

**TOTAL INITIAL FINANCING FOR EDUCATION AS A
PERCENT OF GDP BY FINANCING UNIT**

PROPOSED INDICATOR

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Abstract: This note proposes a methodology for measuring education financing by source. The proposal is to apply the concepts of initial financing and financing unit defined in the 2016 National Education Accounts and to **define the indicator as “initial financing for education by financing unit”; financing units would include general government, private sector households, and “rest-of-world” ODA.** In principle, UIS collects the data needed to calculate initial government financing and initial household financing on education as part of SDG 4.5.4 through its Survey of Formal Education and the UNESCO OECD EU (UOE) joint data collection; however, coverage for non-government financing is quite low in low and middle income countries. Methodology for using alternative sources of data (but not imputation) following the GEMR 2022 and EFW 2022 approaches are proposed with some key differences. The alternative sources of data include (1) using government expenditure on education as a percent of GDP (after deducting ODA receipts and private sector receipts) as a measure of initial general government financing, (2) data contained in national consumption survey reports as a measure for household financing, and (3) the OECD CRS data for ODA financing. **An important methodological challenge is whether additional data collection from national budget documents about revenue from private sector to education units in government can be collected by the UIS:** in absence of this data, initial government financing would include private sector transfers to government budgets (e.g.: public school tuition or ancillary fees charged in some countries) and result in double counting with household initial financing.

1. Background

The monitoring framework for financing includes indicators on public expenditure nationally as a percent of GDP and on spending per student (SDG 4.5.4) by source, but currently omits expenditure nationally by households or by source more broadly. The contribution of households to education expenditure is significant; for example, the GEMR 2022 found that households contributed on average 30 percent of education expenditure equivalent to 1.9 percent of GDP in its sample of nearly 150 countries (UNESCO 2022:398). The Education Finance Watch 2022 also found that households contributed to just under 25 percent of education expenditure globally and 35 percent in low-income countries (UNESCO and World Bank 2022:11). UNESCO (UNESCO 2016a) undertook a detailed analysis of expenditure on education in selected countries under the National Education Accounts methodology and found that households financed approximately 25 percent of education expenditure.

The data needed to estimate expenditure on education including household expenditure collected by the UIS has limited coverage particularly for low and middle income countries, but alternative data sources do exist. The UIS’s Survey of Formal Education as part of the UNESCO OECD EU joint data collection asks countries about government expenditures and transfers including from international sources as well as private expenditure. Because this data has limited coverage especially for household expenditure in low and middle income countries (UNESCO 2022:398), the GEMR 2022 created a dataset of household education expenditure augmenting data collected by the UIS and OECD Education at a Glance by reviewing the reports

of national consumption surveys and combining this with data on consumption as a percent of GDP to estimate household expenditure on education as a percent of GDP. This resulted in estimates of household expenditure on education as a percent of GDP for nearly 150 countries. They combined their estimates with data on public expenditure on education to estimate the share of education expenditure provided by households. A similar exercise using the GEMR 2022 household expenditure dataset was done by the EFW 2022; this study added financing from ODA using the OECD's International Development Statistics Creditor Reporting System (OECD CRS) database to estimate education expenditure by government, households, and ODA (UNESCO and World Bank 2022:10). In this sense, the data building blocks for an indicator on education expenditure by source exist.

2. Objective

The objective of this indicator is (1) to measure the total amount of expenditure, both public and private, on education, (2) understand the source of this expenditure, and (3) measure this indicator using data that can be feasibly collected.

3. Proposed Definition

The following definition is proposed for the indicator: initial financing for education by financing unit (general government, private sector--households, private sector--non-households, rest-of-world--ODA, and rest-of-world--non-ODA).

4. Concepts

The concepts used in this definition are defined in the National Education Accounts developed by UNESCO published in 2016¹ and are summarized here.

Financing unit (see UNESCO 2016b:22): The NEA defines financing units as “institutional units which provide financial resources to the domain” of education. The NEA distinguishes between financing units that finance education and producing units that provide education. These may be the same entity (e.g.: a ministry of education) but are considered separately in the NEA. The NEA offers the following categorization of financing units: (1) general government which includes all levels of government), (2) private sector, and (3) rest-of-world which includes external financing including those of international development partners. For the purpose of this proposal, private sector is split between households and non-households. In practice, the definition of households would need to vary by country and correspond to those from which expenditure data is collected. Rest-of-world is also split between Overseas Development

¹ The World Bank is developing an updated version of the National Education Accounts and this may affect the concepts and terminology used.

Assistance (ODA) which would follow the OECD definition and non-ODA. The choice to follow the OECD definition is also pragmatic given that the OECD CRA is the primary source of data on ODA flows.

Initial financing (see UNESCO 2016b:29): The NEA distinguishes between initial and final financing to reflect the fact that financing units can transfer funding among each other. Initial financing includes direct expenditure on education by a financing unit as well as transfers to other units that are earmarked for education. Initial financing excludes any transfers being received that are earmarked for education. The intent with initial financing is to understand how much of its financing it is, on its own accord, allocating to education.

5. Calculation Method: using UOE joint data collection

In principle, the UOE joint data collection collects all the information needed to calculate initial general government financing, initial private sector household financing, and ODA; however, in practice, coverage is generally low, particularly for household initial financing and for low and middle income countries. The methodology using the UOE data would require division by GDP, which use the same source of GDP as per SDG 1a2.

The following UOE sources (as defined in the UNESCO (2020) *UOE Data Collection Manual 2020*) would be used to estimate initial financing by the financing units in the proposed indicator as follows:

Proposed indicator financing unit (following NEA 2016)	Corresponding UOE variable as defined in the UOE manual (page number noted) or calculation method proposed
General government initial financing	Subtract funds from international agencies and other foreign sources from the sum of direct public expenditure on educational institutions and public transfers and payments to the private sector (see pp. 63)
Private sector - households	Total household expenditure (see pp. 66)
Private sector - non-households	Total expenditure of other private entities (see pp. 68)
Rest-of-world - ODA	OECD CRS - ODA earmarked for education expenditure (see discussion below)
Rest-of-world - non-ODA	Subtract Rest-of-world - ODA amount from UOE's Funds from international agencies and other foreign sources (see pp. 63)

Note that using the UOE data source takes precedence over the alternative data sources described below. The definition of initial general government financing corresponds to the definition used

in the OECD's (2018) *Handbook for internationally comparable education statistics* (see pp. 114).

6. Calculation Method: using alternative sources

Following the methodology used by the GEMR 2022 (UNESCO 2022) and EFW 2022 (UNESCO and World Bank 2022), the following alternative data sources and adjustments are proposed to augment data that has already been collected through the UOE data collection.

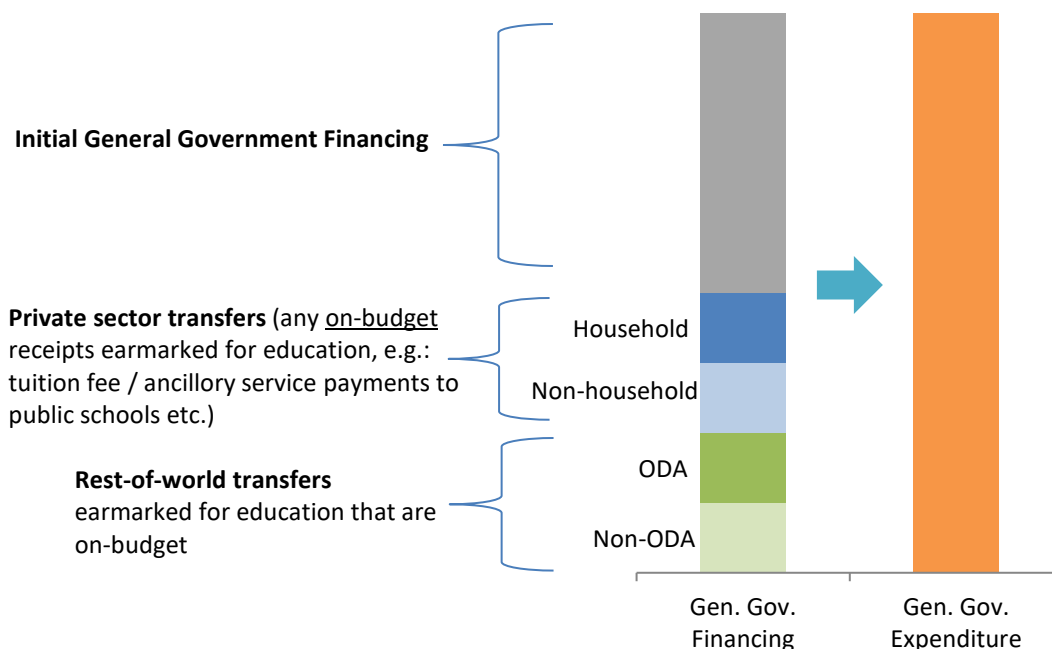
1. Initial general government financing for education

General government expenditure on education as a percent of GDP is a readily available indicator collected and published by the UIS but also the IMF through its Government Finance Statistics (GFS) program, the World Bank through its BOOST programme and Public Expenditure Reviews, UNESCO through its Country Status Reports, and the OECD through its Education at a Glance program. However, expenditure on education would also include transfers from other financing units included in the proposed indicator including households and ODA (see **Figure 1**). As a result, the proposed calculation method would be to adjust public expenditure accordingly:

$$\begin{aligned} \text{initial government financing \% of GDP} = & \\ & \text{total expenditure as a \% of GDP} \\ & - \frac{\text{Rest of world education receipts}}{\text{GDP}} \\ & - \frac{\text{private sector transfers received}}{\text{GDP}} \end{aligned}$$

The following data is needed to implement this proposed calculation method, and alternative sources are suggested if not available in the data from the Survey of Formal Education.

Fig. 1. Financing components of general government expenditure on education



1. Government expenditure on education as a percent of GDP: Government education expenditure as a percent of GDP (from SDG 1a2) would be used for this data.

2. Private sector transfers received (as a percent of GDP): This data is currently not available at a large scale; however, it could be collected by reviewing government budget documents for those countries that report revenues in their budget. The UIS has recently conducted reviews of budget documents to collect data on public expenditure on education, and, as a result, has experience and processes in place to potentially apply this exercise to collecting data on revenues from private sector². This amount would then be divided by GDP, see below.

3. Rest-of-world transfers received (as a percent of GDP): This data could also be collected through a systematic review of budget documents for those countries that report foreign transfers earmarked for education; however, the OECD's International Development Statistics Creditor Reporting System (OECD CRS) database. See discussion below. However, using the data would exclude any external transfers for education that are not reported through the OECD CRS or are not classified as ODA.

4. GDP: The source of GDP data would ideally match that used in the denominator for public expenditure as a percent of GDP. The current source of this data is the IMF WEO dataset;

² A second approach could be to estimate household expenditure that is paid to the public sector (e.g.: tuition fees to public schools); however, this would require data on expenditure per student and data on the type of school the student attends. It would also involve analysis of household survey data because this information is normally not presented in consumption survey reports.

however, this may change in the future.

2. Initial financing by private sector - households

Data on household expenditure on education as a percent of GDP is currently available from the UIS for a limited number of countries as well as from the OECD Education at a Glance; however, coverage for low and middle income countries from these sources is quite limited. As described previously, the GEMR team has added to these sources by estimating the household expenditure on education as a percent of GDP by reviewing the consumption survey reports for education expenditure as a proportion of household consumption and then multiplying this figure by consumption as a percent of GDP. This same approach is proposed for the present indicator for countries that do not have data in the UIS Survey of Formal Education or the OECD EAD.

The main limitation for this data source lies in the comparability of reported household expenditure across countries: these include differences in whether expenditure is collected for a specific child or the household as a whole, differences in the recall period, and differences in items included under education that households are asked to report on. These limitations are described in more detail in the 2021/2022 GEMR (UNESCO 2022:398) and in EFW 2022 (UNESCO and World Bank 2022:20). A second potential limitation is that household expenditure, like government expenditure, would include (in theory) transfers from government earmarked for education that should be subtracted from household expenditure to calculate initial financing. However, households generally do not receive cash transfers earmarked for education: for example, scholarships, bursaries, and vouchers would in practice be redeemable by educational institutions and consist of a transfer from government to the institution. These forms of transfers would likely not be recorded as expenditure by households. Under certain programmes, households do receive cash transfers and stipends in exchange for sending their children to school, for example under conditional cash transfer programs, but those transfers are not specifically earmarked for education (although they can be applied to finance education) and would not fall under the definition of initial financing.

The indicator would be calculated as follows:

$$\begin{aligned} \text{Initial financing by private sector, households} = \\ \text{proportion of household exp. on education} \times \\ \text{household consumption as a \% of GDP} \end{aligned}$$

The following sources are proposed:

1. Proportion of household expenditure on education: As described above, the approach used by the GEMR would be used to collect this figure from consumption survey reports.

2. Household consumption as a percent of GDP: The World Bank's Households and NPISHs final consumption expenditure (percent of GDP) is proposed as this is reported for a large number of countries. This World Bank indicator includes both household expenditure and

support to household received from non-profit organizations³.

3. Rest-of-world transfers-ODA

The largest source of data on ODA financing for education to countries is from the OECD's International Development Statistics Creditor Reporting System (OECD CRS) database. This dataset provides data on amounts transferred to countries whether as direct expenditure, as transfers to budgets earmarked for improving education, or concessional loans earmarked for education. The proposed indicator would utilize ODA transfers received by country, defined as total aid to education, current million US\$, and then would be divided by recipient country GDP to calculate the aid received as a percent of GDP. The data source for GDP is proposed as above, to match the figure used in public expenditure on education as a percent of GDP. Note that only ODA for education would be included. Unallocated ODA received by countries would be excluded because it is not earmarked for education and any of this funding allocated to education would be at the decision of the government and therefore be considered initial financing. Note that the main difference between this proposed approach and the methodology used by the EFW 2022 (UNESCO and World Bank 2022) is that the amount of ODA that is used for education but not earmarked for education (or designated as education expenditure in the CRS) is excluded; this is to be consistent with the definition of initial financing.

4. Private sector non-household and rest-of-world non-ODA

Private sector non-household financing refers to financing from non-household private sector entities including NGOs that was not received earmarked for education. Rest-of-world non-ODA included financing from donors outside recipient countries that are not included in the OECD CRS. Currently, there data are not collected and reported at large scale and would be excluded from the proposed indicator for the time being. This is discussed in further detail in the meta-data for SDG 4.5.4.

7. Methodological Decisions

The main methodological question is whether or not to review budget documents to identify revenue amounts for education ministries or for education services. In some countries, part of public expenditure on education would rely on revenues from households through tuition and ancillary fee payments that are on budget; that is, recorded in the national or sub-national budgets. Given the free education policies of many countries, on-budget revenues at the primary

³ <https://databank.worldbank.org/metadataglossary/world-development-indicators/series/NE.CON.PRVT.PC.KD#:~:text=Household%20final%20consumption%20expenditure%20is,rent%20for%20owner%2Doccupied%20dwellings.>

and secondary levels may not be extensive (as opposed to off-budget or informal fees that would be captured as household expenditure), but there are a number of countries that collect tuition fees, particularly upper secondary. Revenue for tuition and ancillary fees are most prevalent at the post-secondary secondary level of education, but the extent to which these are recorded on government budgets would vary by the institutional structure of the education system. For example, where public post-secondary institutes are financially independent, then their revenues may not be recorded on public budgets. In other words, collecting revenue data from budget documents would be costly for the UIS (requiring the employ of consultants) would help reduce double counting of expenditure on education from both households and public sources and, as a result, allow a better estimate of initial government financing using public expenditure on education. If this data were not collected, then there would be some double counting of expenditure, mostly affecting post-secondary expenditure and depending on whether tuition and other fees are recorded on budget or not.

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