact Evaluation

## Introduction

**Oxford Policy Management is committed to helping low- and middle-income countries achieve growth and reduce poverty and disadvantage through public policy reform.** We provide analytical and practical support throughout the policy cycle, from research and policy design to implementation, performance monitoring, and evaluation.

With over 40 years' experience and more than 400 staff across a global network of offices, we work across the policy cycle to deliver projects that deliver real and lasting change.

Our combination of cutting-edge research and understanding of decision making and policy processes in low- and middle-income countries has enabled us to collaborate with many of the leading names in development policy – including global consultancy practices, universities, and major financial institutions. It has also resulted in a large number of multilateral, governmental, and non-governmental funders commissioning our services. Among others, we have worked with the UN, the European Commission, the World Bank, Oxfam, FCDO (formerly DFID), and Save the Children.

We facilitate change by working with leaders and key reformers within and outside of government to build teams capable of solving policy implementation challenges. We work in all areas of economic and social policy and governance, including: health, finance, education, climate change, and public sector management. We draw on our local and international sector experts to provide the very best evidence-based support.

> **"**
>
> Impact evaluation is an assessment of how the intervention being evaluated affects outcomes, whether these effects are intended or unintended. The proper analysis of impact requires a counterfactual of what those outcomes would have been in the absence of the intervention.
>
> OECD Outline of Principles of Impact Evaluation

# Impact Evaluation

**The design and implementation of quantitative experimental and quasi-experimental impact evaluations is one of our core strengths**. The past decades have seen a huge rise in the number of impact evaluations of development policies, and an increasing trend towards using rigorous evidence while making policy decisions. In recent years, impact evaluations have become essential to understanding what works and why in policies and programmes designed to reduce poverty and disadvantage. Impact evaluations have emerged as a tool to guide policymakers and funders of development programmes in deciding which programmes to modify, continue, scale up, or discontinue.

## Design and methodology

**Our quantitative impact evaluation team works with a wide variety of analytical methods and designs to best meet the objectives and requirements of each evaluation**. In all our quantitative impact evaluations, depending on the characteristics of the programmes we are evaluating and on the relevant evaluation questions, we aim to identify a comparison group. This enables us to understand what would have happened in the absence of the programme, using a range of methods to identify the best possible counterfactual. These include:

- **Experimental design**
  - **Randomised Controlled Trials (RCTs)**
- **Quasi-experimental design**
  - **Propensity Score Matching (PSM)**
  - **Regression Discontinuity Design (RDD)**
  - **Difference-in-Differences (DID)**
  - **Coarsened Exact Matching (CEM)**
  - **Interrupted Time Series (ITS)**
- **Non-experimental design**
  - **Instrumental variables (IV)**
  - **Panel data analysis**

## Mixed-methods approach to our impact evaluations

Most of our impact evaluations integrate quantitative and qualitative approaches at the conceptual and analytical stages to provide a deeper understanding of what has happened. Our impact evaluations aim not only to understand what the impact of a particular programme is, but also seek to ascertain how the programme works, if it could work better, and if it will work elsewhere. This is possible through the use of mixed methods to develop and test a programme's theory of change. We recognise that combining methods from different disciplines is an effective way of increasing the explanatory power of an evaluation, since different evaluation approaches may be suitable for answering different kinds of evaluation questions.

## Sectoral expertise

We have implemented impact evaluations across a range of sectors including health, social protection, livelihoods and climate change. We work with the extensive in-house capacity within our sectoral teams, who bring a deep knowledge of their sector and ensure the policy relevance of the work.

Governance

Health

Education

Poverty and Social Protection

Research and Evidence

Climate, Energy, and Nature

Gender

## Innovative data collection methods and strong data quality assurance

**We have well established and comprehensive methodologies and processes that cut across the entire data collection process and provide real time updates on progress and data quality.**

We have experience in developing and implementing the latest innovations in data collection methods that overcome some longstanding challenges with collecting high quality data in low- and middle-income countries. We have in-house capacity to electronically programme surveys and make use of Computer-Assisted Personal Interview (CAPI), or remote data collection techniques such as web surveys and Computer Assisted Telephone Interviewing (CATI) technologies to collect survey data.

We have strong systems in place to ensure data quality, from the design and development of questionnaires through to training, fieldwork supervision and data processing. The use of electronic data collection methods, when complemented with strong management systems, provides an opportunity to closely monitor the quality of data on an ongoing basis throughout data collection. This allows issues to be rapidly identified and addressed, thereby greatly improving the quality of data. We also use innovative dashboards to supervise and visualise data during fieldwork.

### Figure 1: Example of a dashboard used during data collection
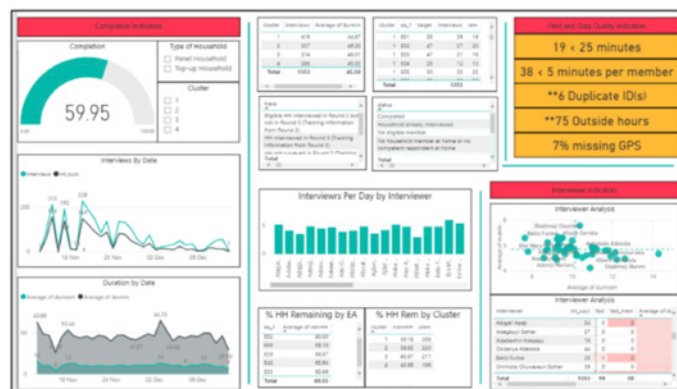


## Data Innovation

We combine modern data science methods with existing methodological approaches for quantitative impact evaluation to deliver the best results to our clients.
We have significant experience in advising and assisting governments and donor agencies on collecting data and employing data analysis techniques for the public good. Our extensive expertise in delivering data-related work puts us at the forefront of the emergence of data innovation as a new ecosystem.

## Our work

**We have implemented more than 50 rigorous quantitative and mixed-methods impact evaluations across multiple sectors worldwide**. We have a strong record in designing and implementing experimental and quasi-experimental impact evaluations to understand the effects of interventions on particular groups, whether positive, negative, intended or unintended.

# Long term partnership for impact evaluations of the Kenya Hunger Safety Net Programme

The Kenya Hunger Safety Net Programme (HSNP) provides regular, unconditional cash transfers (CTs) to 100,000 households in four counties of northern Kenya: Marsabit, Mandera, Turkana, and Wajir. These 'routine' transfers are supplemented by emergency payments to the rest of the population in times of severe or extreme drought. We have been contracted by FCDO to undertake impact evaluations, process reviews and policy analysis.

The impact evaluation of the first phase of HSNP provided a comprehensive assessment of the performance and impact of the programme for the benefit of implementers, funders, other stakeholders, and those interested in cash transfers more generally. Accounting for ethical and logistical considerations, we implemented a carefully designed experimental design (RCT). The evaluation findings fed into on-going programme operations, and future programmatic and funding decisions.
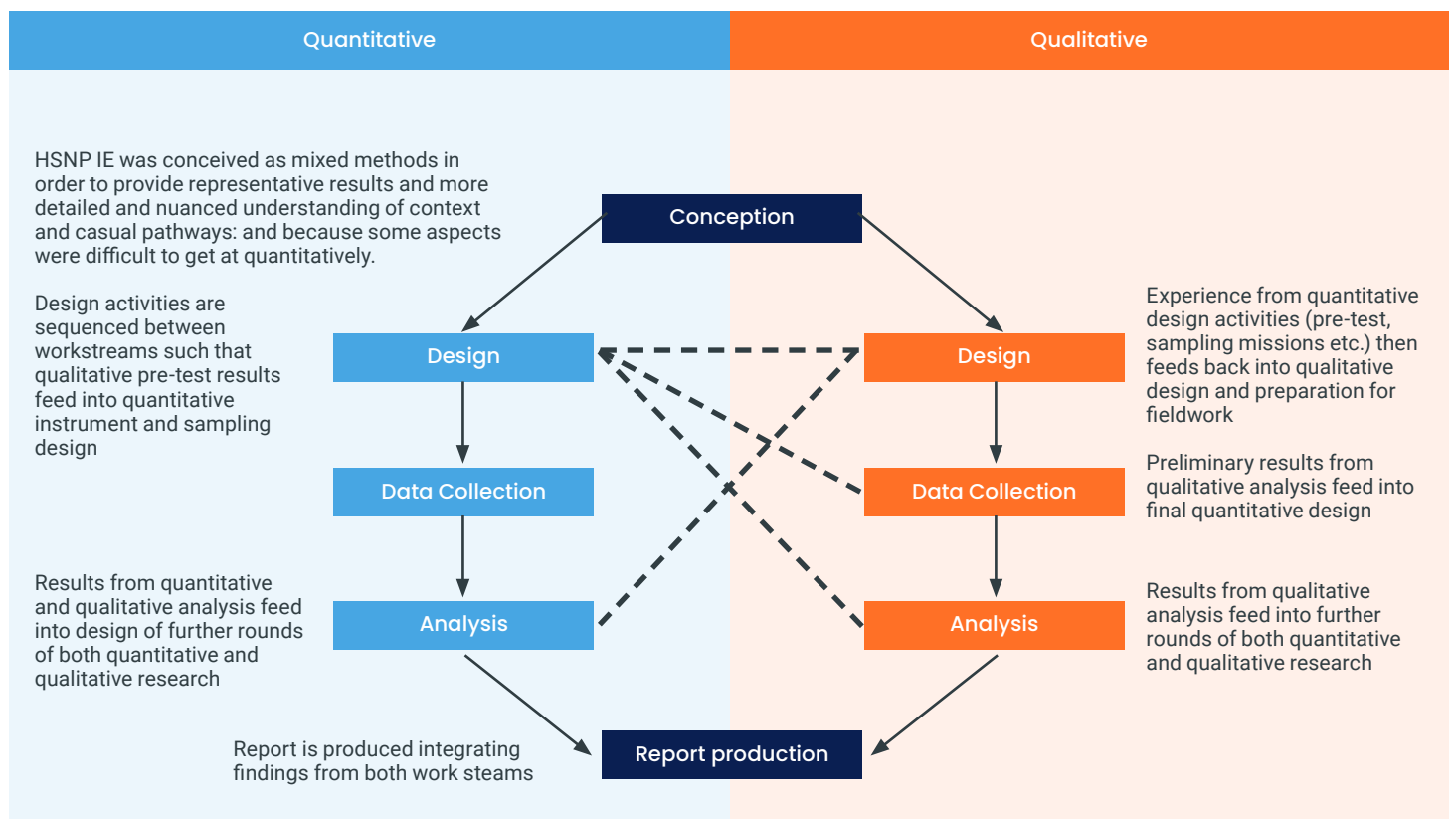
For evaluating the second phase of HSNP, various challenges had to be accounted for: no potential to collect baseline data; alternative cash transfers operating in HSNP areas; the targeting mechanism for HSNP being fuzzy. Thus, a mixed-methods quasi-experimental impact evaluation

approach was employed. We deployed an analytic protocol consisting of four integrated stages: 1) descriptive statistics analysis; 2) regression analysis; 3) regression discontinuity (RD) analysis; 4) propensity score matching (PSM) analysis. Combined with multiple rounds of qualitative research, this enabled us to provide a comprehensive assessment of the impact of the programme at the local economy and household levels.

The evaluations provided crucial information about the impact and performance of HSNP in order to both support accountability of the programme to its funders (including Kenyan taxpayers) and inform the design of future phases of the programme and wider cash transfer initiatives.

More broadly, strong and trusting partnerships built over several years with key government and development partners in the social protection sector in the country have enabled the findings generated by the different evaluations to feed directly into ongoing national policy debates and helped to build the evidence base around social protection both nationally and internationally

## Figure 2 A comprehensive mixed-methods approach



| Quantitative | Qualitative |
|---|---|

HSNP IE was conceived as mixed methods in order to provide representative results and more detailed and nuanced understanding of context and casual pathways: and because some aspects were difficult to get at quantitatively.

Design activities are sequenced between workstreams such that qualitative pre-test results feed into quantitative instrument and sampling design

Conception

Design

Data Collection

Analysis

Results from quantitative and qualitative analysis feed into design of further rounds of both quantitative and qualitative research

Report is produced integrating findings from both work steams

Report production

Experience from quantitative design activities (pre-test, sampling missions etc.) then feeds back into qualitative design and preparation for fieldwork

Preliminary results from qualitative analysis feed into final quantitative design

Results from qualitative analysis feed into further rounds of both quantitative and qualitative research

# Assessing a project's impact on tackling diarrhoea using an experimental design

To tackle the recurring problem of diarrhoea in some countries, Reckitt Benckiser (RB) and Save the Children launched a programme called the Stop Diarrhoea Initiative (SDI) in India and Nigeria in early 2015, and in late 2016 RB and Plan International started the SDI in Pakistan. We undertook the evaluation of the SDI programme across the three countries.

The key objectives of the evaluation in Pakistan for instance, were 1) to assess the project's impact on tackling diarrhoea based on a RCT design as well as the Lives Saved Tool (LiST) model; and 2) to assess the additional marginal impact of a complementary component of the programme, namely the Project Hope, based on the RCT design.

The impact evaluation for the SDI in Pakistan was based on a Randomised Control Trial (RCT) design. However, the impact estimates were based on a Difference-in-Difference analysis, thus taking advantage of the longitudinal nature

of the evaluation. To measure the impact of the country programme, as well as the additional marginal impact of the project Hope, we compared outcome levels between a control group and two separate treatment groups. To measure the additional marginal impact of Project Hope over the country programme, we compared the outcome levels of Treatment 1 and Treatment 2. To measure the quantitative impact attributable to the overall SDI programme, we sum the estimates of impact resulting from the previous estimates.

Findings were then presented in the form of impact estimates and descriptive trends over time. The combination of descriptive statistics on trends allowed us to assess whether the SDI logframe targets have been met and whether any of the detected improvements over time were due to the SDI programme.

# Assessing the impact of the Education Quality Improvement Programme in Tanzania (EQUIP-T)

EQUIP-T was a programme implemented in Tanzania which aimed to improve pupil learning outcomes and education quality, especially for girls, through a school improvement approach -with the potential to be scaled up nationally. We conducted an independent, mixed-methods impact evaluation to assess the programme's impacts on pupil learning and intermediate outcomes, including teacher capacity, and school leadership and management.

The quantitative component of the evaluation comprised of a quasi-experimental survey design based on a sample of 200 schools and 3,000 pupils, which combined Propensity Score Matching with Difference-in-Difference. In other words,

additional matching was used to create a 'pseudo panel' of treatment observations across time, since these were surveyed as repeated cross-sections (not an actual panel).

The study included a qualitative component with key informant interviews and focus group discussions at national, district, school and community levels. The mixed-methods approach allowed for triangulation of results and deeper insights into the impacts of EQUIP-T. Under this evaluation, we developed new survey instruments for Early Grade Reading and Math Assessments and Tanzania's first Teacher Development Needs Assessment.

## Figure 3: Building a pseudo panel of treatment observations for the PSM with DID estimation
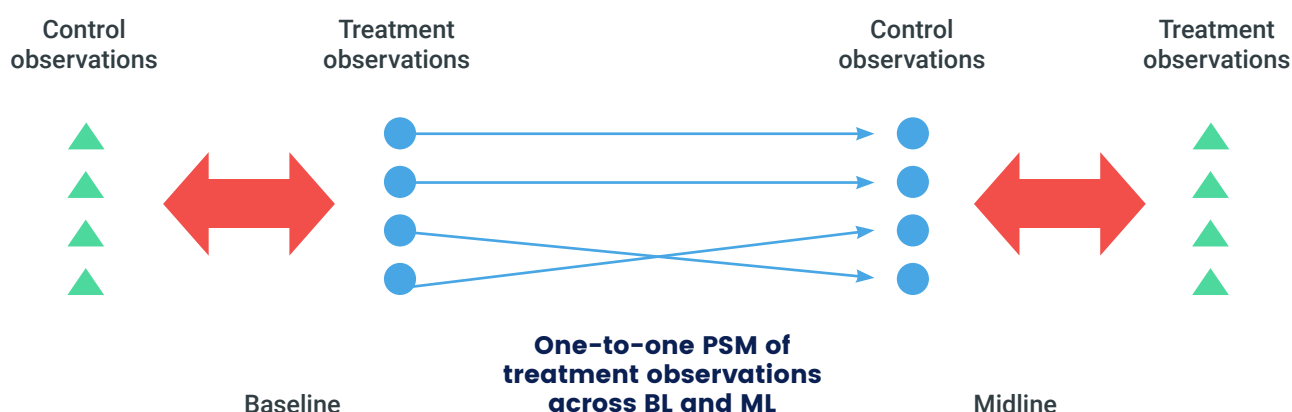
# Assessing a 'Cash Plus' approach to enhancing clean energy access in Kenya during Covid-19

The Mwangaza Mashinani was a pilot project that addressed the issue of affordability of solar products to enhance energy access for the most vulnerable segment of the Kenyan population.

We were contracted to undertake a rigorous impact assessment that combines different studies to provide evidence for the evaluation. The quantitative study was based on an analytical framework and a household survey, which was implemented through an in-person survey before the project started (baseline), a mobile phone survey when the project ended (midline) and an in-person survey one year after the end of the project (endline). The quantitative survey measured the impact of the project on household's and children's health, study hours, and livelihood outcomes (among others).
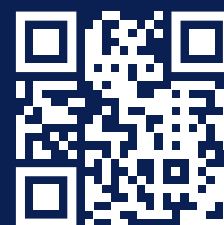
In light of the COVID-19 pandemic, the evaluation design was adapted to ensure that we were still able to produce rigorous evaluation results and to allow us to gather timely evidence to support the COVID-19 response in Kenya. The mixed-methods evaluation consisted of a number of research activities including a remote phone survey, a qualitative study, and a value for money study, as well as an implementation review to provide evidence on the relevance of the project at the national level.

## Figure 4 Adapting delivery and timeline in the context of Covid-19
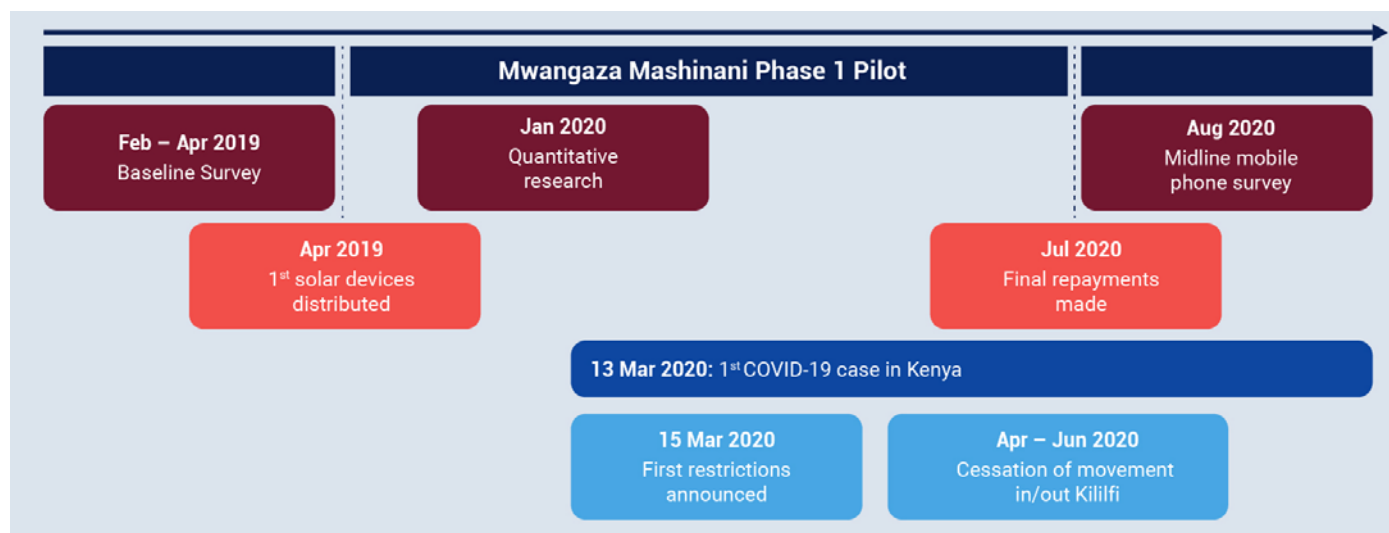


## About us

Oxford Policy Management enables low- and middle-income governments to bring about lasting positive change using analytical and practical policy expertise.

**Oxford Policy Management**