



# Assessing Costs of the Individual Deprivation Measure

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# Introduction

## About the IDM

The Individual Deprivation Measure (IDM) is an individual-level, gender-sensitive measure of multidimensional poverty, underpinned by a twelve-year, multi-stage research program. Motivated by a desire to improve existing measures of poverty to make it possible to assess the relationship between gender and poverty, an interdisciplinary team set out to answer the question: What is a just and justifiable measure of poverty that is sensitive to gender and capable of revealing gender disparities where they exist? Foundational research and testing of the IDM was undertaken through a four-year, international, interdisciplinary research collaboration, led by the Australian National University (ANU) in partnership with the International Women's Development Agency (IWDA) and the Philippines Health Social Science Association, University of Colorado at Boulder, and Oxfam Great Britain (Southern Africa), with additional support from Oxfam America and Oslo University. This project, 'Assessing development: designing better indices of poverty and gender', was funded by the Australian Research Council and partnership organisations (LP0989385). The IDM measure and tool were the result.

A three-phase research design used mixed methods to develop a new approach to measuring multidimensional poverty, and was informed by participatory and feminist research methodologies. The fieldwork involved thousands of participants with lived experience of poverty across 18 sites in six countries. Grounded in the insights from participatory research, the views of men and women experiencing poverty, civil society organisations working on the ground for change, and feminist and development scholarship, the IDM was developed to assess 15 dimensions of life that women and men experiencing poverty said mattered. The IDM's approach of sampling all adults in a household was also informed by the relevant literature and selected for its power to provide insights on withinhousehold differences. A successful proof of concept trial in the Philippines demonstrated that individual-level, multidimensional, gender-sensitive and scalar measurement of poverty is both possible and desirable.

The first IDM study beyond this proof-of-concept trial was subsequently carried out in Fiji (2014–17) by IWDA working with Fiji Bureau of Statistics, with funding support from the Australian Government's Department of Foreign Affairs and Trade (DFAT) in Fiji. This study focused in areas previously identified by a World Bank study as having a high incidence of poverty. The study confirmed the IDM as a tool that extends available insights into multidimensional poverty. It also identified aspects of the measure and survey that would benefit from further testing and refinement.

In 2016, as part of a wider focus on closing gender data gaps, the Australian Government made a further investment in the ANU and IWDA to ready the IDM for global use. From 2016-2020 the IDM Program teams at ANU and IWDA delivered significant methodological

updates including revised survey instruments, dimension scoring and index construction, four additional datasets from varied contexts in Asia, the Pacific and Africa, a prototype of data visualisation and data querying capability, regular contributions to global discourses on individual and gender-sensitive multidimensional poverty measurement and addressing gender data gaps.

## About this paper

The current IDM program will be completed on 30 June 2020. The work of the IDM Program is complex and varied, with activities across a range of types and levels of work including survey development, quantitative data collection with samples ranging from 2,500 to 9,000 in countries varying in size and income level, associated statistical analysis, qualitative research, technology development, strategic advocacy and engagement and communications. A multi-component end-line review will assess and report on the extent to which the IDM Program has achieved its intended outcomes, identify any unintended outcomes, capture lessons related to the enablers and inhibitors to achievement in this Program, and inform future directions. This will involve a series of separate evaluative activities, including related studies to assess the costs and contributions of the IDM. Development Initiatives was contracted to undertake both the costs and the contributions reviews.

This report is an output of the costs review and provides a framework for understanding the costs of using the IDM, considering the implementation context to date (trialling and refining), and how this compares with other relevant multi-topic surveys. A second output from the study is an excel-based tool for estimating the costs of undertaking an IDM study and associated guidance manual, to support future use of the IDM by range of users.

The companion study considers the contributions of the IDM to the measurement landscape of both poverty and inequality, in relation to the dimensions measured by the IDM, Together, the costs and contributions studies will help inform assessment of the IDM's value.

### Limitations

A relatively small number of IDM studies have been undertaken to date, in settings with different cost structures, and in a programme context focused on review, trialling and learning, in relation to the IDM survey instruments and analysis and aggregation of IDM data. Additionally, the budgets for studies provided for review focused primarily on study set up, enumerator training and data collection. Costs associated with other activities, including analysis, report writing and dissemination, were not considered. These costs are not inconsiderable. The IDM generates a large data set (individual-level data across 15 dimensions with 36 themes and 62 indicators, plus non-dimensional data including an assets module administered at the individual level, and respondent preferences about dimension priorities). It makes possible intersectional analysis, analysis of joint deprivations and within household analysis. Analysis options are extensive, meaning analysis and write up can take a considerable amount of time. As a new measure, dissemination and communication of results is a priority and also requires time, in communicating the results it makes possible, and why these might differ from existing measurement approaches.

## How this report is organised

This **Introduction** provides context for the report, including the wider global environment for financing development statistics.

**Section I** introduces the General Statistical Business Process Model (GSBPM) as a framework for analysing costs of producing statistics by stage and process of production, to support comparison of costs across different surveys.

**Section II** sets out the approach to assessing the cost of IDM surveys and reviews the costs of IDM studies to date.

**Section III** considers the approach to and costing of other relevant multi-topic surveys, to locate IDM costs in a wider context. Surveys considered include the Living Standards Measurement Survey (LSMS) and LSMS+, the Demographic and Health Survey (DHS), the Multiple Indicator Cluster Survey (MICS). While direct comparison of costs is difficult, considerations in assessing relevant cost drivers and learnings are offered, alongside potential trade-offs.

Section IV offers conclusions and issues for consideration going forward.

# Context

As the world enters a period likely to be characterized by the immediate and secondary effects of COVID-19, it is clear that having access to accurate data about the nature of poverty and areas of distinct vulnerability, both for the population as a whole and for specific social groups, will be essential to developing appropriate policy responses. At the same time, many countries are expected to face significantly reduced resources. A recent survey<sup>1</sup> of National Statistical Offices in Africa indicated that at least a dozen countries anticipate to have fewer resources as a result of the crisis while only two indicated that they may receive increased resources. A global survey of national statistical offices found that 53% of low-income countries reported that their funding for statistics was expected to decrease because of the crisis.<sup>2</sup>

This shock comes several years after the United Nations called for a data revolution for sustainable development—creating a data system that would be timelier, better disaggregated, more frequent, and from new sources. All of this was framed around the Sustainable Development Goal's expansive list of indicators and its equally expansive call for disaggregation by income, gender, age, race, ethnicity, migratory status, disability, geographic location, and other characteristics relevant in national contexts.

Several efforts attempted to assess the costs that might be associated with achieving this data revolution. In 2014, the most pessimistic of these papers was published by the Copenhagen Consensus.<sup>3</sup> The paper argued that the costs of statistics are high and the

<sup>&</sup>lt;sup>1</sup> https://www.uneca.org/sites/default/files/PublicationFiles/final\_main-results-survey-impact-covid-19-nss\_en.pdf <sup>2</sup> https://unstats.un.org/unsd/covid19-response/covid19-nso-survey-report.pdf

<sup>&</sup>lt;sup>3</sup> https://www.copenhagenconsensus.com/sites/default/files/data\_assessment\_-\_jerven.pdf

benefits to society are low. While it is beyond the scope of this paper to engage in that argument, the costs it associated with data collection are instructive. The report notes a wide degree of variation in the costs associated with statistical products. For instance, the costs per capita for censuses ranged from US\$0.40 in India to US\$42 in the United States.<sup>4</sup> In low-and middle-income countries, the Copenhagen Consensus estimates that a census costs US\$1-US\$3 per person. It further estimates that the costs of a Living Standards Measurement Study (LSMS) survey is US\$0.4-US\$1.5 million. USAID's Demographic and Health Surveys (DHS)—a major source of data in many low- and middle-income countries— are estimated to cost US\$0.8 -US\$1.2 million. For the World Bank's Core Welfare Indicators Questionnaire (CWIQ)<sup>5</sup> the costs are estimated at US\$0.33-US\$0.66 million. For potential funders of surveys, there may be increasing demand to justify the expense of surveys, particularly if countries cut budgets due to economic shocks.

Since 2015, there have been several efforts to justify increasing spending on statistics and create a more enabling environment for investment. PARIS21, for instance, regularly publishes estimates that less than 1% of Official Development Assistance goes to statistical capacity building.<sup>6</sup> Data2X and Open Data Watch developed a data value chain<sup>7</sup> and an inventory of efforts to conceptualize the value of data.<sup>8</sup> The United Nations World Data Forum<sup>9</sup> in 2018 brought together demonstration of the value of data, calls for increase financing for better data and statistics for sustainable development and new mechanisms to mobilise resources. The High-level Group on Partnership, Coordination and Capacity Building,<sup>10</sup> and the Bern Network on Funding Data for Development<sup>11</sup> are developing mechanisms to generate more funding, improve funding modalities and promote mobilisation of domestic resources for data and statistics. A crucial step in understanding the value of data for development and associated financing requirements is to understand the costs associated with data collection.

The Copenhagen Consensus paper does not include extensive discussions of the drivers of costs but suggests that costs are higher for geographically large countries than for smaller countries. It further suggests that costs are higher in places with rugged terrain (this would presumably apply to some small island developing states (SIDS)). Countries with lower levels of literacy would have higher labour costs due to a smaller labour pool for enumerators. Weak infrastructure would increase travel time and transportation costs.

In 2015, the United Nations Sustainable Development Solutions Network (SDSN) published an estimate of the costs of collecting SDG indicators in the 77 countries that were eligible for World Bank funding from the International Development Association (IDA) or a mix of

<sup>&</sup>lt;sup>4</sup> There are several reasons the costs are so high in the United States and so low in India. The biggest difference is that enumerators in the United States are paid considerably more due to higher costs of living. The US Census is also known to face significant challenges around unit non-response—particularly among marginalized populations—linked to distrust of the government and a relatively low population density.

<sup>&</sup>lt;sup>5</sup> These surveys have not been conducted in recent years. Nonetheless, they can provide an indication of what a brief multitopic indicator household survey costs might be expected to be.

<sup>&</sup>lt;sup>6</sup> https://paris21.org/press

<sup>&</sup>lt;sup>7</sup> http://www.data4sdgs.org/resources/data-value-chain

<sup>&</sup>lt;sup>8</sup> http://www.data4sdgs.org/resources/value-data-inventory

<sup>9</sup> https://undataforum.org/

<sup>&</sup>lt;sup>10</sup> https://unstats.un.org/sdgs/hlg/

<sup>&</sup>lt;sup>11</sup> https://bernnetwork.org/home

funding from IDA and the International Bank for Reconstruction and Development (IBRD). The estimates include several components such as administrative data, civil registration and vital statistics and household surveys. The household survey cost estimates draw on a few general criteria. Countries are categorized into groupings based on their population density and whether they were classified by the World Bank as low income, middle-low income, or a SIDS.<sup>12</sup> The income classification is a proxy for the costs of staff wages and the population density is a proxy for transportation costs and time spent traveling. The approach assumes a certain sample size per domain depending on the survey type.<sup>13</sup> Using this approach, the table below provides estimates of the costs of conducting various household surveys. These figures are largely aligned with those published by the Copenhagen Consensus in 2014.

Table 1: Average Cost per survey in US\$ 2015						
	DHS	MICS	LSMS type survey	Labour Force Survey	Agricultural Survey	Supplemental
Operations	\$800,186	\$716,040	\$1,235,852	\$331,204	\$1,117,303	\$319,002
Field Support	\$805,027	\$340,985	\$495,427	\$133,128	\$431,135	\$125,974
Total Average	\$1,605,213	\$1,057,025	\$1,731,279	\$464,333	\$1,548,438	\$444,977

Source: Table 3, United Nations Sustainable Development Solutions Network *Data for Development: A Needs Assessment for SDG Monitoring and Statistical Capacity Development* 2015

The report also included an analysis of national strategies for the development of statistics, many of which included indicative budgets. Drawing on these budgets, using market exchange rates, the estimated costs per survey, weighted by population density and income level, was between US\$1 and \$2 million.

<sup>&</sup>lt;sup>12</sup> Note that based on the criteria used Solomon Islands would be classified as a low-density SIDS. South Africa is not IDA eligible because it was classified as an upper-middle income country and would have been classified as low density. Nepal would have been classified as high density and low income. Indonesia would have been classified as high density and low income. Indonesia would have been classified as high density and low income. Indonesia would have been classified as high density and low-middle income. This means that all things equal, the costs of collecting data would be anticipated to be higher in Solomon Islands and South Africa.

<sup>&</sup>lt;sup>13</sup> By reviewing data on the population of the second administrative level (based on the United Nations Second Administrative Level Boundaries) of the 77 countries, the study suggested that a sample domain could be established per 1.9 million people living in a country. For each sample domain, the study then describes what sample sizes might be expected for each survey--500 people for DHS, 450 for MICS, 400 LSMS, 250 for Labour Force Surveys, 300 for Agricultural Surveys and 200 for supplemental surveys. This approach is not developed to provide guidance on sampling or sample sizes; it is meant to estimate approximately what sample sizes may be used as a method for estimating costs.

	-	Population Density			
		High density	Medium Density	Low Density	Total
Status	Low income	Nepal (plus 7 other countries)	11 countries	11 countries	30
	Lower- middle income	Indonesia (plus 4 other countries)	9 countries	12 countries	26
	SIDS	12 countries	5 countries	Solomon Islands (plus 4 other countries)	21
	Upper- middle income	Not eligible for IDA/Blend funding	Not eligible for IDA/Blend funding	South Africa (Not eligible for IDA/ Blend funding)	Not eligible for IDA/ Blend funding
	Total	25	27	25 countries included in SDSN estimates	77

### Table 2: Population Density and Income Status of IDA/Blend Countries as of 2015

\*\*Adapted from Table 12, United Nations Sustainable Development Solutions Network Data for Development: A Needs Assessment for SDG Monitoring and Statistical Capacity Development 2015

Table 2 presents the position of the countries for which IDM data was collected in the current program within the framework of assessing country costs used by the SDSN costing exercise. The assessment only includes countries that were eligible for funding from the International Development Association (IDA) and those that were eligible for a mix of IDA and IBRD funding (Blend funding). Under the SDSN framework, funding is expected to be lowest for countries in the upper left corner of the table and would be expected to be more expensive as one moves to the right and down the table.

# I. General Statistical Business Process Model (GSBPM)

In 2012 the United Nations Economic Commission for Europe (UNECE) developed a framework to describe the business processes needed to produce official statistics. It was later adopted by the United Nations for all regions. The GSBPM can also provide a framework for categorizing expenditures by stage and process. The processes of the GSBPM are in Figure 1.

This framework has been applied retrospectively to support comparative analysis of costs across IDM surveys, and with costings of other multi-topic surveys. It was not used as the framework for developing IDM budgets and most other budgets for surveys are not generally mapped against the GSBPM. However, the GSBPM gives a structure to compare budgets across countries. The categorization of allocations represents our best judgement in aligning budget items with the stages and processes of the framework.

Analysis of the GSBPM framework below shows that most of the currently available information on budget expenditures for the various surveys reviewed above is limited to building and collecting with little detail recorded for costs in other areas of expenditure such as processing, analyses and dissemination of results. Similarly, the IDM budgets reviewed for this assessment focused on set up and collection and did not provide information on costs associated with processing, analyses and dissemination of results. Given the exploration and testing focus of the current IDM program, the approaches to these activities have yet to be standardised, and so meaningful estimates of resources required cannot yet be provided.

The data set generated by the IDM is extensive, enabling significant analysis options. The structure of the IDM (aggregation is required from indicator to theme, theme to dimension and dimension to index) requires analyst time to construct this has been particularly intensive to date as the IDM programme has explored options and assessed implications of various methods across different data sets. A number of approaches to weighting and index construction have been used and evaluated. The approach taken in Fiji has been audited by the European Commission's Competence Centre on Composite Indicators and Scoreboards, and the results of this work will be publicly available when finalised. This guidance is informing the approach to index construction for data from the Solomon Islands IDM survey. Another composite index construction specialist, Professor Mark McGilvray, has been working with the IDM statistician on approaches to index construction for the approaches used will be published as soon as finalised. At this point, the key point to note is that adequate resourcing for analysis, write up and communication of results will be needed to make effective use of IDM data.

	Quality Management / Metadata Management						
Specify Needs	Design	Build	Collect	Process	Analyse	Disseminate	Evaluate
1.1 Identify needs	2.1 Design outputs	3.1 Build collection instrument	4.1 Create frame & select sample	5.1 Integrate data	6.1 Prepare draft outputs	7.1 Update output systems	8.1 Gather evaluation inputs
1.2 Consult & confirm needs	2.2 Design variable descriptions	3.2 Build or enhance process components	4.2 Set up collection	5.2 Classify & code	6.2 Validate outputs	7.2 Produce dissemination products	8.2 Conduct evaluation
1.3 Establish output objectives	2.3 Design collection	3.3 Build or enhance dissemination components	4.3 Run collection	5.3 Review & validate	6.3 Interpret & explain outputs	7.3 Manage release of dissemination products	8.3 Agree an action plan
1.4 Identify concepts	2.4 Design frame & sample	3.4 Configure workflows	4.4 Finalise collection	5.4 Edit & impute	6.4 Apply disclosure control	7.4 Promote dissemination products	
1.5 Check data availability	2.5 Design processing & analysis	3.5 Test production system		5.5 Derive new variables & units	6.5 Finalise outputs	7.5 Manage user support	
1.6 Prepare business case	2.6 Design production systems & workflow	3.6 Test statistical business process		5.6 Calculate weights			
		3.7 Finalise production system		5.7 Calculate aggregates			
				5.8 Finalise data files			

## Figure 1 Source: UNECE, retrieved 21 May 2020

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# II. Analysis of IDM Survey Costs

In this section, we consider the costs of IDM survey set up, training and data collection for four countries: Nepal, Indonesia, South Africa, and the Solomon Islands, against the framework used by SDSN in estimating costs for other household surveys. We also consider the cost context of each IDM survey, identifying where there were material differences between IDM surveys conducted during the program that may have influenced costs. The survey budgets shared with authors have been mapped against GSBPM categories.

The issue of VAT and overhead costs is complicated when considering budgets. The analysis from GPSDD did not mention VAT or overhead costs to any significant extent. In fact, VAT may be a cost that is not a major concern for the other survey tools. The World Bank, USAID, and UNICEF, for instance, would generally be exempt from payments of VAT. Hence, a comparison of total costs associated with conducting an IDM and other surveys should consider VAT. Overhead costs are not a component of the GSBPM as a whole. It is not clear what overhead costs are considered under the specific budgets of the surveys. However, the SDSN survey cost estimates based on an analysis of budgets in national strategies for the development of statistics would likely include overhead costs. For these reasons, overhead and VAT budget lines have been included in this analysis.

# Nepal

Table 3: Nepal IDM Budget	
Category	USD
3.1 Build collection instrument	\$4,200
3.2 Build collection systems	\$6,730
4.2 Set up collection	\$6,516
4.3 Run collection	\$51,586
4.4 Finalize collection	\$1,700
Activity sub total	\$70,732
Overhead and VAT	\$29,177
Grand total	\$99,910

Based on the framework used in the SDSN survey costing exercise, Nepal would be expected to be a relatively inexpensive place to conduct a survey. It is a low-income country suggesting that labour costs would be relatively low and it is densely populated, reducing time and expenses on travel. On the other hand, Nepal's topography is among the most rugged in the world which likely would increase transportation challenges and costs. This was particularly so in the case of the IDM study, which was implemented 15 months after the large earthquake in Nepal in April 2015. Many roads and bridges were still significantly affected. The budget indicates that overhead and VAT accounting for 29% of expenditures.

The Nepal 2016 DHS surveyed 16,925 adults (12,862 women and 4,063 men). The IDM Nepal study was national representative and surveyed a total of 2533 individuals, comprising 2225 individuals from 1125 households plus a purposive disability sample of 308,<sup>14</sup> which involved interviewing only that member of the household. The IDM sample size was approximately 13% of the DHS sample. On a pro-rata basis, the total survey costs for the IDM Nepal study were very low in comparison to other surveys, falling well below the estimates generally cited for household surveys. The number of adults interviewed per month of labour generated was about 32. This is a relatively high amount of labour per survey. This may be partly related to the limited number of people surveyed. The cost per person surveyed was approximately US\$39. This is substantially lower than the estimated costs of the Nepal DHS survey. Using the range of DHS average cost estimates cited earlier in this paper, that survey was likely to cost in the range of \$0.8-\$1.6mill, for estimated per head costs of between \$47 per capita at the lowest end to and \$89 per capita for the top cost estimate. Assuming for analysis purposes that the DHS survey cost was at the low end of the cost estimates as a low-income country (say, \$0.9mill), the estimated cost of the Nepal DHS would be \$53 per capita.

The Nepal IDM survey was the first to be administered under the current program, so some set up processes may have taken a bit longer. However, as a common CAPI software was not in fact used across each subsequent country, the additional costs and labour associated with the initial move from paper to CAPI may not have been materially higher in Nepal than survey set up costs in Indonesia, South Africa or Solomon Islands, as form development was required for each. The survey was administered shortly after a devastating earthquake which may have distorted prices, increased the time involved in moving around between enumeration areas given the impact on road infrastructure, and resulted in modifications to living patterns and routines, which was reflected in higher numbers of call backs than anticipated. A final material difference between Nepal and subsequent IDM surveys was the survey instruments used. The individual survey instrument used in Nepal was considerably shorter than that used for subsequent IDM surveys. A dwelling survey was also added for subsequent IDM surveys, and finally, the time use module was substantively changed, with implications for the time required for administration. Together, these have added to the time required to interview all adults in a sampled household but this has not yet been assessed across multiple use contexts.

<sup>&</sup>lt;sup>14</sup> The budget for Nepal indicates a smaller sample of 1500 individuals being surveyed plus 300 people for a purposive sample. The final sample surveyed was significantly higher.

# Indonesia

Table 6 : Indonesia Budget	
Category	USD
3.1 Build collection systems	\$333
4.2 Set up collection	\$34
4.3 Run collection	\$121,870
4.4 Finalize collection	\$3,626
Overhead	\$12,544
Grand Total	\$172,429

The Indonesia IDM survey is a subnational survey focusing on two districts. The overall costs are relatively low at \$172,429.<sup>15</sup> 5,698 individuals were surveyed across 2,106 households. The cost per individual surveyed was approximately \$30. This is a relatively low cost per person, particularly since the survey was relatively small. 71% of the budget allocated falls under the category of data collection. This is a higher share than is typically seen. Some of the budget line items seem particularly low with relatively little money spent on building the collection systems, and analysis, cleaning, and preparation.

# **South Africa**

Table 5: South Africa IDM Budget	
Category	USD
3.1 Build collection systems	\$57,074
4.1 Create frame and select sample	\$17,690
4.2 Set up collection	\$121,634
4.3 Run collection	\$457,710
4.4 Finalize collection	\$13,977
5.3 Review and validate	\$6,406
6.1 Prepare draft outputs	\$5,241
Overhead and fees	\$178,090
Grand Total	\$857,823

The South Africa IDM study was designed in two parts: a survey undertaken nationally, and a geographically restricted purposive sample of people with disabilities (and their household members) in two provinces. The survey was the largest undertaken in the current IDM program, and the budget was the highest of the four budgets considered. This is in line with expectations given the sample size and the study context: an upper-middle income country with a low population density. Travel for fieldwork teams was significant; some teams

<sup>&</sup>lt;sup>15</sup> Currencies were converted from Indonesia Rupiah to US Dollars based on a foreign exchange rate of 1 USD=13,500 IDR. These were the midpoint rates as of 1 January 2017. Data collection began in 2017. The budget reports that the total budget was AUD 224,050. devinit.org

travelled distances of more than 500km (one way) to some survey sites from their home base. The purposive sampling of people with disabilities also increased overall costs, compared with increasing the main sample by the same number of respondents. The process of drawing up the purposive sampling frame, contacting respondents and organizing interviews was reportedly extremely time intensive and much more time intensive than for the main sample. The overall cost per household surveyed was about \$183 and the cost per individual surveyed was \$78. These are higher costs per individual than other IDM surveys conducted in this phase of the program.

The number of people surveyed in the IDM study was 11,014 from 4,684 households (the main sample was 8,652 individuals from 3,811 households, the purposive sample was 2,362 individuals from 873 Households), By comparison, the South Africa DHS 2016 surveyed 22,468 individuals from 11,083 households, approximately twice the number of individual respondents from 2.3 times more households. The South Africa DHS 2016 included special modules to capture data from a larger subset of people than most DHS surveys and included many more modules and used fewer age restrictions than most DHS surveys.<sup>16</sup>

The total cost of the South Africa IDM survey was about \$857,823. This is a relatively expensive survey; however, it does not exceed the average cost of a typical MICS survey (US\$1.06 million) in the SDSN costing exercise, though with many fewer households surveyed than most indicative budgets would suggest a MICS would include. However, the low density, higher income context, the purposive disability sample, substantial cognitive interviews, and the sampling of all adult household members to capture intrahousehold dynamics (and thus more call backs on average) would also contribute to higher costs.

More than half of the IDM South Africa budget could be categorized as data collection with the second largest budget line item being professional fees, including personnel and headquarters technical support costs associated with training, sampling, CAPI form development, project management, data cleaning, and report writing.

# **Solomon Islands**

Table 4: Solomon Islands IDM Budget			
Category	USD		
2.1 Design outputs	\$60		
3.1 Build Collection systems	\$22,177		

<sup>&</sup>lt;sup>16</sup> The survey sampling was somewhat more complicated than in most DHS surveys. In half of the households, women ages 15-49 were given the individual survey, one woman per household was given the domestic violence questionnaire, and a survey of the caretaker was given for all children ages 0-5 whose biological mother was not living in the household. For the other half of the households, women 15-49 were given the individual quest0inoniare and the adult health module, women ages over 50 and men over 60 were given the adult health module, one woman over 18 per household was given the domestic violence questionnaire, women and men over 15 were given the biomarker questionnaire as were all children 0-5, and caregiver surveys were administered for each child 0-5 whose biological mother was not in the household. Women could be surveyed if they lived in the household or if they were a visitor who had spent the night before the survey in the household. The Washington Group questions were administered to all individuals over age 5. 11,083 households were surveyed, 8,514 women questionnaires were administered, 3,618 men did the adult questionnaire, and 10,336 adults over 15 were interviewed. The survey also included salt iodine tests. As a result of the more extensive questions, the broader age ranges for questions and the inclusion of a larger subsample of men, the South Africa Demographic and Health Survey included a much larger share of individuals within a household than typical DHS.

Grand Total	\$144,947
7.4. Promote dissemination products	\$120
5.3 Review and validate	\$60
4.4 Finalize collection	\$299
4.3 Run collection	\$84,835
4.2 Set up collection	\$37,397

A total of 1,866 individuals in 851 households were surveyed in the Solomon Islands. The sample of two provinces was relatively small because of project timeframe requirements. The cost per individual surveyed was \$78.<sup>17</sup> The cost per household surveyed was \$170. The total survey costs were significantly higher for the Solomon Islands than for the two other IDM surveys using the revised and longer survey. Following the framework of density and income, a survey in the Solomon Islands would be expected to be relatively high cost, with a small population,<sup>18</sup> low density and small island developing state context contributing to particularly high transportation, accommodation, and communications costs. Some adjustments to sampled enumeration areas were also required due to weather related issues and COVID-19 restrictions. The Solomon Islands is known to be a particularly high cost country generally. The expenses recorded in the budget table for finalizing data collection, reviewing, and validating data and promoting and dissemination do not represent the full costs of these processes, only those expenses directly incurred by the local implementing partner in the Solomon Islands, noting that face to face validation was not possible because of COVID-19 restrictions. Funds were reallocated to additional fieldwork to address the impact of COVID-19 movements on sampling. The budget also included some costs that were not part of the other IDM study budgets, including capacity development and support for a research steering committee.

<sup>&</sup>lt;sup>17</sup> The survey costs have been converted to USD using currency exchange rates in May 2020. Total costs in Solomon Islander Dollars were 1,255,585.40.

<sup>&</sup>lt;sup>18</sup> The latest Solomon Islands census was undertaken in November 2019, but results are not yet available. The Solomon Islands National Statistics Office projects the population will be around 694,619 based on the 2010 census.

# III. Costing approaches of other surveys

The following sections discuss cost estimates from other multi-topic country surveys with a focus on individual-level socioeconomic and demographic outcomes, to locate IDM costs in a wider context. The surveys include the World Bank's Living Standards and Measurement Study+ (LSMS+) surveys, USAID's Demographic and Health Surveys (DHS), and the Multiple Indicator Cluster Surveys (MICS) run by UNICEF.

As noted. the costs of the same survey can vary significantly across countries, depending on several contextual factors. Kilic et al (2017), in particular, have provided a detailed discussion of these factors affecting LSMS-style multi-topic household surveys, summarised below (Box 1).

#### Box 1. Sources of cross-country variation in multi-topic household surveys (Kilic et al, 2017)

- 1) Whether a given cost category/line item is absorbed through technical assistance outside the implementation budget (such as data analysis and dissemination, training and capacity building activities, and specialized equipment procurement outside the country),
- 2) Survey duration, sample size and spatial distribution,
- 3) Interview length and approach to respondent selection,
- 4) Survey mode (type of device for data collection CAPI, Android, etc.,)
- 5) Required field staff and their organization (mobile teams versus resident enumerators, need for specialized staff),
- 6) in-country salary and per diem structure for field-based and supervisory staff, and
- 7) Costs for vehicle purchase versus rental, maintenance and repairs.

#### Reference:

Kilic, Talip, Umar Serajuddin, Hiroki Uematsu Nobuo Yoshida. 2017. "Costing Household Surveys for Monitoring Progress Toward Ending Extreme Poverty and Boosting Shared Prosperity." <u>World Bank</u> <u>Policy Research Working Paper 7951</u>.

# Living Standards and Measurement Study Surveys

The Living Standards and Measurement Study (LSMS) surveys<sup>19</sup> are multi-topic, household surveys covering a range of outcomes across individuals (including employment, education, health) as well as households (including access to water, sanitation and sources of fuel and electricity; consumption; ownership of durables; and exposure to shocks). Over time, the LSMS surveys have evolved different variants, including the LSMS-Integrated Surveys in

<sup>&</sup>lt;sup>19</sup> http://surveys.worldbank.org/lsms/about-lsms

Agriculture,<sup>20</sup> which have an additional focus on agricultural outcomes, and (most recently) the LSMS+ surveys,<sup>21</sup> which have evolved out of the IDA18 commitment<sup>22</sup> to collect self-reported, individual-level data on assets and labour outcomes.

The LSMS+ surveys, in particular, support individual-level modules in existing nationally representative surveys to shed greater light on intra-household variation in outcomes across men's and women's ownership of land, financial accounts and mobile phones, as well as in employment outcomes across wage work and entrepreneurship. This information is intended to provide better understanding of channels for women's economic empowerment. Self-reporting avoids potential measurement issues arising from proxy reporting and social norms affecting responses within family settings (see Kilic and Moylan, 2016, for more details).<sup>23</sup>

Like the IDM, the LSMS+ prioritizes individual-level interviews across a much wider range of outcomes compared to standard household socioeconomic surveys. As a result, the questionnaire instruments are much more complex, and require higher quality data collection (including better educated and trained enumerators). The LSMS also interviews up to four adults per household in one-on-one settings, and as with the IDM, requires call backs if targeted respondents are not initially available, leading to significantly longer timeframes per household for interviews.

Kilic, Koolwal and Moylan (2020), for example, study a survey experiment in Malawi, where in 2016-17 the LSMS+ survey and a standard nationally representative household survey (IHS4) were conducted concurrently. Comparing the two surveys, field teams took an average of 3.4 days in an enumeration area for the standard IHS4 survey implementation, with one enumerator visiting each household, but 4.5 days in the LSMS+ survey (a roughly 32 percent increase). One could reasonably predict that the additional survey implementation costs related to interview length would increase by a similar factor per household. Similar results were also found in the Uganda Methodological Experiment on Measuring Asset Ownership from a Gender Perspective, or MEXA (Kilic and Moylan, 2016), where different survey treatment arms/survey modules were assigned in the same country context with individual versus household-level approaches to collecting survey data on asset ownership. The recommended treatment arm — an individual-level interview approach similar to the LSMS+ design — had an implementation cost per unit household about 31 percent higher than the treatment arm following standard "business-as-usual" survey approaches of asking only one member per household on all members' asset ownership.<sup>24</sup> The benefits of this approach to individual-level data collection have been demonstrated in

<sup>&</sup>lt;sup>20</sup> http://surveys.worldbank.org/lsms/programs/integrated-surveys-agriculture-ISA

<sup>&</sup>lt;sup>21</sup> LSMS+ is established with grants from the Umbrella Facility for Gender Equality Trust Fund, the World Bank Trust Fund for Statistical Capacity Building, and the International Fund for Agricultural Development, and is implemented by the World Bank LSMS Team, in collaboration with the World Bank Gender Group and partner national statistical offices.

<sup>&</sup>lt;sup>22</sup> http://documents.worldbank.org/curated/en/846661468196734005/pdf/106181-BR-IDA-18-Gender-Development-PUBLIC-disclosed-6-2-2016-11-31PM-IDA-SecM2016-0114-Box360260B.pdf

<sup>&</sup>lt;sup>23</sup> Talip Kilic and Heather Moylan. 2016. <u>Methodological experiment on measuring asset ownership from a</u> <u>gender perspective (MEXA): technical report</u>. World Bank.

<sup>&</sup>lt;sup>24</sup> This cost increase takes into account (1) the sum of all household and individual interview durations in each treatment arm, (2) the average within-enumeration area day spread between the start and end of all interviews associated with the households sampled for a specific treatment arm, and (3) "sunk" time costs associated with trying unsuccessfully to secure participation of targeted individuals who were not responsive.

recent studies using LSMS+ data from Malawi — where important gender gaps in reporting economic opportunities (both across assets<sup>25</sup> and labour<sup>26</sup>) are apparent.

# Costs of LSMS Surveys

Although the basic structure and objectives of LSMS and the LSMS+ surveys are similar across countries, there is significant variation depending on local context, sample size, and institutional capacity that can affect ease of implementation. The analysis by Kilic et al (2017) of LSMS-ISA surveys, showed per-household real unit costs<sup>27</sup> ranged from USD 199 in the 2010/11 Malawi Integrated Household Survey (sample size, 12,271); to USD 331 in the 2011/12 Ethiopia Socioeconomic Survey (sample size 3,969); and USD 406 in the 2010/11 Nigeria General Household Survey (sample size 4,916). Most recently, a collaboration between the LSMS program and the ILO to compare LSMS and Labour Force Survey (LFS) estimates of employment<sup>28</sup> had cost estimates of about USD 150-200 per household for a sample size of roughly 700 households.

Kilic et al (2017) also provide a detailed template of cost categories for LSMS-style surveys (Box 2). Using the survey implementation figures above, total costs would be USD 2.44 million for the Malawi survey, USD 1.31 million for Ethiopia, and USD 1.99 million for Nigeria (in 2014 prices). Technical assistance costs for the same surveys (staff, consultants and travel) had somewhat less variation due to a greater role of external staff: USD 590,686 for Malawi, USD 525,904 for Ethiopia, and USD 725,278 for Nigeria. The breakdown of technical assistance costs across major components is presented in Figure 2.

Technical assistance costs are an important driver of survey costs. Given the IDM is a new survey tool, and there are limited numbers of people with direct experience of implementing an IDM survey, technical assistance is likely to be a significant component of IDM survey costs going forward. The daily rates for senior staff supporting implementation of other surveys (for example, task team leader) provide an indication of market rates for relevant expertise and may be useful in estimating IDM resourcing requirements when other specific information is not available. For example, LSMS daily rates for resident survey specialists leading the survey implementation are USD 10,000 per month or USD 500/day for a 20-day working month.<sup>29</sup>

 <sup>&</sup>lt;sup>25</sup> http://documents.worldbank.org/curated/en/737001582039166195/Getting-the-Gender-Disaggregated-Lay-of-the-Land-Impact-of-Survey-Respondent-Selection-on-Measuring-Land-Ownership-and-Rights
<sup>26</sup> http://documents.worldbank.org/curated/en/899841582040036337/Are-You-Being-Asked-Impacts-of-Respondent-Selection-on-Measuring-Employment

<sup>&</sup>lt;sup>27</sup> Real unit cost is in 2014 prices.

<sup>&</sup>lt;sup>28</sup> In 2013, the 19<sup>th</sup> International Conference of Labour Statisticians (ICLS 19), which guides how country labour force surveys and other employment-focused surveys are implemented, recommended that the definition of employment be narrowed to work strictly for pay or profit, and that countries also collect complementary data on unpaid productive work. This has led to a series of analyses on the types of additional survey questions needed to ensure that important areas of work (including, for example, unpaid contributing family work on the farm or enterprise, as well as subsistence agriculture, often conducted by women) are not excluded from these surveys. See, for example, <u>Benes and Walsh (2018)</u>.

<sup>&</sup>lt;sup>29</sup> http://documents.worldbank.org/curated/en/260501485264312208/Costing-household-surveys-for-monitoring-progress-toward-ending-extreme-poverty-and-boosting-shared-prosperity



# Figure 2. Breakdown of Technical Assistance Costs for LSMS-ISA Surveys: 2010/11 Malawi, 2011/12 Ethiopia, and 2010/11 Nigeria



# Comparing costs of IDM data collection to MICS and DHS

It is difficult to make a direct comparison between these surveys. The survey budgets generated by DHS and MICS are hypothetical. The DHS and MICS surveys are nationally representative while some of the IDM surveys conducted to date are not. Furthermore, IDM has done some purposive sampling which has not been developed into the DHS and MICS estimated costs. If the purposive sample tends to cluster somewhere where the costs of collecting data are smaller than the broader population such comparisons may be skewed. Nevertheless, a brief comparison based on the budgets provided by IDM may be helpful.

Table 5: Comparison of costs between IDM and DHS and MICS						
	DHS	MICS	South Africa IDM	Indonesia IDM	Nepal IDM	Solomon Islands IDM
Households surveyed	9,000	12,500	4,684	2,186		851
Individuals surveyed			11,014	5,698	1,800	1,866
Number of months of labour for field work	492	351	302	87	56	
Households surveyed per month of fieldwork	18	36	15	25		
Individuals surveyed per month of fieldwork			36	65	32	
Approximate total cost in USD			\$857,823	\$172,429	\$99,910	
Total cost per household surveyed			\$183	\$78		\$170
Total cost per individual surveyed			\$78	\$30	\$39	\$78

# Potential tradeoffs to consider

IDM faces several tradeoffs associated with survey costs. If IDM focuses on large nationallyrepresentative surveys, the marginal cost per individual data point will decrease. This is due to fixed costs associated with the survey being distributed across a larger number of data points. However, when large national surveys are conducted, the IDM total cost will approach the costs of MICS. Resources for such surveys are finite and already less than assessed as needed to meet global, regional and national requirements for data. For a new measure and survey such as the IDM, this only underlines the importance of communicating the particular value that the IDM adds to the landscape of existing measurement tools – and the challenge of doing so at this point in the IDM's development, when there is still a relatively limited number of studies conducted so far, and limited evidence of how IDM data has been used to inform action.

Smaller, subnational IDM surveys can have significantly lower total costs than national surveys, but subnational surveys may not have the same level of influence at the national or international level as subnational surveys. This may depend entirely on the audience and demand for data in a certain context. Smaller surveys may also have less statistical power making it harder to identify statistically significant differences between groups. Underpowered surveys are less of a concern where differences between comparison groups are likely to be bigger.

Purposive sampling is likely to be more expensive. As mentioned in the discussion of MICS, prescreening for purposive sampling can be carried out during the listing process. Alternatively, if the general sample is large enough, purposive sampling may not be as necessary because the IDM covers all adults in a household and may be more likely to capture data on certain populations than other sampling methods.

Geography is a major factor in survey costs. Areas with higher population density are likely to have much lower unit costs. Areas with remote terrain and lower population density also have higher costs per unit. Small island states are also likely to have higher data collection costs per unit due to time required for travel and additional transportation costs which may not be necessary in other countries.

Labour costs are also driven by a few factors. In countries where the cost of living is relatively high and where GDP per capita is relatively high, labour costs are more likely to be elevated. Labour costs may also be increased depending on the skill level required of staff for the survey. IDM does not have staff conducting analyses of blood samples or other material tasks, but IDM's labour costs may be higher because of the broad range of topics covered in the surveys. This may require special skills of enumerators.

# IV. Conclusions and issues to consider going forward

To date, in the context of the current program to ready the IDM for global use, IDM surveys have had smaller sample sizes than major household surveys. This has kept overall survey costs well below those for many other household surveys. This is particularly true when comparing the number of households surveyed to standard DHS, MICS or LSMS surveys. This lower sample size likely contributes to a higher cost per household and—to a lesser extent—a higher cost per adult surveyed than other major household surveys. However, the main source of cost difference between the IDM and most other relevant multi-topic household surveys is the use of a sampling approach that involves interviewing multiple individual adults in a household, resulting in significantly more time per household. Other surveys that have used a similar sampling approach, notably the recent LSMS+ surveys, have documented the resulting increase in total household survey time compared to sampling fewer adult household members per household. However, if the total number of individuals surveyed does not change, more time per household associated with this sampling approach needs to be offset against any reduction in time associated with sampling fewer households in total than required for approaches that interview few respondents per household.

Nevertheless, differences in cost per data point between the IDM and other relevant multitopic surveys do not seem particularly large. IDM could reduce the costs per respondent somewhat by increasing the sample size; however, this would increase the overall cost of conducting an IDM survey. As noted at the start of this report, resources for conducting surveys are finite and already less than assessed as needed to meet global, regional and national requirements for data. This operating reality provides the context for all household surveys and the decision-making of those commissioning and resourcing multi-topic surveys. This is driving a range of innovations and reform efforts in household surveys globally. Ultimately, however, costs associated with particular surveys also need to be assessed against what they deliver. The IDM's approach delivers individual-level data that can be disaggregated to understand how patterns vary by social group, and enables withinhousehold analysis, in relation to a wide range of dimensions that are important to understanding poverty and how it varies by particular characteristics in specific contexts. As the related contributions study shows, this adds to what existing multi-topic surveys offer, in a number of important ways.

One approach that might be valuable is a survey experiment to identify how much additional information is gained based on modifications in sampling strategy (such as randomly

selecting a subset of respondents within a dwelling) rather than surveying all adult household members. The IDM program has statistically assessed the impact of different sampling strategies (collecting data from all adult household members makes it possible to assess the impact on results of sampling strategies short of this), which will provide guidance in assessing the costs and benefits of sampling options. Survey experiments could also explore the value of both particular questions and the marginal extra benefit of asking each additional question beyond a notional minimum for certain topics, to inform assessment of the trade-offs between survey length and costs.

Standardized budgeting for IDM surveys will assist analysis of costs across surveys and inform management of those costs. Following the World Bank's approach, it may be useful to separate survey implementation and technical assistance costs, to better understand what costs are specific to sample size and which costs might not need to be replicated with additional surveys. Structuring budgets around the stages of the Generic Statistical Business Process Model (GSBPM) will also assist in assessing costs across surveys and contexts. The development of a comprehensive Excel-based tool as a companion output of this cost review, structured around GSBPM stages and drawing on the MICS cost-estimation tool, will support standardizing of future IDM survey cost estimation and enable users to examine and manage cost drivers and assess trade-offs.

# Appendix 1: DHS and MICS budgeting guidelines

# **Demographic and Health Survey**

USAID's Demographic and Health Survey is the world's largest household survey program. The survey focuses primarily on health and demographics and has been carried out in more than 90 countries with more than 320 surveys. The survey includes many biometric modules, with the most common focus on measuring weight and height among children under 5. There are other biometric modules focusing on vitamin deficiencies, malaria, HIV, anaemia and adult indicators of malnutrition. These questions are asked in addition to a range of questions about household assets, attitudes about gender-based violence, education, information, knowledge, and mortality among other topics. The DHS differs from the IDM in many ways, many of which will be discussed in further depth in this report, and in the related study on the IDM's contributions to the broader data ecosystem. However, one key difference is that the IDM does not include biometric measures, eliminating many technical, logistical, and labour costs. Understanding the inputs required to generate the DHS can help contextualize the costs associated with the IDM. The DHS program does not publish a template for estimating survey costs. However, they have published guidance on labour requirements for certain outputs.

Two key differences between the DHS and the IDM for understanding differences in required inputs are the sampling framework and DHS programme's use of biometric measurements. This would suggest that a higher share of costs for an IDM would be due to labour costs. A better understanding of the of these differences can highlight the cost implications. Most DHS surveys survey one adult in household and then ask questions to all women in the household ages 15-49. In many countries, all men ages 15-49 in a household will be sampled in about a third of households. As an example, the 2016 Nepal DHS administered the women's surveyto 12,879 women and 4,063 men. The men's questionnaire includes approximately 190 questions (not all questions were asked of all men). If the DHS were to approximate the IDM methodology and achieve an individual level gender balanced sample they would need to increase the number of men interviewed by approximately 8,000.

The DHS programme has not published historical budgets or a template for budgets reported in monetary amounts. However, the programme has published an indicative budget for labour required. Rather than reporting the number of days of labour, the amount of required labour has been reported in terms of months of labour required. To help assess the costs of the DHS, the planning documents for DHS round 6<sup>30</sup> included a table for budgeting time. They suggest that each field team consists of one supervisor, one female field editor,

<sup>&</sup>lt;sup>30</sup> Demographic and Health Surveys Methodology, Survey Organization Manual, December 2012.

three to four female interviewers and one to two male interviewers (if a man's survey is included). For quality control, the DHS program recommends no more than 15 teams carry out the work and that they do not work longer than three months. They recommend working six workdays per week including one travel day, and two call backs at least for non-response. They suggest that it might make sense to leave one enumerator in a cluster to complete the call backs as the rest of the team moves to the next cluster. In this sense, the structure of the IDM surveys to date have largely followed the labour demands of the DHS. Understanding the details of the approaches of the DHS can help provide context on the choices IDM considers for budgeting future surveys.

The DHS manual included a budget template with a sample country. The example survey included several assumptions. The example assumed 9,000 households were surveyed in 300 clusters with teams covering 100 km per day and regional field coordinators (of which there were three) averaging 200 km per day. It is not currently possible to provide a detailed comparison between the travel associated with previous IDM surveys and those of this example survey. This information is provided to provide information for consideration with future survey budgeting. Altogether, this template suggested the breakdown in labour outlined in table 6.

Table 6: Labour for 9,000 Household DHS Survey					
Input	Months of Iabour	Households surveyed per month of labour			
Administration	63	143			
Listing	45	200			
Pre-testing	21	429			
Training	123	73			
Data field work	492	18			
Data processing	86	105			
HIV lab work (if applicable)	6	1,500			

\*\*Source: DI calculations based on DHS Survey Organization Manual 2012

# **Multiple Indicator Cluster Survey**

UNICEF's Multiple Indicator Cluster Survey is also one of the largest household survey programs in the world. As of May 2020, 363 surveys are currently being planned or have been completed, most of which have occurred since 1995. In line with UNICEF's mission

they focus primarily on the welfare of children and women. Unlike the DHS, the MICS does not include as many biometric questions, this results in lower costs.

MICS recommends similar fieldwork approaches as the DHS. Field teams include four interviewers, one measurer (primarily measuring height of children under 5), and one supervisor. They recommend that surveyors work five days per week plus one day of travel and take one day off per week. They also recommend that surveyors survey about 3-4 households per day including call backs. It is recommended that about 10% of the team be hired to cover capacity issues and potential attrition of staff. No more than 20 fieldwork teams are recommended.

There should be about one lister and one mapper doing one cluster of about 80-120<sup>31</sup> houses per day. This rate should be possible in special surveys too where particular populations such as Roma are being surveyed or when there are no census maps. The MICS team also says that a faster rate of work may be possible when listing in urban areas or if there are highquality maps with photos. While not mentioned in the MICS guidance on survey mapping and listing, there have been some efforts to use satellite imagery to improve the mapping of households for censuses and surveys. The World Bank's High Frequency Surveys<sup>32</sup> have used satellite imagery to reduce the need for listers and mappers to be on the ground. However, this approach was used to reduce risk to staff in conflict settings rather than to reduce costs. Initiatives such as GRID3<sup>33</sup> are working to increase the efficiency of census operations using satellite imagery. GRID3 could provide highly accurate maps that could be used by staff for mapping and significantly reduce the effort required by survey teams. However, MICS recommends that mapping should be carried out unless highly accurate maps that are less than a year old are available. In contexts where the population is shifting, MICS suggests that maps should only be relied on if they are less than 6 months old. They also recommend that in instances where purposive sampling may be required; listers can identify which households have populations of interest during the listing exercise.<sup>34</sup>

If teams are covering remote areas, experiencing bad weather, or if they are doing parts of the map that are not adjacent, an additional 25% of time should be added. At the country level, there can be a small team of mapping editors, listing editors and supervisors with one recommended per three field teams. An extra 10% of team should be hired to prepare for potential attrition.

In terms of materials, MICS recommends that teams carry a measuring board. Each team member should have a tablet with a spare tablet per team as a backup. The MICS team tests salt for iodine content and each team should have salt testing kits. They also have a test kit for testing water quality. IDM saves on expense by not including special equipment for testing. These expenses would mostly be related to materials costs rather than labour since the modules for these questions are brief. In a 2019 template budget, MICS reports that water testing kits cost about US\$100 each. They estimate that for a survey of 12,500

<sup>&</sup>lt;sup>31</sup> This depends on the number of households mapped per cluster. MICS recommends surveying 15 to 25 households per cluster.

<sup>&</sup>lt;sup>22</sup> http://documents.worldbank.org/curated/en/464241565765065128/pdf/Findings-from-Wave-2-of-the-Somali-High-Frequency-Survey.pdf

<sup>33</sup> https://grid3.org/

<sup>&</sup>lt;sup>u</sup> UNICEF, Manual for Mapping and Household Listing (25 February 2019)

households, with 5 water tests conducted per survey cluster, water testing kits and related supplies would cost US\$43,679. Not testing water quality, therefore, brings material savings.

UNICEF also recommends that an extra 30% of chargers, batteries and styluses should be bought as backup. They list venue rentals for pretesting, fieldwork training, listing training and testing for CAPI software. Vehicle hire is listed for pretesting, training, monitoring, regional workshops, and fieldwork. Other materials such as printing, communications, and dissemination are also listed.

MICS has a budget template that differs a bit from the example provided by the DHS. The MICS indicative budget assumes 12,500 households would be sampled with 12,500 households surveyed, 15 fieldwork teams, 4 interviewers per team and 20 households per cluster. Under this set of assumptions, the cost breakdown is shown in table 7.

Table 7: Summary of estimated labour required for MICS Survey of 12,500 Households						
Input	Labour (in months)	Households surveyed per month of labour				
Listing	161	78				
Data fieldwork	351	36				
Total listing and fieldwork	512	24				

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