Guidance Note 3
Introduction to Mixed Methods in Impact Evaluation

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Outline

A. Why mixed methods (MM)?
B. Four decisions for designing a MM evaluation
C. Using MM to strengthen each stage of an evaluation
D. Using MM to strengthen QUANT and QUAL evaluations
E. Evaluating complex programs
F. Hints for resource constrained NGOs wishing to use MM evaluations

The Main Messages

1. No single evaluation approach can fully address the complexities of development evaluations
2. MM combines the breadth of quantitative (QUANT) evaluation methods with the depth of qualitative (QUAL) methods
3. MM is an integrated approach to evaluation with specific tools and techniques for each stage of the evaluation cycle
4. MM are used differently by evaluators with a QUANT orientation and a QUAL orientation – and offer distinct benefits for each kind of evaluation
5. While MM evaluations can require extra money and time, we offer tips for resource constrained NGOs to use MM.

A. Why mixed methods?

No single evaluation methodology can fully explain how development programs operate in the real world

This explains the growing interest in mixed methods evaluations

Why mixed methods? No single evaluation method can fully explain how development programs operate in the real-world

1. Programs operate in complex and changing environments
2. Interventions are affected by historical, cultural, political, economic and other contextual factors
3. Different methodologies are needed to measure different contextual factors, processes and outcomes.
4. Even “simple” interventions often involve complex processes of organizational and behavioral change
5. Programs change depending on how different sectors of the target population respond

What is a mixed methods evaluation?

- An integrated approach that draws on tools and techniques from at least two different social science disciplines for defining hypotheses, sample selection, evaluation design, data collection and analysis.
- Combines quantitative and qualitative approaches
- The team normally includes professionals from each discipline
- Requires a proactive management style that:
  - addresses the challenges of using these approaches and
  - ensures that full advantage is taken of the theoretical and methodological benefits.

The benefits of a mixed methods approach

QUANTITATIVE
breadth

+

QUALITATIVE
depth

How many?
How much?
How representative of the total population?
Are changes statistically significant?

- How were changes experienced by individuals?
- What actually happend on the ground?
- The quality of services

B. Four decisions for designing a mixed methods evaluation

Decision 1: At which stages of the evaluation are mixed methods used?

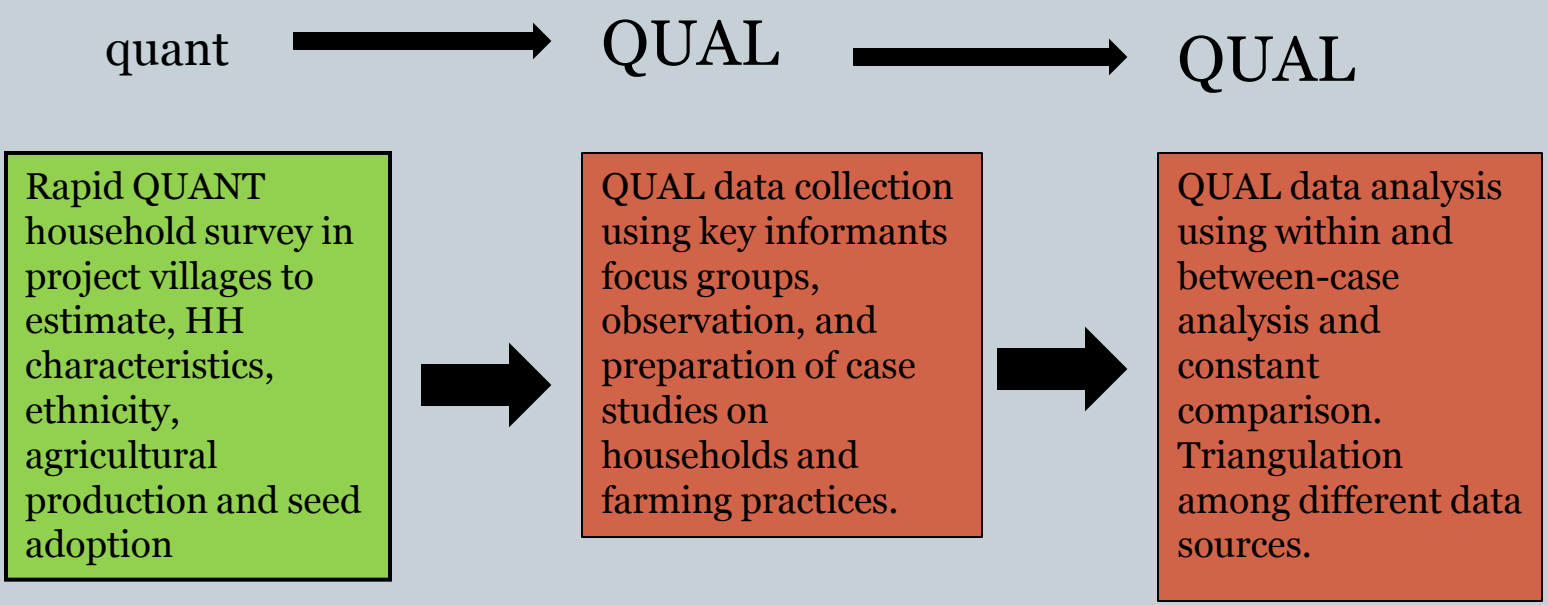
	QUANT	QUAL	Mixed
1. Formulation of hypotheses			
2. Sample design			
3. Evaluation design			
4. Data collection and recording			
5. Triangulation			
6. Data analysis and interpretation			

Mixed methods can be used at any stage of the evaluation.
A fully integrated MM design combines QUANT and QUAL methods at all stages of the evaluation

Decision 2: Is the design sequential or concurrent?

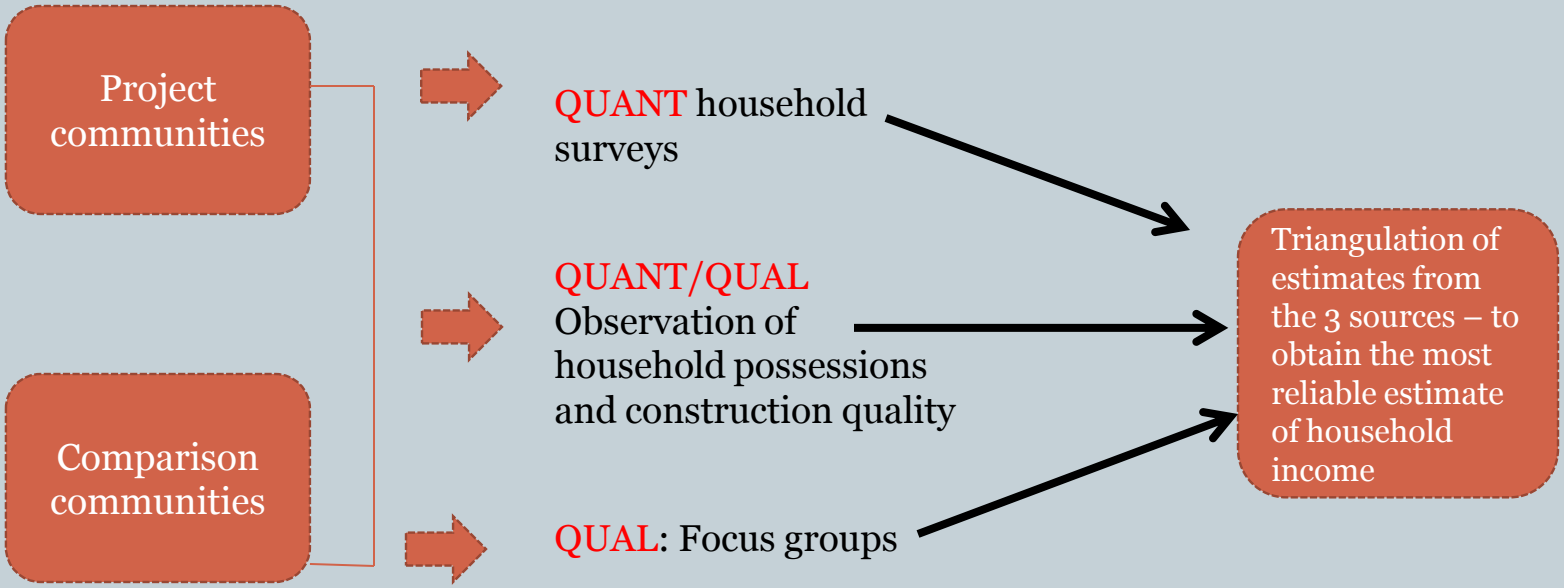
- Sequential designs:
  - **QUANT and QUAL approaches are used in sequence**
- Concurrent designs
  - **QUANT and QUAL approaches are both used at the same time**

Sequential QUAL dominant mixed methods design:
Evaluating the adoption of new seed varieties by different types of rural families.

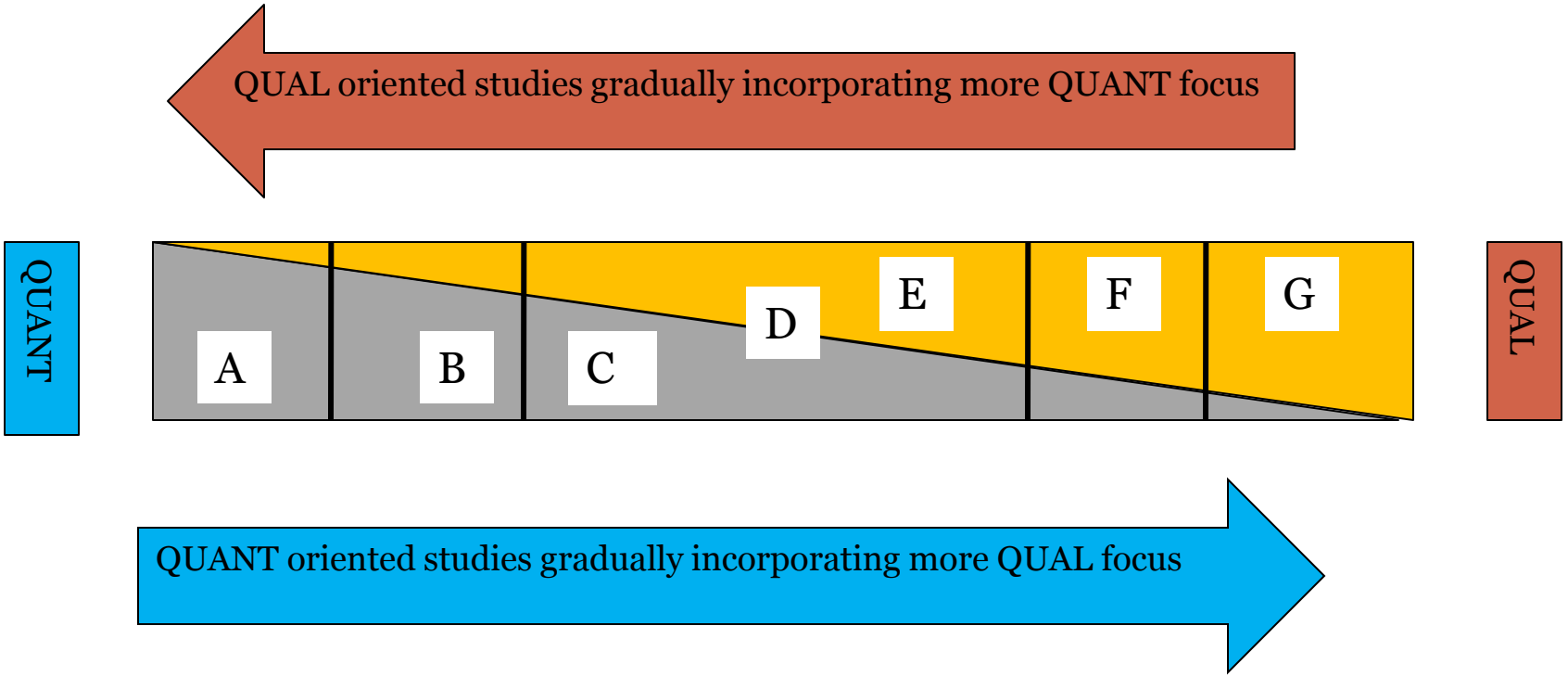


A concurrent MM design: Triangulating QUANT and QUAL estimates of household income in project and comparison areas

QUANT and QUAL data collection methods are used at the same time

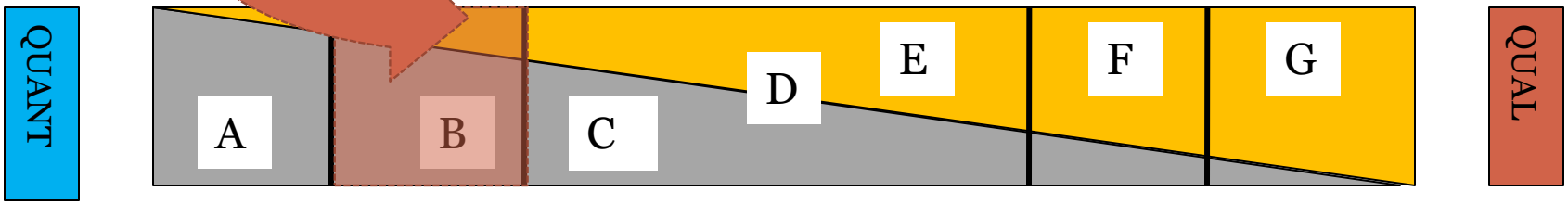


Decision 3: which approach is dominant?



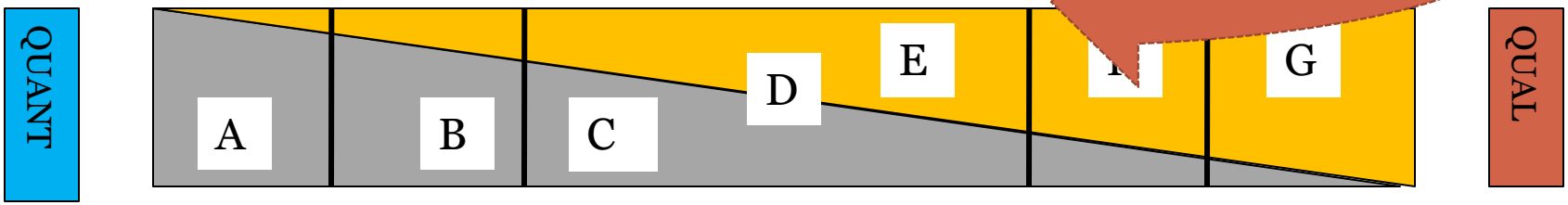
A = completely QUANT design
B = dominant QUANT with some QUAL elements
C = QUANT oriented design giving equal weight to both approaches
D = Study designed as MM
E = QUAL oriented design giving equal weight to both approaches.
F = dominant QUAL design with some QUANT elements
G = completely QUAL design

A quantitative dominant evaluation design



Example:
A rapid qualitative diagnostic study is conducted to help design a quantitative household survey. The data is analyzed using quantitative analysis techniques [e.g. regression analysis]

A qualitative dominant evaluation design

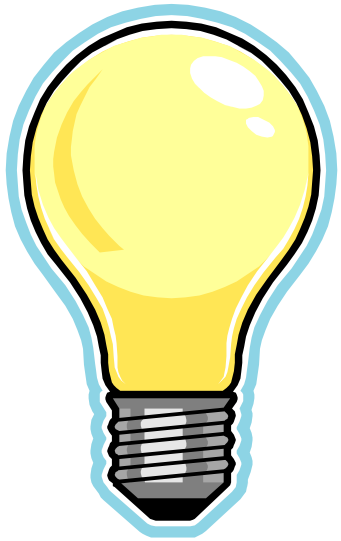


Example

A rapid quantitative sample survey is conducted. This is used to develop a typology of rice production systems. Qualitative case studies are selected to represent each type. The data is analyzed and presented using qualitative methods such as narrative descriptions, photographs and social maps.

See Annex 3 for examples of evaluation designs at each point on the

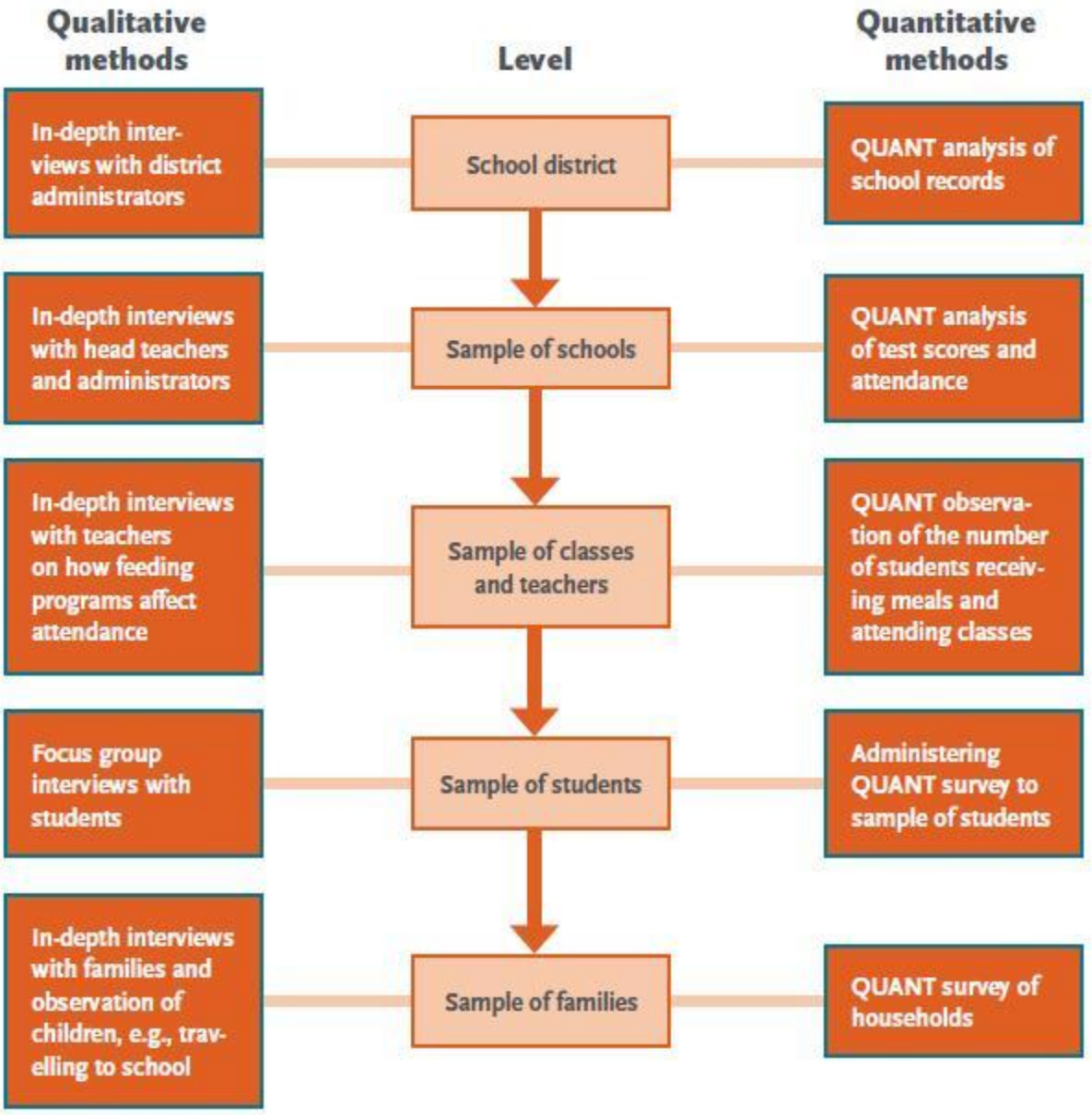
QUANT- QUAL continuum



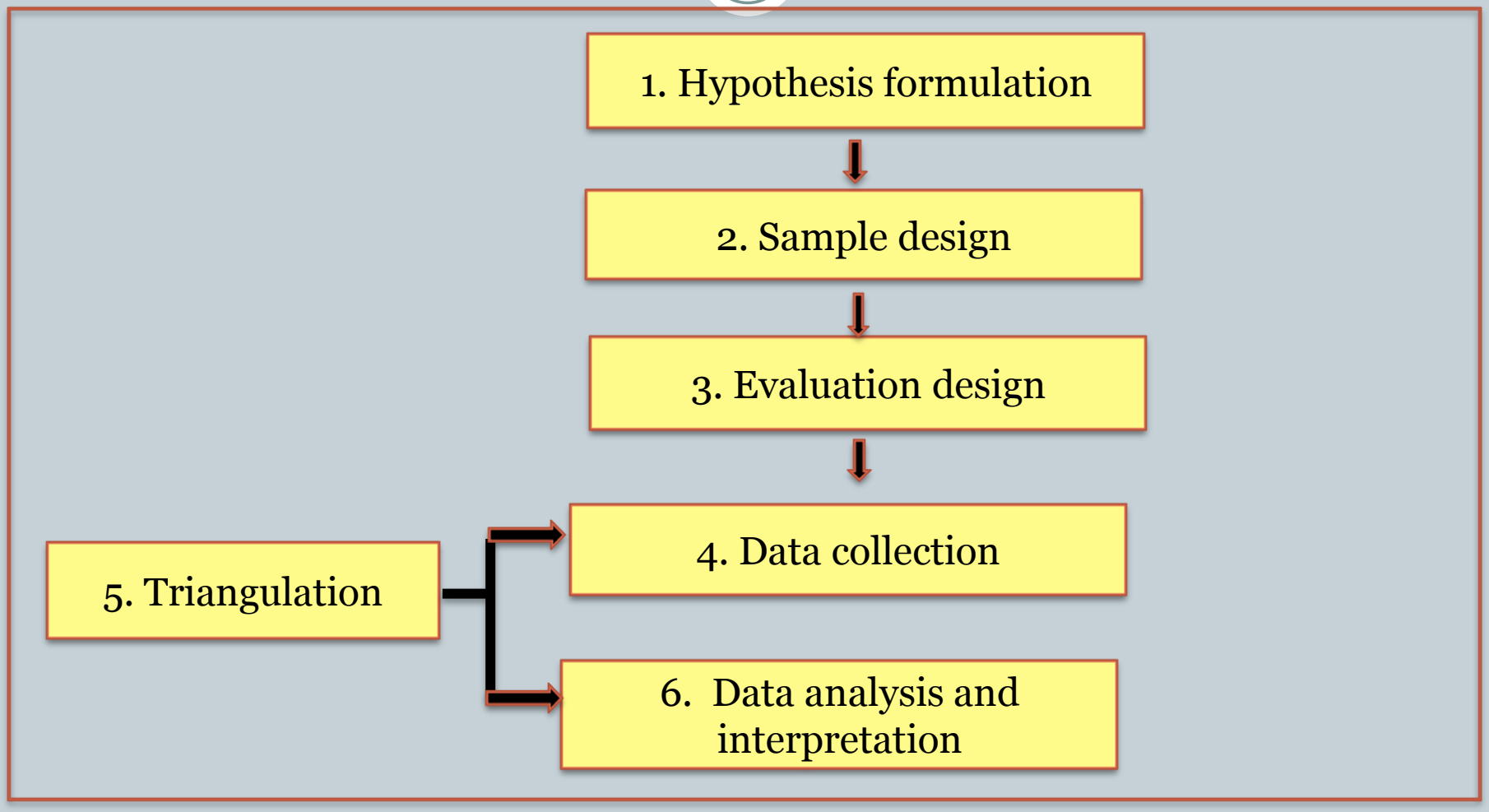
Decision 4:
Is the design single or multi-level?

A Multi-level mixed methods design

The effects of a school feeding program on school enrolment



C. Using mixed methods to strengthen each stage of the evaluation

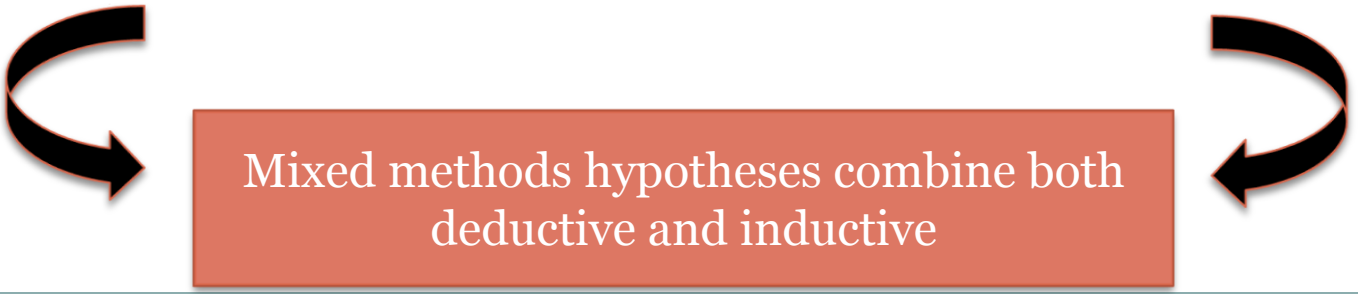


Stage 1. Mixed methods approaches to hypothesis development

- Combining deductive (QUANT) and inductive (QUAL) hypotheses
- Basing the evaluation framework on a theory of change
- Strengthening construct validity by combining different QUANT and QUAL indicators
- Contextualizing the evaluation

Comparing **DEDUCTIVE** and **INDUCTIVE** hypotheses

Deductive	Inductive
Mainly used in QUANT research	Mainly used in QUAL research
Hypotheses test theories based on prior research	Hypotheses based on observations in the field
Hypotheses defined at start of the evaluation before data collection begins	Hypotheses not defined until data collection begins
Hypotheses normally do not change	Hypotheses evolve as data collection progresses
Hypotheses can be tested experimentally	Hypotheses are tested using Theory of change or logically



Stage 2. **Mixed method sample designs**

- Parallel mixed method sampling
  - Random (QUANT) and purposive (QUAL) sampling
- Sequential MM sampling
- Multi-level MM sampling
- Strengthening the coverage of the sampling frame
- Strengthening the matching of the project and control groups

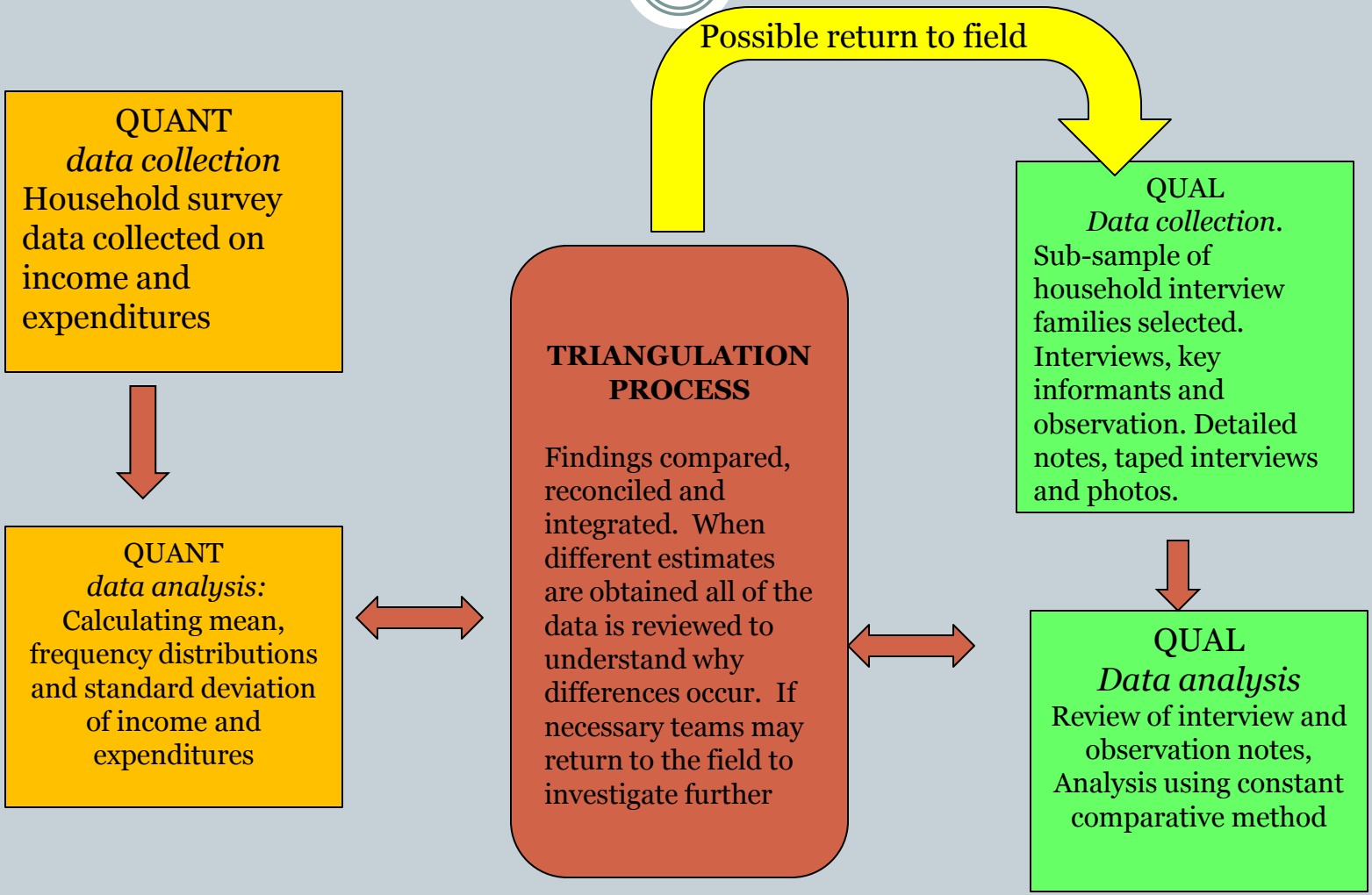
Stage 3. Mixed method evaluation design

- Combining experimental and quasi-experimental; designs with QUAL techniques to explore:
  - Processes and quality of services
  - Context
  - Behavioral change
- Flexibility to adapt the evaluation to changes in the project design or the project context
- In-depth analysis of how the project affects different groups
- Creative identification of comparison groups

Stage 4. Strengthening data collection

A. Integrating survey and QUAL data collection
B. Commonly used mixed method data collection methods for strengthening QUANT evaluations
    A. Focus groups
    B. Observation
    C. Secondary data
    D. Case studies
C. Reconstructing baseline data
D. Interviewing difficult-to-reach groups
E. Collecting information on sensitive topics
F. Attention to contextual clues

Stage 5. Validating findings through triangulation



Different kinds of triangulation

- Different data collection methods
- Different interviewers
- Collecting information at different times
- Different locations and contexts

Stage 6. Mixed method data analysis and interpretation

- Parallel MM data analysis
- Conversion MM data analysis
  - **Converting QUAL data into QUANT indicators and vice versa]**
- Sequential MM data analysis
- Multi-level MM data analysis
- Generalizing findings and recommendations to other potential program settings

Using mixed methods to strengthen the interpretation of findings

Statistical analysis frequently includes unexpected or interesting findings which cannot be explained through the statistics. Rapid follow-up visits may help explain the findings

Interpreting findings

- A QUANT survey of community water management in Indonesia found that with only one exception all village water supply was managed by women
- Follow-up visits found that in the one exceptional village women managed a very profitable dairy farming business – so men were willing to manage water to allow women time to produce and sell dairy produce

Source: Brown (2000)

D. Using mixed methods to strengthen predominantly QUANT and QUAL evaluation designs

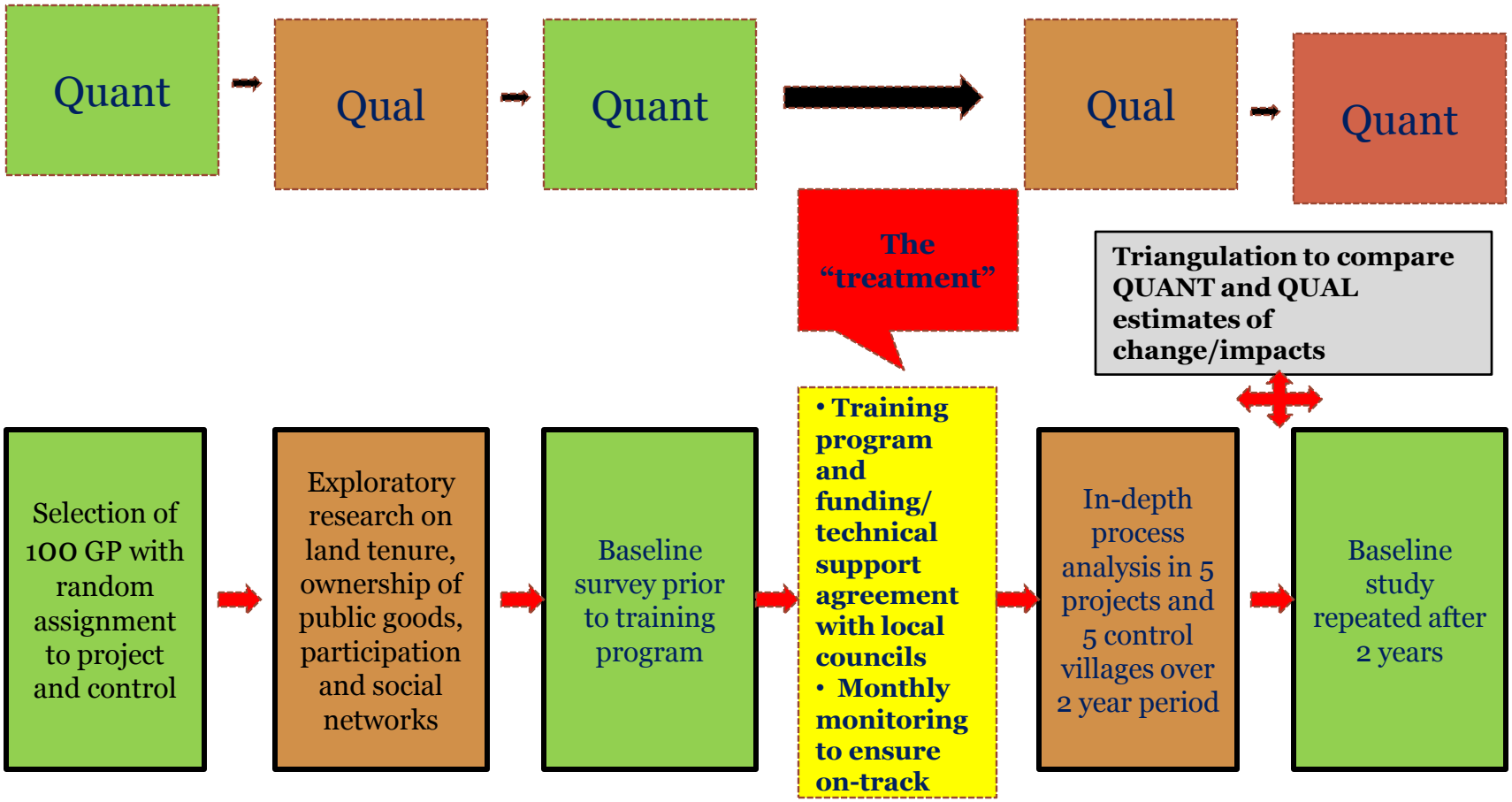
Strengthening a predominantly QUANT design

- Exploratory studies to understand context and issues before the survey is designed
- Focus groups conducted with different sectors of the population
- Adding specialized, semi-structured modules to examine certain issues in depth
- Preparation of case studies to complement a survey

Using mixed methods to strengthen a predominantly QUAL design

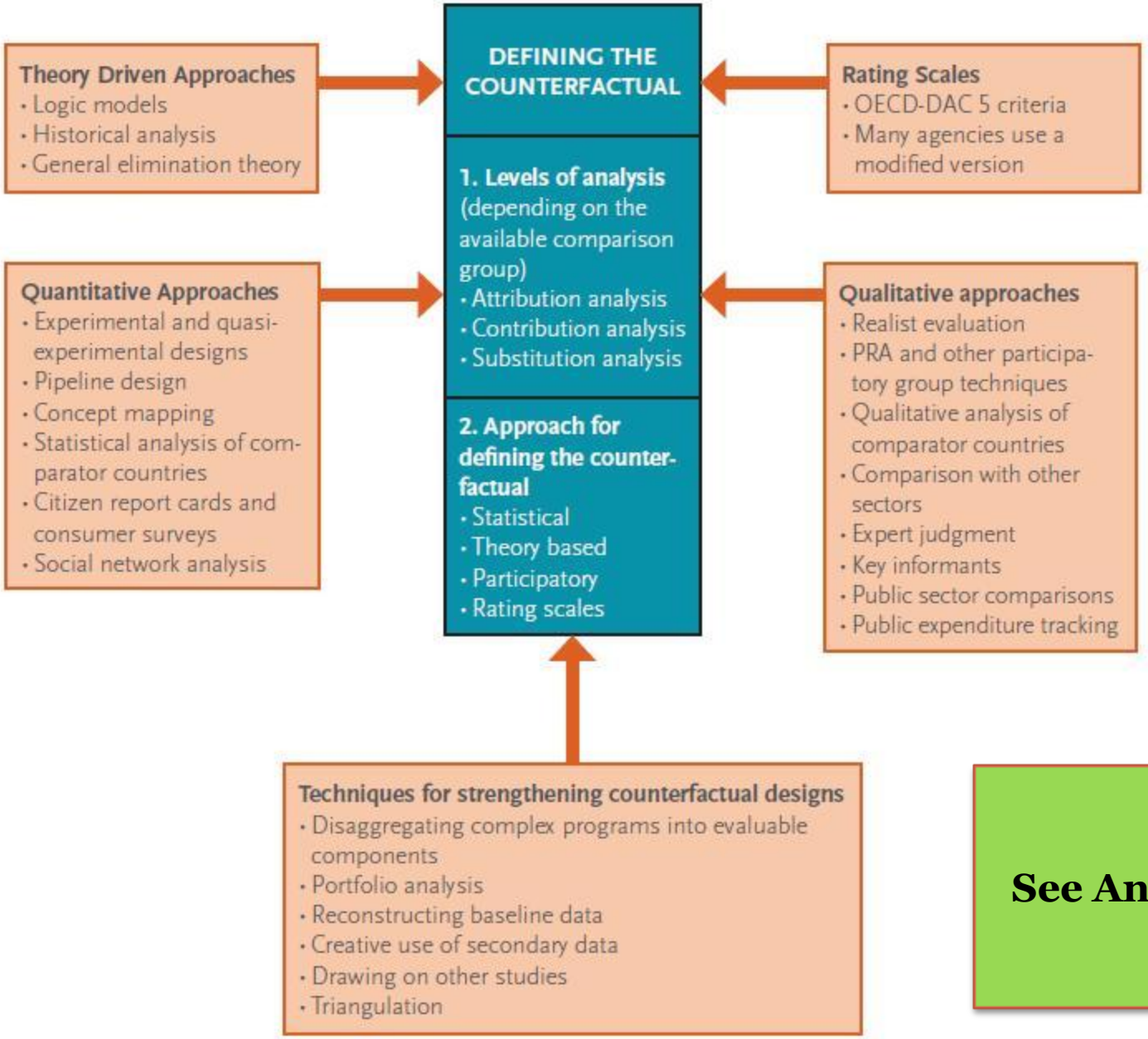
- Ensuring that cases, focus groups and other in-depth data is broadly representative and that it is possible to generalize
- Locating cases within the context of the community
- Using statistical analysis to eliminate rival hypotheses

A balanced Mixed Methods design: the Effectiveness of the Gram Panchayat Reform Program in Promoting Democratic Decentralization in India **[See Annex 10 Case 15]**



E. Using mixed methods to evaluate complex programs

- No single evaluation method is able to fully evaluate most complex programs
- Mixed methods are able to combine conventional QUANT designs with tools that can:
  - Capture the complexities of the program setting
  - The changing nature of the program and its intended outcomes
  - Document what actually happens on the ground during program implementation
  - Study the processes of behavioral change
  - Use triangulation to combine different perspectives
  - Provide the best possible estimates of QUANT outcomes in situations where measurement is difficult


DEFINING THE COUNTERFACTUAL
Theory Driven Approaches
• Logic models
• Historical analysis
• General elimination theory
Rating Scales
• OECD-DAC 5 criteria
• Many agencies use a modified version
1. Levels of analysis (depending on the available comparison group)
• Attribution analysis
• Contribution analysis
• Substitution analysis
Quantitative Approaches
• Experimental and quasi-experimental designs
• Pipeline design
• Concept mapping
• Statistical analysis of comparator countries
• Citizen report cards and consumer surveys
• Social network analysis
Qualitative approaches
• Realist evaluation
• PRA and other participatory group techniques
• Qualitative analysis of comparator countries
• Comparison with other sectors
• Expert judgment
• Key informants
• Public sector comparisons
• Public expenditure tracking
2. Approach for defining the counterfactual
• Statistical
• Theory based
• Participatory
• Rating scales
Techniques for strengthening counterfactual designs
• Disaggregating complex programs into evaluable components
• Portfolio analysis
• Reconstructing baseline data
• Creative use of secondary data
• Drawing on other studies
• Triangulation

See Annex 7

F. Tips for resource-constrained NGOs wishing to used mixed method evaluations

- MM can help enhance quality and credibility of evaluations conducted under constraints
- Base the evaluation on a well-articulated theory of change
- Start gradually, only using MM in certain stages
- Start with sequential designs
- Start with simpler and more economical techniques
- Focus on kinds of evidence that are credible to stakeholders
- Creative use of secondary data
- Strong reliance on triangulation
- Creative ways to reduce costs of data collection

Creative ways to reduce the costs of data collection

- Piggyback the study onto a survey being conducted by another agency to reduce the costs of data collection.
- Use university students, student nurses etc. to reduce the costs of data collection
- Consider using secondary data rather than conducting new surveys
- Use observation, focus groups or other qualitative techniques as an alternative to conducting a survey
- Triangulation, comparing estimates obtained from two or more sources, can often be cheaper than conducting a conventional survey.

Case studies illustrating economical ways to conduct mixed methods evaluations

- UNICEF Education Project in Timor L'Este [# 7]
- Eritrea: Evaluating the impacts of rural roads [# 11]

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