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Key messages on SDG 4 measurement and monitoring needs

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Ref doc 5 - Key messages to Steering Committee on SDG 4 measurement and monitoring needs and priorities to support the development of national capacity

1. Objectives

The SDG 4 measurement and monitoring agenda is ambitious as, compared with its predecessor, it has an expanded scope in at least three respects:

- levels of education,
- learning outcomes, and
- inequality.

The increased scope and the relatively large number of indicators, compared with the MDG education targets, pose a considerable challenge for countries wishing to monitor their progress towards SDG 4. This challenge is complicated by the fact that there is no established methodology for several indicators in the SDG 4 monitoring framework.

For these reasons, countries and the international community seek **guidance** in two respects:

- Estimate the cost of data collection for the 11 global indicators and disaggregate it in three parts:
 - what is currently covered by countries that collect the data,
 - what is currently covered by other countries on behalf of those collecting the data, and
 - what is currently not covered because countries do not collect the data.
- Look across the different data collection requirements and assess how the efficiency of data collection efforts can be enhanced, working out potential synergies and thus minimizing the need for countries to prioritize certain SDG 4 indicators over others.

The table that accompanies this short note attempts to provide a rough estimate of the cost of collecting the data for the 11 global indicators, including the part of the cost that would need to be absorbed by the international community for those countries that cannot afford to cover the full cost of data collection and capacity development/technical assistance. Separate columns refer to low-, lower-middle-, upper-middle- and high-income countries, which have different capacities to carry out and fund data collection efforts.

2. Assumptions

Several assumptions are needed to carry out this exercise. These are related to the unit costs of different sources and the use of particular sources to collect more than one indicator.

- In terms of **periodicity**, it is assumed that all survey-based data collection efforts need to take place in three five-year intervals, with the target years 2020, 2025 and 2030.
- The basic grouping of sources, presented in more detail below, is:
 1. Learning assessments
 2. Multipurpose household and/or school surveys
 3. Administrative data and related sources

2.1 Learning assessments

Indicator 4.1.1 looks at the proportion of children and adolescents achieving minimum proficiency levels in reading and mathematics at three points in time: a) early grades; b) end of primary; and c) end of lower secondary. At national level, many countries lack adequate data collection mechanisms to gauge children's proficiency in reading and mathematics. More than 60% of low-income countries do not take part in any of these assessments.

2.2 Multipurpose household and/or school surveys

The SDG 4 monitoring framework demands the use of household and school surveys. This is mainly because of the need to report on disparities between population groups. Data for those global indicators that can be disaggregated (namely for targets 4.2-4.4 and 4.6) are meant to be collected through household surveys that collect background information for the individuals concerned (with the potential exception of indicator 4.2.2, which is currently based on administrative data, as discussed above). The cost associated with disaggregating is assumed to be zero for all practical purposes.

However, other reasons may also make surveys a more appropriate source of data, for example the absence of good quality administrative data (e.g. on adult education) or the relative ease with which they can be used to administer skill assessments of the population (e.g. on literacy and numeracy). In many cases, a separate survey is not necessary; rather, specific modules addressing individual questions can be developed and attached to existing surveys. The cost of adding a module to an existing survey programme would be lower than the cost of implementing a new survey.

2.2.1 Multipurpose household surveys

The main source of indicator **4.2.1** is the UNICEF MICS. However, other multi-purpose household surveys with a child development module could also be used. The cost should not be considered as fully additional for education since the results of such surveys benefit mostly other sectors. Therefore, only the cost of adding an early childhood development module to existing surveys should be considered here.

With respect to indicator **4.2.2**, data exist for 135 countries through school censuses and the marginal cost of this information can be assumed minimal. But in the medium term, the information should be sourced through a household survey to comply with the obligation to report on inequalities in participation (indicator 4.5.1). Its cost can be subsumed under the survey cost of collecting the data for indicator 4.2.1.

Indicator **4.3.1** should be based on the cost of a round of a labour force survey, which is necessary to capture the relevant target age group (adults). As in the case of indicator 4.2.1, a plausible question is whether the cost should be considered as fully additional for education. Most countries have a labour force survey and tend to cover its cost. However, adding an improved module on adult education and training, along the lines of similar modules in Europe, either in a labour force survey or as part of a multipurpose household survey, will require efforts by countries to successfully develop and roll it out. It is assumed that the estimated average cost will be a fraction of a round of a labour force or similar survey.

The source of information on self-reported ICT skills for indicator **4.4.1** is a household survey. A specific survey is administered in Europe, while a module promoted by ITU is added to household surveys in other countries. The latter would be the most cost-efficient way to collect the relevant information. Considering the efforts required by countries to roll out such a module, it is assumed that the average cost will be a fraction of a round of a labour force or similar survey.

Data on adult literacy and numeracy proficiency skills for indicator **4.6.1** have been collected in

almost 40 OECD and partner countries through PIAAC. The estimated average cost of the survey, which is scheduled to take place every 10 years, is considered to be high and unaffordable for poorer countries, while it is not very sensitive to the lower range of literacy and numeracy skills. UIS has proposed a new 'Short Literacy and Numeracy Survey' (SLNS) that would address these concerns. One option would be to explore synergies so that the background questionnaire of the SNLS would be used to collect information on indicators 4.3.1 and 4.4.1, which would become an 'adult education and skills survey'. Another option would be to add the assessment module of the SLNS to existing survey programmes.

2.2.2 Multipurpose school surveys

There are several gaps for indicator 4.a.1 of school infrastructure, which is complicated by its very different dimensions. Many countries do not report on several of these dimensions, while available data are not truly comparable and, as self-reported, are of questionable quality. This problem can be solved by enforcing standards of reporting, with good guidelines for respondents in schools. Progress in monitoring will require new definitions of these infrastructure aspects of schools and, possibly, new ways of collecting the information – including through a school survey that would validate the data. Until these questions are answered, it is very difficult to assign a unit cost.

There are also considerable gaps with respect to indicator 4.c.1, both because many countries do not report and because the available data are not truly comparable. Progress in monitoring the percentage of trained teachers will require a new definition of trained teachers and, possibly, new ways of collecting the information – either through large investments in personnel management systems or, alternatively, school surveys that would assess the training status of working teachers. Though some definitions are needed this indicator could be part of a general purpose schools survey.

2.3 Administrative data and related sources

The data collection process for indicator 4.7.1 is the questionnaire administered by UNESCO to its member states as part of the monitoring process of a Recommendation adopted by the UNESCO General Conference in 1974¹. The cost is assumed to be zero for all practical purposes.

The data collection process for indicator 4.b.1 is managed by OECD DAC. The cost is assumed to be zero for all practical purposes in the sense that there is an established mechanism and the marginal cost of extracting information on aid allocations to scholarships is negligible. This could change if a new indicator were to be developed that would directly monitor the number of scholarships, although even in that case the cost would be much lower than for other indicators.

3. Unit costs

- Learning assessment: The estimated average cost of learning assessments (\$500,000) is based on the 'Investment case for expanding coverage and comparability for Global Indicator 4.1.1', prepared by the UIS and GPE. This requires that both reading and mathematics be assessed as part of the same learning achievement survey, which is not always the case.
- Household surveys: The cost of a household survey round has been estimated at \$500,000. Additional modules for early childhood development (\$50,000) and adult skills (\$200,000/300,000) can be costed at lower levels.
- Administrative data and related sources: No extra costs have been assigned

¹ Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms, UNESCO, 1974.

4. Caveats

Further cautionary notes are necessary at this stage. The analysis is simple and aims to present an overall framework with some rough but plausible estimates. However:

- Unit costs will need to be further confirmed with direct evidence from survey managers.
- Unit costs are likely to vary by country income group (here they are assumed not to vary, for simplicity).
- Low- and lower-middle-income countries that do not cover the full cost of participating in data collection for SDG 4 may already be contributing a part of the total cost (here they are assumed to be fully externally funded, for simplicity).
- Low- and lower-middle-income countries that do not cover the full cost of participating in data collection for SDG 4 may contribute an increasing part of the total cost in the future (here they are assumed to be fully externally funded throughout the three data collection rounds to 2030, for simplicity).
- Initial development costs were included but are small in comparison with the cost of data collection.

5. Results

This note suggests that the data collection efforts for the 11 global SDG 4 indicators can be classified in three main groups:

- Learning assessments (4.1.a, 4.1.b and 4.1.c)
- Multipurpose household and/or school surveys that include:
 - General household and/or school surveys (4.a.and 4.c)
 - Household surveys with an assessment component on early childhood development (4.2.1 and 4.2.2) and on adult skills (4.3.1, 4.4.1 and 4.6.1)
- Administrative data and related sources (4.7.1 and 4.b.1)

The analysis suggests that the total annual cost of data collection for the three groups of indicators would be \$280 million including both global and thematic indicator, with two thirds of the costs, or \$180 million, needed to monitor the global indicators. Three quarters (73%) would fund the implementation of learning assessments split between 50% for in-school based assessment and the remainder for adult skills surveys including literacy and numeracy. To be clarified, the cost of data collection for an early childhood development measure is considered small because it is assumed – but not certain – that it will continue to be collected through existing multi-purpose household surveys (MICS or other).

About 67%, or \$121 million, is either already or will be covered by upper-middle and high-income countries. It is estimated that \$31 million is currently provided as aid but this would need to increase to \$93 million per year, of which \$70 million would cover learning assessments and \$15 million would cover both the ECD and adult education and skills survey. The annual aid could be reduced by \$10 million if assessments for grades 2-3 (indicator 4.1.1a) were not included.

Annual data collection costs (in \$ 000) for SDG4 indicators by indicator type (global/thematic) and source

Basic components	Total	Global indicators	Thematic indicators
Learning assessments	1,466,04	995,542	470,500
General household surveys and/or school surveys	514,913	134,325	380,588
Household surveys with an assessment component in early childhood development and adult skills	743,675	743,675	NA
Total	2,795,853	1,896,751	899,101
Annualized	279,585	189,675	89,910
Average per country	13,507	9,163	4,343
Annualized per country	1,351	916	434

Estimate of annual data collection costs for SDG indicator by source of funding per year (\$ million)

	Aid (Low and lower middle)	Self-funding (Upper middle and high income)	Total
Existing funds	31	121	152
New funds	62	65	8
Total funds	93	187	2

6. Conclusions

This note suggests that there are two priorities for countries to monitor the 11 SDG 4 global indicators:

- the participation of countries in learning assessments at the three levels identified in global indicator 4.1.1; and
- the development of a combined household and/or schools survey that provides data for all indicators associated with targets 4.3, 4.4, 4.6, 4.a and 4.c, which are currently not collected with learning assessments or administrative systems

With all the caveats mentioned above, the annual cost of these monitoring efforts is estimated at \$280 million. About 60% of that is needed for upper-middle and high-income countries and is or will be covered by them. It is estimated that the remaining 40% or \$93 million is the cost for low- and lower-middle-income countries and may be expected to be covered by grants. The cost could be reduced by \$10 million if learning assessments at grades 2 and 3 are not included.

It should be noted that the present analysis has focused on the global indicators for SDG 4 and that the cost of thematic indicators would require a separate analysis. See the annex for the links between indicators and different data collection sources.

Indicator by source

Indicator	Household survey						
	System data	School census/ Administrative data	Multi-purpose survey, e.g. DHS, MICS	Labour force survey	Literacy survey	School survey	Learning assessment
Target 4.1							
4.1.1							X
4.1.2	X						
4.1.3		X	X	X	X		
4.1.4		X	X	X	X		
4.1.5		X	X	X	X		
4.1.6		X	X	X	X		X
4.1.7	X						
Target 4.2							
4.2.1			X				
4.2.2		X	X				
4.2.3			X				
4.2.4		X	X				
4.2.5	X						
Target 4.3							
4.3.1				X	X		
4.3.2		X	X	X	X		
4.3.3		X	X	X	X		
Target 4.4							
4.4.1				X	X		
4.4.2							X
4.4.3			X	X	X		
Target 4.5							
4.5.1		X	X	X	X	X	X

