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Twaweza Independent Evaluation Overview of Baseline and Other Surveys

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TWAWEZA
INDEPENDENT EVALUATION
OVERVIEW OF BASELINE
and OTHER SURVEYS

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Overview of the Baseline Surveys, Mid-term Micro-Survey, and Follow-up Surveys

Overview

As stipulated in the independent evaluation contract, CIE will implement baseline surveys at households, facilities (schools, health clinics), and communities using national randomly-selected samples in all three countries. These will be followed up in 2012 with a targeted micro-survey and then with full national-level random administrations in late 2013 or early 2014. The rationale for the baseline surveys and the subsequent full follow-up survey administrations is to measure change along key variables over time. The rationale for the mid-term micro-survey is to measure targeted change, using the full baseline study (including case studies) as a guide.

Purpose of the Baseline Surveys

Given the key evaluation questions to be addressed, the baseline surveys need to establish 1) citizens' knowledge about government provision of the basic services of education, health, water; 2) baseline conditions in schools, health facilities, and communities (quality of service); 2) citizens' access to and use of information channels and media; 4) self-perceptions and indicators of agency and action; and 5) test emerging and intriguing hypotheses. For each broad purpose, establishing what is known at this point enables assessments of change over time. Thus, the overall design of the evaluation calls for follow-up randomized national-level surveys in Year 5 to assess changes and to test the same and new hypotheses. Obviously, baseline surveys are designed to establish initial conditions against which effects or changes can be compared.

Development

The development of baseline surveys to capture key elements and interactions in Twaweza's theory of change has drawn on the following resources and individuals:

- *The Oxford Poverty & Human Development Initiative*[1]*:* Grounded in Amratya Sen's[2] understanding of poverty and human freedom, OPHI is charged with identifying 'missing dimensions' for measuring poverty (including shame and humiliation) and the development of modules assessing these that are cross-culturally robust and comparable. Central to their work is the development of international measures of agency and empowerment. Research scholars from OPHI are closely involved in the development of the household survey.

  Examples of items of interest from their developing work focus on perceptions about:

  - Satisfaction with one's life;
  - Capability to change circumstances in the community;
  - Degrees of freedom to act (ladder);
  - Control over one's destiny;
  - Locus of control in household decision-making; and
  - Shame in the face of not taking up a community problem.

- *Measuring Empowerment Framework*[3]: Initially developed and promoted by the World Bank, this framework contains guidance and tools to assess empowerment, as determined by personal agency (defined as the capacity to make purposive choice), and opportunity structure (the

[1] See http://www.ophi.org.uk/
[2] See Sen, 1999.
[3] Alsop & Heinsohn, 2005.

institutional context in which choice is made). Agency is in turn measured by proxy indicators of *asset endowments*, including psychological, informational, organizational, material, social, financial, or human assets. This approach is particularly congruent with CIE's overall values and approach to evaluation as being assets-based.

Examples of items of interest in this instrument assess perceptions about:

- Inclusion/exclusion from community organizations;
- Participation in community organizations;
- Overall influence in community decision-making processes;
- Capacity to make change happen;
- Complaining to government officials; and
- Justice and fair treatment.

- *Social Capital Survey*[4]***:*** Based on a wide range of experiences with collecting and analyzing data on social capital in East Africa and beyond, including the Living Standards Measurement Surveys system, a standard household survey used by the World Bank and others. Six dimensions are considered: groups and networks; trust and solidarity; collective action and cooperation; information and communication; social cohesion and inclusion; and empowerment and political action.

  Examples of items of interest in the instruments assess perceptions about:

  - Degrees of participation in social groups;
  - Inclusion/exclusion from community groups;
  - How groups/organizations work together to solve problems;
  - How groups come together to take collective action; and
  - Support systems for individuals and families.

- *AudienceScapes*[5]*:* Implemented in Ghana and Kenya, the AudienceScapes national-level surveys assessed citizens' perceptions about their level of trust in various institutions, including government institutions and the media; the seriousness of a range of development issues (food security, drought, political instability, and interethnic disputes); media censorship; and use of media (traditional [radio] and new technologies [mobile phones, internet, TV, MP3 players]). Clearly, to assess use of communication channels and access to information, these modules are highly relevant.

- *Transparency International's African Education Watch*[6]*:* This seven-country study (Ghana, Madagascar, Morocco, Niger, Senegal, Sierra Leone, and Uganda) assessed primary education management structures. Key findings are that, despite the legal requirement that primary education be free, many parents still pay fees (registration, tutoring); the transfer of funds from central government to local schools is likely to be 'diverted'; basic financial records are not kept; and there is a lack of training for headteachers and SMCs responsible for monitoring money flows. Many of the items in these instruments are particularly relevant for the school facilities surveys.

[4] See Grootaert & Bastelaer, 2001.
[5] See http://www.audiencescapes.org/
[6] See http://www.transparency.org/news_room/in_focus/2010/african_education_watch

Operationalizing Key Concepts

Central to the development of the baseline surveys, especially the household questionnaire, is agreement on how to operationalize the key constructs in addressed in the evaluation questions and preliminary hypotheses. The Evaluation Design document provides preliminary indicators of key concepts and contexts. These follow from Twaweza's metrics framework and subsequent elaborations of key ideas in the theory of change.

Given that direct measurement of these constructs is not feasible, proxy indicators will be used. Proxy indicators are indirect measures or signs that approximate or represent a phenomenon in the absence of a direct measure or sign. Below are key ideas that inform indicators of key concepts[7]. It should be noted that the Twaweza documents meld key constructs; that is, agency is defined, in part, as access to and meaningfulness of information as well as taking action. For analytic purposes, we separate these out, although the overlap remains evident.

Access to and use of information and communication channels

The catalytic effect of developing, sharing, spreading, and using information is central to the Twaweza social change process. Thus, 'information' is not just a message (a noun); rather we construe it as a complex set of processes that energizes citizen agency. It has these characteristics:[8]

- Information is not a 'thing', but a dynamic, ubiquitous force in social life. Its root meaning derives from *in - form.* Life uses information to organize matter into form. Societies, communities transform information and organize to change social institutions.

- Citizens' capacity for meaning-making plays a crucial role: they – individually and in groups – are interpreters, deciding which information to pay attention to, which to suppress. A metaphor for *meaningful* information is 'nourishment' for social change.

- As soon as people become interested in an issue, their creativity is engaged. Information that stimulates reflective conversations, especially among different parts of a community, will spawn new interpretations, new meanings, new stories – new information.

- It is not the amount of information, nor its broad generalizations, that is key in the change process, but its *meaning* to individuals/groups that makes it potent (or not). When information is identified as meaningful, it becomes a force for change. Such information circulates and grows and mutates in the conversations and interactions that occur.

Thus key elements to be measured in the household questionnaire include: access to communication channels (variety, frequency) and use (purpose). Central also, however, is how information becomes meaningful to citizens. Does generating information make it more meaningful or valuable, as in Uwezo? These and other key hypotheses will be explored through the baseline surveys. (See Annex A for preliminary hypotheses to be tested.)

Agency – Self-perception of agency, voice, monitoring, and taking action

A central concept in Twaweza's theory of change is *agency*. In its documents, Twaweza defines four elements of agency:

- Getting information/coming to know and understand in order to make meaning (contingent, contextualized). (See above construct on communication/information.)

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7 See Evaluation Design document for elaborations of these ideas.

8 See Wheatley's (1999) work on information dynamics within human organizations and complex systems.

- Being able to monitor: budgets, laws, entitlements in relation to others, to the past, and to put things in perspective. What is crucial is day to day monitoring, observing, noticing, and being able to make observations more explicit.

- Voicing/expressing/communicating in public sphere. Thinking about different channels (written, verbal, symbolic/material). Moving from communication in private sphere/proximal domains to public and more distant domains i.e. being able to project meanings and 'jump-scale'. There is a relationship here between individual agency and collective agency. What is the role of intermediaries and brokers?

- Action/change: Action in the sense of projecting meanings that collect in chains of significations to make things happen, that make a material difference and have concrete outcomes. 90% of this can be actions that people can do themselves, 10% of this can be actions that are about holding the government to account. There is a relationship between small, everyday actions and bigger public events.[9]

As noted in the Evaluation Design document, these elements of agency call for assessments that measure access to and use of information (above); self-perceptions of agency or self-efficacy; taking action, including speaking up in public forums and discussing with others in one's social network, as examples. However, also central is citizens' perceptions of the risks associated with speaking out or taking other actions. Thus measures of this will be included.

'Making things happen'
This element in Twaweza's understanding of agency will be assessed through reports of actions that have had an effect. While one hopes that these responses on the part of government will be positive (responsive to concerns, able to effect change in positive ways), there is the likelihood that the 'things' that happen are quite negative. For example, in recent communication with colleagues, the point was raised that one of the unintended consequences of the Uwezo assessments of learning at the household level might be punitive responses on the part of family members towards a child who cannot read, even to the point of beating that child. The '9 Villages' narrative also depicts negative consequences towards the Mzee. Thus, the household questionnaires will tap into both positive and negative 'things' that may happen as a result of citizens taking action.

Structure and Organization of Household Questionnaire
Given the theory of change that the evaluation is assessing, the household questionnaire will include items that permit the creation of various indices: wealth; knowledge about basic services; access to information; use of information; agency (sub-indices on using information; social networking; monitoring); and taking action. CIE assumes that monitoring and taking action most often occur in and through social networks, hence the need to establish which social organizations are operative, used, and valued. Thus, the logical flow of the household questionnaire should establish the following, perhaps in this order (requires further field and pilot testing):

- Demographics of the household
- Wealth indicators
- Knowledge of and experiences relative to access to, quality of, and delivery of services in the areas of education, health, and clean water
- Knowledge of, experiences with, and use of communication channels and media

[9] These ideas are in the 'Purpose, Goals & Objectives' document and have subsequently been elaborated in communication between CIE and Twaweza.

- Agency (instrinsic and personal; voice)
- Action relative to concerns (local and practical, and instrumental and strategic)
- Monitoring their own circumstances and government
- Social networks

The draft household questionnaire has 11 sections or modules:

1. Location details
2. Respondent details
3. Subjective wellbeing and aspirations
4. Education
5. Health
6. Clean water
7. Communication and access to information
    - 7.A. Access to information
    - 7.B. Telephony habits
    - 7.C. Computer and internet access
    - 7.D. Religious organizations
8. Community organizations – Organizational assets
9. Experience of discrimination
10. Secutiry
11. Housing conditions

Design and Development

The development of the household, facilities, and community questionnaires is underway with considerable technical assistance from the research scholars at OPHI, as well as psychometricians at UMass. Selected modules from a preliminary household questionnaire were field-tested in February 2010. The module on Consumer Supply Channels did not test well in this exercise; further refinements are underway. Overall results from that field-testing have informed further development of the household questionnaire. A second round of field-testing is scheduled for April-May 2010, followed by revisions, then pilot-testing by the survey research firm that CIE will contract to implement the survey in Tanzania. Pilot-testing will include translation into Kiswahili which will be overseen by language experts at IDS, University of Dar es Salaam. A similar procedure will be followed for implementation in Kenya and Uganda, after appropriate cultural adjustments are made.

Sample Design, Frame, and Stages for Tanzania[10]

The sample design will be a two-stage purposive and random design to assure representativeness of all citizens to be engaged by the Twaweza initiative. The sample will be selected using the Tanziania national sampling frame designed by the National Bureau of Statistics. This sampling frame has been tested and used for household surveys since 2002.

For the baseline survey of citizens, the unit of analysis will be the household, and the respondent will be a competent[11] adult member of the household. There are to be 2,500 households in the sample. There will be ten households drawn at random from 250 villages or, for urban areas, wards. For the community and facilities surveys, each of the 250 communities will have a community profile. The facilities survey will include the largest public school within each community; the most central health clinic/facility; and the

[10] Note that these stipulations will be required of the survey research firm and may undergo further refinement.
[11] By ‘competent’, we mean an adult who is mentally sound and physically fit to carry out the interview, over 15 years of age.

number and location and functionality of public water points. For the education surveys, we propose to survey both the headteacher and the head of the School Management Committee to capture the relationship and interactions between a citizen organization and the school.

Sampling Stage 1: urban and rural distribution
To assure representativeness for the urban/rural population distribution in Tanzania, 25% of the sample will be drawn from 63 urban wards and 75% of the sample will be drawn from 187 rural villages. Within urban settings, communities (wards) can be categorized (using the DHS system) as being in Dar-es-Salaam, in a small city, or a town. Within Dar-es-Salaam, we will exclude those wards/neighborhoods characterized as largely expatriate and wealthy.[12] There will be 630 households in urban settings, and 1870 households in rural settings.[13]

Sampling Stage 2: Selection of Communities
There will be no attempt to purposively stratify the selection of urban wards and rural villages by ecological zone or region since, on one hand, there is no means to provide representative samples from the zones, since the Census does not classify communities or districts by ecological zone (and the zones cross Regions). Also, an attempt to proportionately allocate 250 communities to the 27 Regions would result in inadequate sample sizes for low-density Regions. Thus, the full list of census enumeration areas in all regions, coded for rural and urban areas, will be used as the frame from which to draw the sample of 63 urban wards (excluding expatriate neighborhoods) and 187 rural villages.

Sampling Stage 3: Selection of Households
Within each community, 10 households will be randomly selected from the full listing of households for each ward or village. By household is meant, for the purposes of this survey, a dwelling place that includes children (from 1 to 15 years).[14] Thus, the sampling frame at the ward or village level will actually work from a random listing of 20 potential households. Where interviewers find a single-person household, or a household with no children, it will be dropped and replaced by a household containing children. This process will continue until 10 'qualified' households are included in the sample.

Selection of Respondents within Households
Eligible respondents will include all competent adult (15 years and older) members of the household present at the time of the interview.[15] A modified Kish Grid method will be used to randomly select the respondent from the eligible adults.

Deliverable to CIE: Final sampling strategy, frame, and stages report.

Weighting the Sample
The probabilities of the selection of communities, households and respondents into the sample are variable. Sampling weights (the probability of inclusion based on the sampling frame) will be calculated and applied. To take account of the bias against adults who are working outside the home, information

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[12] Such neighborhoods will have a high proportion of non-citizens.
[13] These percentage distributions for urban/rural population are estimates from the 2002 census, projected forward to 2010 taking account of a (5%) population movement to urban areas since the 2002 census. These distributions are subject to further assessment.
[14] The decision to select households with children is based on Twaweza's focus on basic services, particularly education, that are particularly of concern to families rather than single adults.
[15] Note that by specifying that the selection of the respondent within a household must be a competent adult present at the time of the interview, there will be a bias against the inclusion of adults (males and females) working outside the household.

about non-present adults will be gathered at the time of the interview, and sampling weights used to adjust for this under-representation. In addition, weighting will be estimated to adjust for non-responses.

Deliverable to CIE: Weighting strategy report.

Selection & Training of Interviewers

Interviewer Selection

The interviewers will be selected to ensure that they have a background in social research. Further, they will be selected to ensure understanding of the regions where they will be posted to work; this will ensure that back translation to the local dialects is possible.

Training of interviewers

All interviewers and supervisors will be trained on instrument administration, research techniques, and ethical practice. A training and reference manual will be developed to reduce divergence from standards. Training will include briefings by the team leader. These will include background on the project; explanation of the sampling procedures; explanation of the questionnaire (question by question); dummy interviews; sharing of problems encountered; pilot interviews with respondents in the field; and a debrief on the pilot interviews.

Deliverable to CIE: Training manual and procedures report

Pilot-testing

CIE and the consulting research firm participated in a preliminary survey development and short field-testing in February 2010. Further pre-testing will be undertaken in April-May 2010. After further revisions, a pilot test will be conducted by the consultant. The locations for this exercise will be purposively chosen, taking into account regional differences in socioeconomic status and cultural practices. This strategy will ensure that the sensitivity of some questions is ascertained; this could lead to changes in the questions to avoid mis-interpretation or non-response. Six different locations – rural and urban – are proposed for this exercise. Pilot-testing will be conducted after interviewer training to address the following questions:

1. Is the questionnaire measuring what it is intended to measure?
2. Do the questions adequately reflect the desired content?
3. Are the questions appropriate for the sample/population?
4. Is the questionnaire comprehensive enough to collect the information needed to address the purpose and objectives of the study?
5. How long does it take to administer the questionnaire?

After pilot-test data are collected, reliability tests will be carried out using the data collected from 20 respondents not included in the sample. Data will be analyzed using SPSS; correlation matrices will be run on the data to ascertain reliability. The pilot-testing will be followed by a debrief which may result in further refinements and adjustments.

Deliverable to CIE: Report on pilot-testing. CIE participation in further refinements.

Administration & Quality Control

Implementation will be led by an overall Team Leader who is charged with ensuring that the fieldwork is conducted to the highest standards. This individual will supervise field team supervisors who, in turn, will supervise 5-6 interviewers.

Each team supervisor will conduct 5% accompaniment to ensure that the interviewers follow instructions and procedures in the sample specifications for recruiting respondents and in the conduct of the interview. Team supervisors will also carry out 10% back-checks to verify proper recruitment by the interviewers. The supervisors will make discreet face-to-face contact with respondents to ascertain if the respondent was recruited according to the briefing instructions.

Each supervisor will conduct 100% questionnaire checks to verity that all questions have been answered according to the briefing instructions. In addition, spot checks will be made by the overall team leader to ensure that both supervisors and interviewers are actually doing the work.

Quality assurance of administration of the questionnaire (recruitment of respondents; checks on basic data) will also be done by the University partners, as part of their sub-contract obligations to CIE.

Deliverable to CIE: Report on quality procedure in conduct, noting problems and solutions implemented.

Data Entry & Quality Control

Data entry will be done either in the head office of the survey firm or through an automated data capture system, depending on capacity and choice of the firm. If data capture is not automated, during the time of data entry, cleaning and validation will take place on a continuous basis to remove any invalid data entries and also to correct any inconsistent observations that emerged during the data collection and entry processes. Data entry and cleaning will be conducted by the data entry personnel and the key survey personnel, by performing frequency runs using software with data cleaning specifications based on the questionnaire.

The editing team will be thoroughly briefed on the purpose of the questionnaire and carry out 100% questionnaire checking and editing. In addition, about 75% of questionnaires will be selected at random, and the code list updated during editing. All code frames will be vetted before application and then checked by the overall Team Leader. Editor team leaders then go through questionnaires with data entry clerks before commencing data entry, to highlight difficult areas. This process will enable the data entry clerks to understand the questionnaire fully. At least 20% of the questionnaires will be verified again by the team leaders.

Community Questionnaires

The community questionnaires will be administered to the local officials/village heads. The draft community questionnaire includes sections or modules on the following:

- Size and age distribution of population;
- Infrastructure (roads, water points, electricity, telephone, internet, waste disposal, recreation facilities);
- Community organizations and associations (including religious organizations, CSOs, and NGOs);
- Facilities (health, schools – public and private, banks, post office);
- Government services (police, local elected officials);
- Primary and secondary livelihoods;
- Market dynamics (markets (imports-exports), labor migration, agricultural practices); and
- Presence of communications media (mobile phone reach; cyber-cafés; M-Pesa; market outlets; trade unions; etc.).

Facilities Questionnaires

The relatively facilities questionnaires of schools and health facilities will establish current conditions along key axes: teacher and health care worker attendance; availability of learning materials and basic medicines; etc. The sampling procedure will be to select the largest primary school contiguous to and serving the village or neighborhood and to select the health facility that is the first point of contact for residents. These facilities questionnaires will establish baseline conditions and then permit assessments of change over time. As noted above, for the school facilities questionnaire, Transparency International's African Education Watch questionnaires are quite appropriate and are currently being modified for our use. We anticipate administering questionnaires to both headteachers and heads of the School Management Committees. The draft headteacher questionnaire includes sections or modules on:

- School characteristics (enrollments, classrooms, condition [water, latrines]);
- Training of headteachers and School Management Committees on financial matters;
- Teachers posted and in attendance (percent of classes in session based on timetables);
- Availability of learning materials;
- Problems at schools and actions taken;
- School governance;
- Transparency of information (pass rates, school holidays);
- Transparency of financial information;
- Responses to concerns expressed by parents; and
- Relationship with the School Management Committee.

Modules for the health facility questionnaires include:

- Overall health problems in the community (severity, frequency);
- Percent of children who are immunized;
- Conditions of facility (electricity, generator, refrigeration, morgue);
- Health care workers posted and in attendance;
- Availability of basic medicines, expiration dates;
- Service: number of patients per day; fee structure; and
- Specific services: pre-natal, HIV/AIDS, malaria, parasites.

Mid-term Micro-Survey Using LQAS – 2012

Lot Quality Assurance Sampling (LQAS) is a simple and elegant methodology for assessing the 'quality' of development interventions (those that are relatively easily measured). Developed in the 1920s as a method for controlling the quality of industrially-produced goods, LQAS has been taken up in the health and disaster management fields in developing countries[16]. The methodology rests on the notion that a small random sample from a 'lot' can be assessed for its overall 'quality', given probabilities and sampling methods. The smallest number of items is determined statistically; this is called the decision rule. As the methodology has been used, it has come to be known as 'The Rule of Nineteen'[17], capturing the notion that a sample size of a minimum of 19 items allows for "specificity and sensitivity of greater than 90%"[18] Thus LQAS permits targeted, statistically-sound assessments using small sample sizes. For the mid-term micro-survey, this methodology holds promise.

[16] See Dodge & Romig, 1944, and Valadez & Devkota, 2002.

[17] We also note that the 'Rule of Nineteen' refers to rules governing the care game bridge in England. As such, it represents another application of the probabilities underlying the decision rules.

[18] Valadez & Devkota, 2002, p. 177.

Follow-up Surveys – 2014

In order to measure changes at the societal level to which Twaweza's partner initiatives may have contributed, a systematic follow-up survey towards the end of the evaluation contract will be necessary. In earlier discussions, Twaweza argued that this should be a panel study. Upon consultation with our statistical advisors and further review, we find this approach to be problematic. Attrition rates in panel studies in developing countries can be as high as 40%[19]. While the attrition may not significantly affect estimates, the tracking associated with reducing attrition is prohibitively expensive and time-consuming. We, therefore, will repeat the baseline surveys with randomly-selected samples from the three countries to be able to make appropriate comparisons over time.

Given that we have framed the evaluation as a learning exercise, it is likely that new items will be introduced into the follow-up surveys. However, to ensure comparability, no items will be excluded unless they prove irrelevant for the analyses. We will follow similar procedures as for the baseline surveys.

References Cited

Alsop, R., & Heinsohn, N. (2005). *Measuring empowerment in practice: Structuring analysis and framing indicators.* World Bank Policy Research Working Paper #3510. Washington, DC: The World Bank. Available at: http://siteresources.worldbank.org/INTEMPOWERMENT/Resources/41307_wps3510.pdf

AudienceScapes. Available at http://www.audiencescapes.org/

Dodge, H. F., and H. G. Romig. 1944. *Sampling inspection tables: Single and double sampling.* New York: John Wiley & Sons

Grootaert, C., & van Bastelaer, T. (2001). *Understanding and measuring social capital: A synthesis of findings and recommendations from the Social Capital Initiative.* Social Capital Working Paper Series. World Bank Social Development Department. Washington, DC: The World Bank. Available at: www.worldbank.org/socialdevelopment

Hill, Z. (2004). Reducing attrition in panel studies in developing countries. *International Journal of Epidemiology, 33*(3), 493-498.

Oxford Poverty & Human Development Initiative. See http://www.ophi.org.uk/

Sen, A. (1999). *Development as freedom.* Oxford: Oxford University Press.

Transparency International African Education Watch. Available at http://www.transparency.org/news_room/in_focus/2010/african_education_watch

Valadez, J. J., & Devkota, B. R. (2002). Decentralized supervision of community health programs: Using LQAS in two districts of Southern Nepal. In *Community-based Health care: Lessons from Bangladesh to Boston.* Management Sciences for Health, Inc.

[19] Hill, 2004.

ANNEX A. PRELIMINARY HYPOTHESES – HOUSEHOLD QUESTIONNAIRE

Cluster 1 – Access to and use of information

This construct is composed of three broad elements: access to various information media (variety); intensity of use (frequency); and purpose of use.

- Access to and use of information is related to age (youth are more likely to access and use information channels).
- Access to and use of information is related to gender (men are more likely to access and use XXX; women are more likely to access and use XXX).
- Access to and use of information is related to income (those with more resources are more likely to access and use information).
- Access to and use of information is related to ethnicity (those in the dominant or more powerful ethnic group are more likely to access and use information).
- Access to and use of information is related to holding positions of power (those holding positions of power are more likely to access and use information).
- Mobile phone usage (including Sim cards) is related to age (youth are more likely to access and intensely mobile phones).
- Intensity of use of information media is associated with increased taking action.
- Access to information stimulates the imagination (those who use more information channels are more likely to envision a different situation for themselves or their families).
- Relevance and importance of information is related to taking action.
- Access to and use of information is related to taking action relative to water first; livelihoods second; health third; education fourth.
- Citizens who generate information (rather than receive it) will have greater sense of agency and ability to take action (ie, Uwezo).

Cluster 2 – Agency – Self-perception and taking action

Agency is operationally defined as 1) subjective perception; and 2) reports of taking action.

- Agency is related to age (youth are more likely to believe they have agency and to take action).
- Agency is related to gender (men are more likely to believe they have agency and to take action relative to household livelihood and government; women are more likely to believe they have agency and to take action relative to education and clean water).
- Agency is related to income (those with more resources are more likely to believe they have agency and to take action).
- Agency is related to ethnicity (those in the dominant or more powerful ethnic group are more likely to believe they have agency and to take action).
- Agency is related to holding positions of power (those holding positions of power are more likely to believe they have agency and to take action).
- Agency is related to access to information (those with more access to information [multiple sources, frequency of use] are more likely to believe they have agency and to take action).
- Agency is related to use of information (those with subjective perception of agency are more likely to access and use information channels).
- Action is more likely to be taken through social networks and groups than by individuals.
- Taking action in the public sphere will lead to repressive counter-actions.
- Perceptions of risks (repressive actions) will decrease taking action.

- Taking action in more proximate domains (lads I watch soccer with, beauty parlor clients) will increase the ability to act in less proximate domains (public/private).
- Taking action perceived to be successful enhances subjective perception of agency.
- Participation in planning or implementing new projects promotes greater sense of agency.
- Positive responses disasters (taking charge, problem-solving, organizing community/neighborhood) is related to an increased sense of agency.
- Participation in social networks promotes a sense of agency (those who participate more deeply [variety, intensity] in informal and formal social networks are more willing to take action).
- Monitoring at the practical and local level is associated with monitoring in the public sphere
- Monitoring of government services encourages transparency of officials

Cluster 3: Taking action and improved service delivery

This assumes that there is evidence in the baseline surveys of responses by government service providers. If not, then these will be elaborated and tested through the follow-up survey.

- Taking action in the public sphere is related to improved service delivery.
- Improved service delivery is related to enhanced subjective perception of agency.
- Improved service delivery is related to willingness to take further action.
- Improved service delivery leads to better living conditions