

Briefing note: sample selection for QUIP studies

Introduction

There is no universal best practice method for sample selection for a QUIP study, as it depends upon many contextual factors. The most important of these are (a) the main purpose of the study, (b) availability of relevant data about variation in the characteristics of expected gainers and losers from the project, (c) availability of relevant data about variation in their exposure to project activities, (d) time and resource constraints. This section briefly explores these factors, and then outlines the sequence of sampling decisions and actions needed prior to starting data collection.

Factors affecting sample selection

(a) Main purpose of the study

Deciding who to interview, how many people to interview, and how best to select them requires clarity about what information is being sought, by whom and why. Neglecting this not only leads to poor practice but also misunderstanding about the quality of a study. For example, sample bias is not a problem for a QUIP study that deliberately set out to identify drivers of successful outcomes by interviewing what Atul Gawande refers to as “positive deviants.” Deliberately selective (hence biased) sampling is in this instance fit for purpose!

More generally, differences in sampling strategy arise from whether the priority is to confirm and quantify the overall impact of a completed project on a defined population in relation to a predetermined set of measurable indicators, or to identify and explore what is happening in a more open-ended way – to improve implementation of an ongoing project, for example. The QUIP is a relatively open-ended approach. Its primary purpose is to gather evidence of causal processes at play, not to quantify them.¹ Deciding on the number of interviews and focus groups to conduct depends less on reducing sample bias than on assessing at what point the extra insight into causal processes gained from more data no longer justifies the extra cost.²

(b) Contextual variation

Random selection of respondents across the entire population affected by the project is a good starting point for thinking about sampling for a QUIP study, but there are also good reasons for making adjustments for it. If we expect causal processes to be different for different sub-groups, and we have data that enables to identify those sub-groups prior to sample selection then there is a case for stratified

¹ If the primary purpose is to quantify specific causal effects then there are two options. The first is to use an appropriate experimental or quasi-experimental approach instead. The second is to build a simulation model, using both QUIP data to identify the main causal factors, and quantitative monitoring data to calibrate their magnitude. The first is more precise, the second potentially more flexible.

² To do this formally would not entail estimating statistical sampling errors but a Bayesian process of assigning confidence parameters to prior expectations and assessing how these change with each extra observation.

random sampling. For example, we might choose to ensure the QUIP study includes a minimum quota of people living in urban and rural areas. Stratification of the sample on these grounds is an art not a science that depends on prior thinking about what contextual factors are most likely to be a source of variation in project outcomes.

It also depends on the quality of monitoring data available. For example, it is good to stratify on the basis of baseline income or wealth indicators. Better stratification might also incorporate data on observed change in income or wealth income over the project period. Hence a simple design might quota sample four groups: richer and improving; richer but declining; poorer but improving; poorer and getting worse.

(c) Exposure or 'treatment' variation

This refers to variation in how project activities affect different people, including those who are direct beneficiaries of different packages of goods and services. In addition there are those who may only be affected indirectly: because their neighbours are affected and may share things with them, for example. If data is available on variation in who directly received what and when, and it is expected that these differences will have different causal effects, then there is a case for stratifying the sample to ensure it reflects the full range of such exposure. This is particularly the case if part of the purpose of the study is to aid decisions about which of a range of project activities or packages to expand or to stop. Impact assessment using the QUIP do not require a control group of people completely unaffected by the project. There may nevertheless be an argument for interviewing some people unaffected by the project, but similar to those affected by it in order to explore whether they volunteer different or additional drivers of change.

(d) Time and resource constraints

A third reason for departing from pure randomization in sample selection is to cluster respondents geographically in order to reduce the time and cost of data collection. One way to do this is to adopt two stage random sampling, with the first stage based on geographical units (eg. villages, districts or census areas). However, there is often a strong case for using contextual information (e.g. about agro-ecological zones) to purposefully select or at least stratify area selection. The rationale for this is precisely analogous to stratification based on contextual data at the household level as already discussed under (b).

Ultimately, budget constraints may also limit the total number of interviews and focus groups that the QUIP study can cover. There may also be a case for staggering studies – i.e. conducting two smaller studies a few months apart rather than doing a single larger study. This can help to build understanding of project impact lags, pathways and cumulative processes, as well as those of other drivers of change. Sampling strategy for repeat studies can also be informed by lessons from earlier studies. Again the principle here is that credibility of findings builds incrementally with the addition of each extra piece of evidence.

Practical example of how to build a purposive sample frame

Commissioner A has a total beneficiary list of 6,000 across 40 villages in two districts. They have commissioned a 'single' QuIP of 24 households and 4 focus groups.

The starting point is to establish whether there is anything which differentiates the total sample list. The outcome of this example is that 4 different types of intervention have been delivered to different beneficiaries across the total group – the commissioner wants all groups sampled. The programmes targeted young families, and mainly women but one of the interventions was also delivered to men. There are no distinguishing features between the villages in each district.

The purposive nature of the sample will therefore be in selecting between gender and intervention types, with randomised selection of villages and beneficiaries within the intervention lists. A suggested framework is below:

District	Village	Beneficiary type				TOTAL
		Programme 1 (women)	Programme 2 (women)	Programme 3 (women)	Programme 4 (men)	
	<i>V1 pilot</i>	1	1	1	1	4
District A	V1	1	2	1	2	6
District A	V1	1 focus group (younger women)				1
District A	V2	2	1	2	1	6
District A	V2	1 focus group (younger men)				1
District B	V3	1	2	1	2	6
District B	V3	1 focus group (younger women)				1
District B	V4	2	1	2	1	6
District B	V4	1 focus group (younger men)				1
	TOTAL	6	6	6	6	24 individuals 4 focus groups

Whilst the distribution across groups is fairly arbitrary, the final totals are well distributed across programmes, villages and districts. The field team would be given lists of all the possible beneficiaries which fall into each of these categories, a total of 16 lists, from which to randomly select 1 or 2 respondents. The lists would comprise:

1. Village 1: Programme 1
2. Village 1: Programme 2
3. Village 1: Programme 3
4. Village 1: Programme 4
5. Village 2: Programme 1
6. Village 2: Programme 2
7. Village 2: Programme 3
8. Village 2: Programme 4
9. Village 3: Programme 1
10. Village 3: Programme 2
11. Village 3: Programme 3
12. Village 3: Programme 4
13. Village 4: Programme 1
14. Village 4: Programme 2
15. Village 4: Programme 3
16. Village 4: Programme 4