

# **A PROPOSED METHODOLOGY FOR SDG THEMATIC INDICATOR 4.5.3**

Prepared by the Global Education Monitoring (GEMR)<sup>1</sup>

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## Introduction

SDG 4 includes neither a target nor a global indicator on education financing.<sup>2</sup> In view of that gap, the Technical Advisory Group on SDG 4 Indicators proposed and the Technical Cooperation Group approved, three thematic indicators (on public, household and aid expenditure, respectively) under SDG target 4.5 on equity. Of these, indicator 4.5.3 on public expenditure aims to measure the “extent to which explicit formula-based policies reallocate education resources to disadvantaged populations”. During initial discussions in 2014-2015, the focus was not on formula-based funding per se. Rather, in the spirit of target 4.5 on equity, the intention was to identify an indicator that would capture the efforts countries make to reallocate resources to reach disadvantaged groups.

These original concerns are also reflected in the provisional [metadata](#) document on global and thematic indicators, which points at two weaknesses of the indicator 4.5.3 formulation, namely that it refers to:

- ‘education’ resources, while **other resources** (e.g. cash transfers under the social protection budget) can also help equalise education opportunities; and
- to ‘formula-based’ resource reallocation, while **other approaches** can also be used for this purpose.

To this date, this indicator does not have a methodology. The purpose of this paper is to propose a methodology, first sketched in the 2016 Global Education Monitoring (GEM) Report, and present results from its application.

The overall objective is to measure whether governments incorporate equity in education into their fiscal policy through targeted financing and redistribution. This approach acknowledges that financing mechanisms for equity could extend from purely ‘education’ to other resources, such as cash transfers under a social protection budget. It could also extend from ‘formula-based’ to other resource allocation mechanisms. The information required for the indicator is a mixture of quantitative information (e.g. budget spent, number of students reached) and qualitative information (when data on coverage and target populations are not available).

In that sense, the discussion also touches upon the more general issue of whether and how qualitative indicators can be accommodated in the current and future education and overall agenda indicator frameworks. A few indicators in the SDG 4 monitoring framework are qualitative, including:

- global indicator 4.7.1 that tries to capture the extent to which countries make an effort to cover a particular type of content in their national education systems

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<sup>2</sup> However, public education financing is directly mentioned in SDG 1 on poverty reduction and global indicator 1.a.2 calls for monitoring government spending on education, health and social protection under a target that focuses on ‘mobilization of resources ... to implement programmes and policies to end poverty in all its dimensions’. Attention to government education expenditure is justified by the fact that public expenditure in social sectors, aided by a fair taxation system, can play a major role in reducing poverty.

- thematic indicators, such as 4.1.6 on the administration of a nationally representative learning assessment or 4.7.3 on human rights education

Across the SDGs there are several qualitative indicators aimed at assessing the extent to which certain legislative and institutional initiatives are being implemented, for instance:

- [global indicator 5.1.1](#) on the extent to which legal frameworks promote, enforce and monitor equality and non-discrimination on the basis of sex
- [global indicator 16.a.1](#) on the existence of independent national human rights institutions

A methodology on indicator 4.5.3 needs to take developments in the measurement of such indicators into account.

## Background

Since indicator 4.5.3 was approved, there have been two attempts to operationalize it.

### First attempt

A 2016 UIS [information paper](#) in November 2016 made the following observations:

- It disagreed with the suggestion that social protection programmes should be used to inform the indicator because it would require assessments of:
  - the share of a social protection programme used by households to access education; and
  - the marginal cost associated with the trade-off between investing in education or other social sectors.
- It agreed with the second criticism that mechanisms other than those based on formulas could be just as or more important – and therefore also with the idea that the indicator as currently formulated does not capture the original intent.

For a potential operationalization of the indicator it considered two broad categories of options, each at three, increasing levels of detail (which produces nine combinations; **Figure 1**):

**Figure 1.** Measuring country efforts to equalize education opportunities through their financing system

		Depth/level of scrutiny		
		Weak	Medium	Strong
		Intention	Implementation /Procedural equity	Implementation/Equality of opportunities
Degree of Comprehensiveness	Weak	Existence of financing mechanisms Does the country have an official redistribution mechanism towards disadvantaged populations? A	Do some of the disadvantaged populations receive additional education resources through the form of direct and transparent transfers based on their background characteristics? D	Do some of the disadvantaged populations benefit from additional/better education resources through the form of direct and indirect transfers and education resources allocation mechanisms? G
	Medium	Comprehensive financing mechanisms Does the country have an official redistribution mechanism towards a comprehensive list of disadvantaged populations? B	Do all of the disadvantaged population receive additional education resources through the form of direct and transparent transfers based on their background characteristics? E	Do all of the disadvantaged populations benefit from additional/better education resources through the form of direct and indirect transfers and education resources allocation mechanisms? H
	Strong	Comprehensive and effective financing mechanism Does the country have an official redistribution mechanism towards a comprehensive list of disadvantaged populations? Is the financing mechanism set to equalize educational opportunities? C	Do all of the disadvantaged population receive additional education resources commensurate to the additional marginal cost they carry through the form of direct and transparent transfers based on their background characteristics? F	Do all of the disadvantaged populations benefit from adequate education resources commensurate to the additional marginal cost they carry through the form of direct and indirect transfers and education resources allocation mechanisms? I

Degree of Comprehensiveness

Source: UIS (2016).

- Indicators capturing reallocation mechanisms (policy intent / comprehensiveness) (Group 1 in **Figure 2**):
  - (options A/B) It considered the World Bank's 2016 SABER school finance [framework paper](#). While it dismissed this approach, because questions were too general and prospects for rolling the approach out to many countries were dim, it acknowledged that a stripped-down version of the SABER tool would generate a minimum of basic information: whether or not there are mechanisms to reallocate resources towards (i) the poor (=1) and (ii) other disadvantaged populations (=2). The approach would call for additional questions to the UIS/OECD/Eurostat education survey. (a related but narrower measure based on the SABER teacher module as to whether an education system reallocated teachers to areas in need was also recommended)
  - (options D/E) A much more data-intensive approach based on national education accounts would analyse public education budgets on a line-by-line basis to identify budget items that were reallocated towards vulnerable groups but cautioned that this would only be possible every 5-7 years.

- Indicators capturing the reach of disadvantaged populations (policy effectiveness / depth) (Group 2 in **Figure 2**). These would focus on the actual distribution of resources, regardless of the existence or not of policy:
  - (options G/H) Instead of focusing on government action, one approach would focus on government inaction by analysing the proportion of expenditure devoted to education among the poorest fifth of households: a high percentage would suggest the system was failing the poorest as it was forcing them to pay out of pocket.
  - (options D/E or G/H) Instead of focusing on government teacher allocation policies, one approach would focus on the results of government action or inaction by analysing the actual distribution of teachers, using other administrative or learning assessment data.
  - (options G/H) Related to the last option and using background information from a learning assessment, another approach to the indicator would be an index of access to education resources (not just teachers), comparing its value for students at the bottom and the richest quintile. This was the preferred indicator of the paper.

**Figure 2.** Potential operationalizations of indicator 4.5.3 according to Information Paper 32.

	Type	Variable	Current coverage	Sources	Scale-up options			Periodicity	Methodological standards required
					Instruments	Time frame	Additional cost		
<b>Group 1: Governments' intentions and existence of reallocation policy mechanisms</b>									
<b>Indicator 1: Do countries have reallocation mechanisms towards disadvantaged populations?</b>	Quali	binary or categorical ordered	4 countries	SABER School Finance	UIS/UE data collections. Add questions to regular annual education surveys	Could be piloted in 2016 and scaled up in 2017	Low	Annual	Standard definitions for disadvantaged groups and reallocation mechanisms
<b>Indicator 2: Do countries have incentives/reallocation mechanisms to ensure that teachers go to the hard-to-staff schools?</b>	Quali	binary or categorical ordered	21 countries	SABER Teachers	UIS/UE data collections. Add questions to regular annual education surveys	Could be piloted in 2016 and scaled up in 2017	Low	Annual	Standard definitions for hard-to-staff schools and incentives/reallocation mechanisms
<b>Indicator 3: % of domestic education spending allocated to the disadvantaged populations (From NEA methodology)</b>	Quali	Continuous, Percentage	None		UIS, NEAs	5 to 7 years	High	Annual or Biennial	Detailed reference classification of education expenditures and an agreed list of vulnerable groups, expanded NEA methodology
<b>Group 2: Effectiveness of policies to reach disadvantaged populations</b>									
<b>Indicator 4: Education spending as a % of total household expenditure for the poorest quintile</b>	Quanti	Continuous, Percentage	~20 countries	LSMS, National household surveys	LSMS, National household surveys, ~60 surveys	2 years	Fair	Triennial	Generalization and standardization of questions on education expenditures
<b>Indicator 5: Equity measure of the actual distribution of teachers across pupils (Concentration Index, Parity Index, Odds ratio)</b>	Quanti	Continuous, range will depend on the equity indicator chosen; CI: [-1,1], Parity and odds ratio [0,+∞[	~10 countries	UIS regional module	Option 1: scale-up UIS survey to other regions Option 2: use regional IAs as proxy	Option 1: 2-3 years Option 2: <1 year	Option 1: Fair Option 2: Low	Option 1: Annual Option 2: ~Quinquennial	Option 1: Standardized sub-national characteristics (wealth, urban/rural etc.) at the first level of administrative divisions Option 2: Align methodologies for background variables (wealth, rural/urban, ethnicity etc.)
<b>Indicator 6: Equity measure of access to domestic education resources (Concentration Index, Parity Index, Odds ratio)</b>	Quanti	Continuous, range will depend on the equity indicator chosen; CI: [-1,1], Parity and odds ratio [0,+∞[	None		PASEC, SACMEQ, TERCE, PISA, TIMSS, PIRLS	<1 year	Low	~Quinquennial	Standardized and transparent methodology to calculate an Index of Access to Domestic Education Resources (IADER)

Source: UIS (2016).

Information paper 32 was correct both in its assessment of the need for indicator 4.5.3 to break free from the narrow confines of a 'formula-based policies' indicator and of its openness to the feasibility of a simple, SABER-like approach to such an operationalization through simple questions to be added to the UIS/OECD/Eurostat education survey. By contrast, the alternative approach of measuring the actual distribution of resources was departing from the intent.

## Second attempt

A [background paper](#) submitted for the fourth meeting of the TCG in January 2018 took a narrower but deeper view of the indicator, focusing on 'formula-based policies', limited neither to the allocation of cash nor to the allocation to schools (e.g. school boards and municipalities could be targeted). This would require a refinement of indicator 4.5.3. It provided an overview of different funding models with needs based components in primary and secondary education from three perspectives:

- considered needs and factors used to represent them (except for the distinction between urban and rural schools that does not indicate vulnerability)
- resource allocation formulas and weights
- nature and level of funds

The paper rightly argues that to quantify the 'extent' to which formulas 'reallocate', it is necessary to:

- estimate the volume of the total formula funding programme
- define which elements of the formula are considered as targeting disadvantaged populations and
- quantify the amount that is allocated because of those factors.

It raises the concern that the volume of the programme is usually not explicitly declared and is mixed with the education budget, especially when it allocates core funding. Without this information, the extent of reallocation could be judged on the basis of the formulas:

- judgement of cost differences between students with and without disadvantage
- comparison of real school budgets
- analysis of funding using student level data

All these options are quite complex and the paper recommends that instead of quantifying amounts of reallocation, collecting funding formulas would be sufficient and could serve as a peer learning effort.

The paper made the following key recommendations:

- Data collection for indicator 4.5.3 should not be done annually but rather every 3-5 years, utilizing opportunities where country education finance experts meet together.
- Due to the complexity of a potential questionnaire on formula funding:
  - Identify countries with formula funding, as part of a regular data collection.
  - Collect the more detailed data collection for countries applying formula based funding.

The paper looked thoroughly at a series of parameters (e.g. policies operate at different levels, are often contradictory and not geographically comprehensive; different types of costs or resources are covered, estimation of amount 'reallocated' is complex) that render a 'formula-based policies' indicator less interesting for monitoring.

Overall, the two past attempts confirm that, for the indicator to be valuable, it is necessary to:

- move away from the narrow concept of 'formula-based policies';
- search for the policies that have the largest potential impact on resource reallocation for disadvantaged populations, with an emphasis on poverty;
- avoid measures of actual distribution of resources that are not informative of the mechanisms
- develop simple questions that can be part of a regular education survey

### **Types of financing policies and programmes considered**

Countries pursue policies of varying form and intensity to mitigate the education impact of factors such as poverty, ethnicity, disability and remoteness. Four categories of financing policies were defined:

1. Overall education financing mechanism with a focus on equity.
2. Policies/programmes that provide resources to schools.
3. Education policies/programmes that provide resources to students/families.
4. Social policies/programmes that provide resources to students/families.

This analysis focuses on formal education at all levels funded domestically, externally or mixed as long as implementation is led or co-led by the government. It is inclusive of all possible modes of transfers of funds between (different levels of) governments and schools, families and/or students, including: lump-sum, block grant, earmarked grant, school-specific grant or scholarships ([OECD, 2017](#)), with a few exceptions, as explained in the following description of each category.

1. The category of 'overall education financing mechanisms' mainly captures resource allocation mechanisms from the central government to the lower tiers (local governments or schools). There are two common approaches for these allocations. First, the budget may be allocated from the centre based on the school-age population and a unit cost per student. To promote equity, such per capita formulas may be adjusted to take factors such as poverty and location into account. Second, the budget may be organized along line items some of which may be specifically addressing the education needs of disadvantaged groups. The equity orientation is captured by adding all related line items. Both approaches can potentially have a major impact on equity in education.

Not included in this category are general policies that support:

- free compulsory education
- school-related expenses for all students, even though these could have a potentially equitable effect on the poorest students, including school feeding programmes for all
- capital investment to construct, maintain, rehabilitate and renovate schools and equipment

2. The category on 'resources to schools' includes policies or programmes that compensate schools for being in a disadvantaged area and/or have disadvantaged students. They tend to be block grants, in addition to the capitation grants, and may:

- be nation- or region-wide; and
- provide cash or cover specific expenditure types (e.g. equipment purchases, teacher training)

Most programmes in this category define vulnerable populations on the basis of on poverty, rurality or ethnicity/indigeneity. Other aspects, such as disability or special needs are also used but not often as the first targeting criteria. As many programmes may exist in each country, the largest programme in terms of budget/expenditure and/or school coverage should be selected.

3. The category on 'resources to students and families' refers to education ministry policies and programmes that directly benefit disadvantaged students and their households as the final defined beneficiaries. These may be in the form of cash (e.g. scholarship, although most such schemes are not equity-oriented since they are merit-based), exemption from payment (subsidies included but interest-free or low-interest student loans are not included) or kind (e.g. targeted school meal programmes). Interest-free or low-interest loans are excluded from this category.

4. The category on 'resources to students and families' is about other ministry policies and programmes that directly benefit disadvantaged students and their households. These tend to be social protection programmes, such as conditional cash transfers or child grants with an education component that aim to address poverty occasionally with a gender dimension. Data on beneficiaries as a percentage of the population and spending as a percentage of GDP are often available. Targeting mechanisms tend to be well articulated and regularly evaluated.

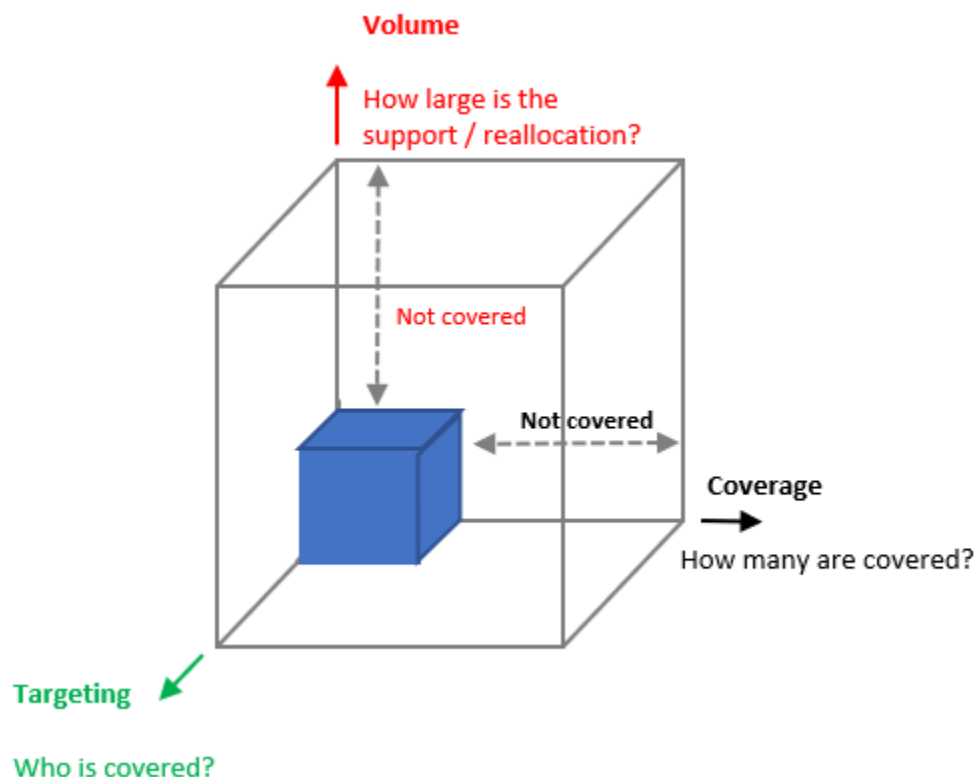


### Dimensions of financing policies considered

Assuming a specific policy/programme existed to support disadvantaged populations, three key dimensions are examined for each policy (**Figure 3**):

- **Coverage:** the share of schools/families/students reached by the main policy/programme;
- **Targeting:** the criteria (location, poverty, disability, or other) used to select beneficiaries; and
- **Volume:** the share of total public education spending allocated for the main policy/programme and/or the size of the average transfer under this policy/programme

**Figure 3. Three dimensions in evaluating equity-oriented financing policies or programmes targeting disadvantaged groups**



The following general questions are asked for each of the four types of policy/programme (**Table 1**):

- whether specific policies/programmes exist to provide resources to disadvantaged populations (and what is the name of the policy/programme)
- what number/percentage of schools/families/students the main policy/programme reaches

- how targeting is done – and whether location, poverty, disability, or other criteria are used
- what volume/share total public education spending is used for the main policy/programme and/or what is the size of the average transfer under the main policy/programme

These questions could be the basis for a short questionnaire to countries for data collection.

**Table 1. Core questions on equity orientation of four types of financing policies/programmes by three dimensions**

Question	Type of financing policy/programme			
	Overall funding mechanism	Schools	Students/families (education)	Students/families (social)
Existence	Description	Description	Description	Description
Targeting criteria				
Depth/Volume	What share of total public education spending is being reallocated?	What share of total public education spending is being reallocated?	What share/volume of total public education spending is being used for the main programme? <i>and/or</i> What is the size of the average transfer under the main programme?	What share/volume of total public education spending is being used for the main programme? <i>and/or</i> What is the size of the average transfer under the main programme?
Width/Coverage	What percentage of / how many schools does it reach?	What percentage of / how many schools does it reach?	What percentage of / number of students / households does the main programme reach?	What percentage of / number of students / households does the main programme reach?

### Rating the extent of efforts to promote equity in education

The proposed methodology assesses the extent of effort using a three-point scale: low, medium and high. For each type of policy, three dimensions are considered and a rating is assigned to each dimension. The sum of these ratings for a dimension is the rating for each type of policy. The final rating is derived by summing each of the four ratings. These

assessments translate into a single qualitative assessment for the country: low, medium and high. The criteria are described below.

These criteria are a first attempt to summarize the very rich set of information collected. They are not based on a theoretical assessment of what is a desirable level of coverage or volume of expenditure or budget reallocation; rather, they are practical choices to help distinguish countries' different levels of effort. Moreover, they are by no means final; rather, they have been put forward as a basis for discussion.

### **Policy type 1: Overall education financing mechanism with a focus on equity**

#### *Dimension 1: Existence*

Is there an overall education financing mechanism that addresses equity? Yes/No

#### *Dimension 2: Depth/Volume*

What share of total public education spending is being reallocated using this mechanism?

- Low, if less than 25%
- Medium, if between 25% and 50%
- High, if equal to or greater than 50%

If unknown, the content of the policy/programme will be used as a criterion for analysis.

- High, if:
  - It allocates from national to regional/municipal level, built into the budgeting process.
  - It is for all levels of compulsory education / all public schools.
- Medium, if:
  - It is for all levels of compulsory education at some schools / geographical locations.
  - It is for a specific population, regardless of education level (e.g. students with disability)
  - It is for only part of compulsory education.
- Low, if:
  - It is only part of compulsory education at some schools / some geographical locations.
  - It is for non-compulsory education regardless of school types, populations or regions.

*Dimension 3: Width/Coverage*

What percentage of the school-aged population benefits from the financing mechanism?

- Low, if less than 30%
- Medium, if between 30% and 70%
- High, if equal to or greater than 70%

If unknown, the content of the policy/programme will be used as a criterion for analysis.

- High, if:
  - It allocates from national to regional/municipal level, built into the budgeting process.
  - It is for all levels of compulsory education / all public schools.
- Medium, if:
  - It is for all levels of compulsory education at some schools / geographical locations.
  - It is for a specific population, regardless of education level (e.g. students with disability)
  - It is for only part of compulsory education.
- Low, if:
  - It is only part of compulsory education at some schools / some geographical locations.
  - It is for non-compulsory education regardless of school types, populations or regions.
  - It allocates from national to regional/municipal level, built into the budgeting process.

**Policy type 2: Policies/programmes that provide resources to schools***Dimension 1: Existence*

Are there education financing policies that provide more resources to disadvantaged schools or schools with disadvantaged students? Yes/No

*Dimension 2: Depth/Volume*

What share of total public education expenditure is being reallocated using this mechanism?

- Low, if less than 2%
- Medium, if between 2% and 10%
- High, if equal to or greater than 10%

If expressed as a share of GDP:

- Low, if less than 0.1%
- Medium, if between 0.1% and 0.4%
- High, if equal to or greater than 0.4%

If expressed as a share of total public expenditure:

- Low, if less than 0.3%
- Medium, if between 0.3% and 1.5%
- High, if equal to or greater than 1.5%

If unknown, the content of the policy/programme will be used as a criterion for analysis.

- High, if it addresses equity for all levels of compulsory education.
- Medium, if it addresses equity for only part of compulsory education.
- Low, if it addresses equity for non-compulsory education.

### *Dimension 3: Width/Coverage*

What percentage of the school-aged population does it reach?

- Low, if less than 2% or greater than 50%
- Medium, if between 2% and 10% or between 25% and 50%
- High, if between 10% and 25%

The rationale for this rating is that, while policy type 1 tends to be country-wide, policy type 2 tends to address specific target populations. Narrow but deep policies are assessed more highly than broad but shallow policies. If unknown, the content of the policy/programme is used as a criterion for analysis.

- High, if it addresses equity for all levels of compulsory education.
- Medium, if it addresses equity for only part of compulsory education.
- Low, if it addresses equity for non-compulsory education.

## **Policy type 3: Education policies/programmes that provide resources to students/families**

### *Dimension 1: Existence*

Are there education policies that provide more resources to disadvantaged students/families?  
Yes/No

### *Dimension 2: Depth/Volume*

What share of total public education expenditure is being used for the main programme?

- Low, if less than 2%
- Medium, if between 2% and 10%
- High, if equal to or greater than 10%

If expressed as a share of GDP:

- Low, if less than 0.1%
- Medium, if between 0.1% and 0.4%

- High, if equal to or greater than 0.4%

If expressed as a share of total public expenditure:

- Low, if less than 0.3%
- Medium, if between 0.3% and 1.5%
- High, if equal to or greater than 1.5%

If unknown, the content of the policy/programme will be used as a criterion for analysis.

- High, if it addresses equity for all levels of compulsory education.
- Medium, if it addresses equity for only part of compulsory education.
- Low, if it addresses equity for non-compulsory education.

### *Dimension 3: Width/Coverage*

What percentage of disadvantaged students/families does the main programme reach?

- Low, if less than 2% or greater than 50%
- Medium, if between 2% and 10% or between 25% and 50%
- High, if between 10% and 25%

The rationale for this rating is that, while policy type 1 tends to be country-wide, policy type 2 tends to address specific target populations. Narrow but deep policies are assessed more highly than broad but shallow policies. If unknown, the content of the policy/programme is used as a criterion for analysis.

- High, if it addresses equity for all levels of compulsory education.
- Medium, if it addresses equity for only part of compulsory education.
- Low, if it addresses equity for non-compulsory education.

## **Policy type 4: Social policies/programmes that provide resources to students/families**

### *Dimension 1: Existence*

Are there social policies with an education dimension that provide more resources to disadvantaged students/families?

### *Dimension 2: Depth/Volume*

What share of total public expenditure is being used for the main programme?

If expressed as a share of GDP:

- Low, if less than 0.01%
- Medium, if between 0.01% and 0.1%
- High, if equal to or greater than 0.1%

If expressed as a share of total public expenditure:

- Low, if less than 0.5%

- Medium, if between 0.5% and 1%
- High, if equal to or greater than 1%

If unknown, the content of the policy/programme will be used as a criterion for analysis.

- High, if it is a conditional cash transfer programme.
- Medium, if it is a child grant scheme for families with school-aged children or a social assistance programme (e.g. for poverty, disability) for families with school-aged children
- Low, if it is any other programme

### *Dimension 3: Width/Coverage*

What percentage of disadvantaged students/families does the main programme reach?

If expressed as a share of the total population:

- Low, if less than 2%
- Medium, if between 2% and 8%
- High, if greater than 8%

If expressed as a share of the school-aged population:

- Low, if less than 5%
- Medium, if between 5% and 15%
- High, if greater than 15%

If unknown, the content of the policy/programme will be used as a criterion for analysis.

- High, if it is a conditional cash transfer programme.
- Medium, if it is a child grant scheme for families with school-aged children or a social assistance programme (e.g. for poverty, disability) for families with school-aged children
- Low, if it is any other programme

A provisional **overall rating** is based on the number of 'high', 'medium' and 'low' scores assigned. A financing system has been provisionally described as 'equity-oriented' if it has at least five 'medium' and 'high' scores assigned.

### **Application of the methodology on collected data**

Information was gathered on the four types of education and social policies and programmes from 70 countries, which cover all SDG regions. With a few exceptions, they are mostly low- and middle-income countries. The sources of information were, wherever possible, national databases and official reports, such as approved parliamentary budget proposals, national reports on budgets and education statistics, laws, and education sector strategies. Where such information was not accessible or in the case of language barriers, GPE, UNESCO and World Bank resources were used.

The information has been processed following the methodology presented above. It is divided into four types of policy or programme by country. Within each category, there is information on the policy or programme, the year to which it refers, targeting criteria, expenditure and coverage. The absence of policy or programme under each type is also noted. For type 1, assessing the extent to which the overall financing mechanism is reallocating resources to favour disadvantaged regions and schools is perhaps the most complex judgement considering the large differences between countries in their financing mechanisms from the central to the local level.

For types 2-4, the analysis focuses on the largest policy or programme in the country to the extent available financial and beneficiary information permitted this ranking. Subjective judgement was involved in the case of aid-funded programmes to assess the degree to which the country led the programme. In the absence of quantitative data, scores are determined solely by the school level / target group the policy is directed at, which may influence the overall score. Finally, even when information is available on policy or programme volume and coverage, information may be missing on total government and/or education expenditure. Inevitably, considerable amount of time and could have affected the level of data accuracy.

**Annex 1** summarizes the information and colour-codes the rating for clarity. Dimension 1 ('Existence') is identified as Yes/No. Dimensions 2 ('Volume') and 3 ('Coverage') are identified as 'high', 'medium' or 'low'. The last column identifies countries as equity-oriented or not. Based on the criteria described above, 18 of the 70 countries are identified as equity-oriented.

## Discussion

Indicator 4.5.3 is meant to provide a minimum evidence basis for addressing the question whether countries recognize disadvantage in education and address it through financing mechanisms. The purpose of the indicator is to be formative and to capture significant differences between countries to motivate those not sufficiently focused on equity to reconsider their flagship policies.

Clearly this is not an easy exercise. Countries differ in their levels of education development and in their demographic characteristics. They may prioritize different tools and different populations groups, whose nuances this methodology may not capture in a satisfactory way. As previous exercises have shown, collecting information on education-related policies and programmes that target vulnerable and disadvantaged group is complex, although the process of developing an indicator could have the potentially positive consequence of helping countries think how to make their financing mechanism more direct and transparent.

This analysis supports extending indicator 4.5.3 beyond the narrow confines of a formula-based indicator and basing it on descriptive information that can be collected through a regular survey of expenditure allocation and reallocation policies and programmes of a wider scope. But it also supports going beyond information on the mere existence of a mechanism to also set thresholds that confirm the potential of such mechanisms to substantially reallocate



resources through information on depth (volume) and width (coverage). Although it would have been desirable to also include evidence of effectiveness, it is not realistic to base the indicator on anything other than descriptive information.

The main outstanding question for developing and sustaining the methodology for indicator 4.5.3 is the extent to which information collection can be made systematic.

Collecting such information through a formal questionnaire, such as the annual UIS and/or UIS/OECD/Eurostat education survey would constitute a significant departure from the type of information currently collected. While alternative mechanisms could be considered, such as the process through which information was collected as part of this paper, it is ultimately essential to ensure country participation in the information collection.

## Recommendations

Based on the previous analysis and the data that are presented on the 70 countries in the annex, the following recommendations are made for indicator 4.5.3:

- Revise the **formulation** of the indicator to capture the original intent of the indicator. A proposed solution would involve replacing:
  - 'explicit formula-based policies' with 'national / sub-national financing policies or programmes' to capture the broader range of instruments that can be used for equity;
  - 'education resources' with 'resources' to capture the fact that social expenditure can be as effective for equity in education as education expenditure; and
  - 'targets vulnerable groups in education' with 'to benefit the education of disadvantaged populations'
 i.e. 'Extent to which *national /sub-national financing policies or programmes* reallocate resources to benefit the education of disadvantaged populations'
- Collect information through the annual UIS and UIS/OECD/Eurostat education **survey** (or some complementary arrangement), including on description, targeting criteria, volume and coverage of four types of financing policies or programmes.
- Where there is more than one policy/programme, focus on the largest for each of the four types (which practically means focusing on **poverty** or socio-economic disadvantage as the main characteristic of vulnerability and disadvantage) instead of trying to be comprehensive.

## Annex 1: Summary of country information on extent to which four types of financing policies and programmes are sufficiently oriented to promote equity in education

Country	1. Overall education financing mechanisms			2. Policies and programmes to providing resources to schools			3. Education policies and programmes to provide resources to students and their families			4. Social policies and programmes to provide resources to students and their families			Overall
	Is there any education funding mechanism that address equity?			Are there policies that provide more resources to disadvantaged schools or schools with disadvantaged students?			Are there education policies that provide more resources to disadvantaged students / households?			Are there social policies that provide more resources to disadvantaged students / households?			
	Existence	Volume	Coverage	Existence	Volume	Coverage	Existence	Volume	Coverage	Existence	Volume	Coverage	
Afghanistan	Yes	Low	High	Yes	Medium	Medium	No			Yes	Low	High	Not equity-oriented
Algeria	Yes	Medium	High	Yes	High	Low	Yes	Medium	Low	Yes	Low	High	Equity-oriented
Argentina	Yes	High	High	Yes	High	Medium	Yes	High	Medium	Yes	High	High	Equity-oriented
Bangladesh	No			Yes	High	Medium	No			Yes	Medium	High	Not equity-oriented
Belize	Yes	Medium	Medium	Yes	Low	Low	Yes	High	Medium	Yes	Low	High	Equity-oriented
Benin	No			Yes	High	Medium	Yes	Medium	High	No			Not equity-oriented
Bolivia	Yes	High	High	Yes	High	Medium	Yes	Low	Low	Yes	Medium	High	Equity-oriented
Brazil	Yes	Low	Medium	Yes	Low	Medium	Yes	High	Medium	Yes	Low	High	Equity-oriented
Burkina Faso	Yes	Low	Low	Yes	Low	Low	Yes	Low	Low	Yes	Medium	High	Not equity-oriented
Burundi	Yes	Low	Low	Yes	Low	Medium	No			Yes	High	Low	Not equity-oriented
Cambodia	Yes	Low	Low	Yes	Medium	Medium	Yes	High	Medium	No			Not equity-oriented
Cameroon	No			Yes	Medium	Low	Yes	Low	Low	Yes	Low	High	Not equity-oriented
Chad	Yes	Low	Low	Yes	High	Medium	Yes	Low	Low	Yes	Low	High	Not equity-oriented
Chile	Yes	High	High	Yes	High	High	Yes	Medium	Medium	Yes	Low	Medium	Equity-oriented
Colombia	No			Yes	Medium	Medium	Yes	Medium	Medium	Yes	Medium	High	Equity-oriented
Congo	Yes	Low	Medium	Yes	High	Medium	Yes	Medium	Medium	Yes	Low	High	Equity-oriented
Costa Rica	No			Yes	Medium	Low	Yes	Low	High	Yes	Medium	Medium	Not equity-oriented
Cote D'Ivoire	No			Yes	Low	Low	Yes	Medium	Medium	No			Not equity-oriented
D. R. Congo	No			Yes	High	Low	Yes	Medium	Low	Yes	Medium	High	Not equity-oriented
Dominican Rep.	Yes	High	High	Yes	High	High	Yes	High	Low	Yes	Medium	High	Equity-oriented
Ecuador	Yes	High	High	Yes	High	Low	Yes	Medium	Low	Yes	Medium	Medium	Equity-oriented
Egypt	Yes	Low	Low	Yes	Low	Low	Yes	Low	Low	Yes	Low	High	Not equity-oriented
El Salvador	Yes	Medium	Medium	Yes	Low	Low	Yes	Low	Low	Yes	Medium	Low	Not equity-oriented
Ethiopia	Yes	Medium	Medium	Yes	Low	Low	Yes	Medium	Medium	Yes	Medium	High	Equity-oriented
Gabon	No			Yes	High	Medium	Yes	Low	Low	Yes	Low	High	Not equity-oriented
Georgia	Yes	High	High	No			Yes	Low	Medium	No			Not equity-oriented
Ghana	Yes	Low	Medium	No			Yes	High	Medium	Yes	Medium	Low	Not equity-oriented
Guatemala	No			Yes	Medium	Medium	Yes	High	Low	Yes	Low	Medium	Not equity-oriented
Guinea	No			Yes	Medium	Low	Yes	Medium	Medium	Yes	High	High	Equity-oriented
Haiti	No			Yes	High	Medium	No			Yes	Medium	Medium	Not equity-oriented
Honduras	No			Yes	Medium	Medium	Yes	Low	Low	Yes	Medium	High	Not equity-oriented
India	No			Yes	Low	Low	Yes	Low	Low	Yes	Medium	High	Not equity-oriented
Indonesia	Yes	Low	High	No			Yes	Medium	High	Yes	Low	Low	Not equity-oriented
Iran, Isl. Rep.	Yes	Low	Low	Yes	Low	Medium	No			Yes	Low	High	Not equity-oriented
Jamaica	No			Yes	Low	Medium	No			Yes	Medium	High	Not equity-oriented
Japan	Yes	Low	Medium	Yes	Medium	Medium	Yes	Low	Medium	Yes	Low	Low	Not equity-oriented
Kazakhstan	No			Yes	Low	Low	Yes	Low	Low	No			Not equity-oriented
Kenya	Yes	Low	Low	Yes	Low	Medium	Yes	Low	Low	Yes	Low	High	Not equity-oriented
Kyrgyzstan	No			Yes	Low	Low	Yes	Low	Low	Yes	High	Medium	Not equity-oriented
Madagascar	Yes	Low	Low	Yes	Medium	Low	Yes	Low	Low	Yes	High	Low	Not equity-oriented
Malawi	No			Yes	Medium	High	Yes	Low	Low	Yes	Medium	Medium	Not equity-oriented
Mali	Yes	Low	Low	Yes	Low	Low	Yes	Low	Low	Yes	Medium	Medium	Not equity-oriented
Mauritania	Yes	Low	Low	Yes	Medium	Medium	Yes	Low	Low	No			Not equity-oriented
Mexico	No			Yes	High	Low	Yes	Medium	High	Yes	Low	High	Not equity-oriented
Mongolia	Yes	Low	High	Yes	High	Medium	Yes	High	Medium	Yes	High	High	Equity-oriented
Mozambique	No			Yes	Low	Low	Yes	Low	Medium	No			Not equity-oriented
Myanmar	No			Yes	High	Medium	Yes	High	Medium	No			Not equity-oriented
Nepal	Yes	Low	Low	Yes	Low	Low	Yes	High	Low	No			Not equity-oriented
Nicaragua	No			Yes	Medium	Low	Yes	Low	Low	No			Not equity-oriented
Niger	No			Yes	Medium	Low	Yes	Low	Low	Yes	Medium	Medium	Not equity-oriented
Nigeria	Yes	Low	Low	Yes	Low	Medium	Yes	Low	Medium	Yes	Low	Low	Not equity-oriented
Panama	No			Yes	High	Medium	Yes	High	Low	Yes	Low	High	Not equity-oriented
Paraguay	Yes	Low	Low	Yes	High	Medium	Yes	High	Medium	Yes	Medium	High	Equity-oriented
Peru	Yes	High	High	No			Yes			Yes	Medium	Medium	Not equity-oriented
Russian Fed.	Yes	High	High	Yes	Low	Low	Yes	Low	Low	Yes	Low	Medium	Not equity-oriented
Rwanda	No			Yes	High	Low	Yes	Low	Medium	Yes	Low	High	Not equity-oriented
Senegal	Yes	Low	High	Yes	Low	Low	Yes	Low	Medium	Yes	Low	High	Not equity-oriented
Singapore	No			Yes	Low	Low	Yes	Low	Low	Yes	Medium	Medium	Not equity-oriented
Somalia	No			No			Yes	Medium	Medium	No			Not equity-oriented
South Africa	Yes	Low	Medium	Yes	Low	Low	Yes	Medium	Medium	Yes	High	High	Equity-oriented
Sri Lanka	Yes	Low	Low	Yes	Low	Low	Yes	Low	Low	Yes	Medium	High	Not equity-oriented
Sudan	No			Yes	Low	Medium	Yes	High	High	No			Not equity-oriented
Syrian A. R.	No			No			No			No			Not equity-oriented
Tajikistan	Yes	Low	High	Yes	Low	Low	Yes	High	High	Yes	Low	Low	Not equity-oriented
Thailand	Yes	Low	Medium	Yes	Low	Medium	Yes	Low	Medium	No			Not equity-oriented
Trinidad/Tobago	No			Yes	Medium	Low	Yes	Low	Low	Yes	Medium	Medium	Not equity-oriented
Turkey	No			Yes	Medium	High	Yes	Low	Medium	Yes	Low	Low	Not equity-oriented
United States	Yes	Medium	Medium	Yes	Low	Medium	Yes	Low	High	Yes	Medium	High	Equity-oriented
Uruguay	Yes	High	Low	Yes	High	Medium	Yes	Medium	Medium	Yes	Medium	High	Equity-oriented
Uzbekistan	No			Yes	Low	Low	Yes	Low	Low	Yes	Low	High	Not equity-oriented
Viet Nam	Yes	Low	Low	Yes	Low	Medium	Yes	Low	Low	Yes			Not equity-oriented
Yemen	Yes	Low	Low	Yes	Low	Low	No			Yes	High	Low	Not equity-oriented
Zambia	Yes	High	Medium	Yes	High	Medium	Yes	Medium	Low	Yes	Medium	Medium	Equity-oriented