

## 2.3 LIST OF CORE ECE COST AND FINANCING INDICATORS AND VARIANTS

The main ECE costing and financing indicators are presented in the Table 1 below across three color-coded priority levels, based on their relative importance for understanding and projecting ECE public costs and financing. Complementary indicators are listed together. For example, the lower priority indicator of “Public ECE expenditure as a percentage of Gross Domestic Product” follows the higher priority indicator of “Public ECE expenditure as a percentage of education expenditure.”

<b>ABSOLUTE PRIORITY</b> <b>Absolute priority indicators</b> These indicators are crucial for the most basic understanding of the public costs and financing of the sub-sector, and for modelling/projecting those costs.	<b>HIGH PRIORITY</b> <b>High priority indicators</b> These indicators are useful to better understand of the costs drivers and to make cost simulations of envisioned policies.	<b>LOWER PRIORITY</b> <b>Lower priority indicators</b> These indicators will provide further details into the analysis and the cost projections.
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The indicators below refer to the national public (government) ECE costing and financing. In contexts where government financial management is decentralized, it may be important to compare indicator values across sub-national regions.

The indicators presented are those which relate to understanding and modelling public ECE costs and financing, and do not address private ECE costs and financing (unless explicitly stated).

The indicators are listed in two tables:

**Table 1:** Resources and expenditures: the levels of public investment in ECE, its composition, and the potential additional resources; and

**Table 2:** Strategic inputs: the main cost drivers of the ECE subsector, grouped under the sub-categories of: Teachers; Infrastructure; Learning materials; Social spending; Process costs; and Operational inputs.

In many cases, expenditure elements featured across indicators will have different data sources. A transparent process for reconciling various data sources will need to be determined.

## ECE Public Costing and Financing Indicators

**Table 1. Resources and expenditures.**

Resource and expenditure indicators are crucial to understand the historic and current levels of public investment in ECE, its composition and the resources potentially available for the subsector

Indicator	Variants	Definition	Possible source(s) of data	Comments
<b>ABSOLUTE PRIORITY</b> <b>Public ECE expenditure as a percentage of education expenditure</b>	(total expenditure)	$\frac{\text{Public ECE expenditure}}{\text{Education expenditure}}$	MoE Directorate of Finance <i>and/or</i> Ministry of Finance/ Budget	<p>The share of ECE in the education expenditure may be volatile from one year to the next when large investment programs are implemented. <b>EXAMPLE</b> This is typical especially of infrastructure investments, though may also occur if a government decides to scale-up a service delivery model, such as a one-year school readiness program, which might require a significant investment in teacher or paraprofessional training initially, with minimal in-service training costs required over time.</p> <p><b>IMPORTANT</b> It is important, whenever possible, to calculate the ratio of actual expenditures rather than budgets, as the latter are not always executed as planned. Note that actual expenditures will have an additional time lag and may be more difficult to obtain. The execution rate of the budget is presented as a complementary indicator below.</p> <p>This indicator makes government's ECE efforts visible and allows for international comparisons.</p>
	Recurrent expenditure <sup>1</sup>	$\frac{\text{Public ECE recurrent expenditure}}{\text{Education recurrent expenditure}}$		The share of ECE in the education recurrent expenditure is generally more stable over time, as both recurrent expenditures (ECE and education) are largely driven by teacher compensation, which evolves relatively slowly.
	Capital expenditure	$\frac{\text{Public ECE capital expenditure}}{\text{Education capital expenditure}}$		As levels of ECE access are generally lower than those of other subsectors, it may be necessary to have increased levels of investment in capital infrastructure for ECE in order to support significant increases in access.

Indicator	Variants	Definition	Possible source(s) of data	Comments
<p>Note: If the ECE expenditure is not available, as it is sometimes bulked into the primary education budget, it is possible to make a rough estimation of it based on the number of teachers in ECE or, if that is not available either, the number of students. The rationale for this estimation is that the largest share of the recurrent budget is the teachers' salary. Hence, the ECE expenditure can be estimated from the Total ECE and primary expenditure and the prorata of the number of teachers (or students). The two calculations generally lead to similar results; if results notably differ, and if there are no known data quality issues with either number of students or teachers to decide between the two, the average of the two calculations below could also be used.</p> <p>ECE exp. <math>\approx</math> <math>\frac{\text{Total ECE and primary exp.} \times \text{Number of ECE teachers}}{\text{Total number of ECE and primary teachers}}</math> or ECE exp. <math>\approx</math> <math>\frac{\text{Total ECE and primary exp.} \times \text{Number of ECE students}}{\text{Total number of ECE and primary students}}</math></p>				
<p><b>LOWER PRIORITY</b></p> <p><b>Public ECE expenditure as a percentage of Gross Domestic Product (GDP)</b></p>		$\frac{\text{Public ECE expenditure}}{\text{GDP}}$	<p>MoE Directorate of Finance</p> <p><i>and/or</i></p> <p>Ministry of Finance/Budget</p> <p>GDP figures from the <u>IMF WEO website</u></p>	<p>ECE expenditure as a percentage of GDP is informative regarding ECE investments in the country in the context of the country's wealth. It is a combination of the previous indicator and the government's overall expenditure as a percentage of GDP; it is mostly used for international comparisons. It is affected by the tax-to-GDP ratio.</p>
<p><b>LOWER PRIORITY</b></p> <p><b>Execution rate of the ECE budget</b></p>	<p>(total expenditure)</p> <hr/> <p>Recurrent expenditure</p> <hr/> <p>Capital expenditure<sup>1</sup></p>	$\frac{\text{ECE actual expenditure}}{\text{ECE voted budget}}$	<p>MoE Directorate of Finance</p> <p><i>and/or</i></p> <p>Ministry of Finance/Budget</p>	<p>The execution rate (amount actually spent compared to allocated/voted budget) of the ECE budget gives information on the implementation capacity of the subsector. If the budget is not executed, increased funding might not lead to improved results; adequately using already available resources should be a priority.</p> <p>The recurrent budget execution rate is generally higher than the capital budget's rate, as most of it is generally salaries. Under-spending can still occur because, for instance, of training programs being delayed, policy framework or curricula not ready for implementation, etc. Capital budget involves procurement, implementation capacity, etc. Typical underspending occurs on classroom/infrastructure construction, learning materials procurement and distribution.</p> <p>Note that the execution rate may in some cases be greater than 100% when the budget is over-spent. <b>EXAMPLE</b> This is generally for recurrent expenditure, for instance when contract teachers are hired because of permanent teacher shortage). An execution rate repeatedly above 100% for a few years indicates under-budgeting of some activities and generally prompts improved planning.</p>

Indicator	Variants	Definition	Possible source(s) of data	Comments
<p><b>HIGH PRIORITY</b></p> <p><b>Public ECE Unit Cost</b></p>		$\frac{\text{Public ECE expenditure}}{\text{Number of ECE learners in public ECE}}$	<p>MoE Directorate of Finance</p> <p>EMIS</p>	<p>The (public) Unit cost is the public expenditure spent on one child attending ECE services for one year. It allows for comparisons with other subsectors.</p> <p>It is also the simplest basis for expenditure projection, in data-poor contexts, where future total expenditures can be projected as the product of the unit cost by the projected number of learners (see Annex – Model 1 below).</p> <p>Due the different nature of recurrent and capital expenditures, it is often useful to calculate public ECE recurrent unit cost and public ECE capital unit costs. It is common to focus on recurrent public unit cost.</p> <p>Unit cost is also frequently computed based on recurrent expenditure, as capital expenditure are oftentimes supported by partners. If capital expenditure is to be taken in consideration in the unit cost, consider the expected duration. A useful formula for this can be found in the UNESCO, UNESCO IIEP, World Bank, UNICEF and Global Partnership for Education's (2014) <u>Education Sector Analysis Guidelines, Vol.1, Chapter 3 on Cost and Financing.</u></p>
	<p>As a % of GDP/capita</p>			<p>Expressed as a % of the GDP per capita, the Unit Cost can be compared between countries to assess public investment in ECE service provision – and the relative cost of enrolling a child in a public ECE institution.</p>
	<p>By type of expenditure (Recurrent and Capital)</p> <p>By service delivery model</p>	$\frac{\text{Public expenditure for ECE type A}}{\text{Number of learners in ECE type A}}$		<p>From a public expenditure perspective, it can be invaluable to compare the public cost associated with children attending the wide variety of ECE services. <b>EXAMPLE</b> Self-standing ECE schools may have a different unit cost from ECE classes attached to primary schools, or some ECE services may operate on different calendars or intensity (full-time vs. mornings only) of services provided.</p> <p>When grants or subsidies are provided to community or private service providers, or when the government pays some or all of teachers' salaries in those schools, it can also be interesting to compare the public cost of children attending those services compared to public services (if learning conditions and achievements are satisfactory, those may constitute interesting options for coverage expansion).</p>

Indicator	Variants	Definition	Possible source(s) of data	Comments
	By service provider			<p>The idea here is to compare the unit cost of ECE for the MoE to that of ECE services provided by other Ministries, where applicable. This indicator may require a specific survey to grasp what ECE services other institutions finance, such as other ministries, private institutions, or community-based institutions.</p> <p><b>EXAMPLE</b> In some countries, some ECE services may be offered by Ministry of Social Welfare, Ministry of Health, or disaster or crisis coordination entities, for instance, especially for some key target populations – targeted based on vulnerability characteristics such as but not limited to gender, geographic location (i.e. remoteness), disability status, orphanhood status, household wealth, household arrangements such as single headed households, being from a minority group (i.e. ethnic or linguistic minorities), and/or affected by conflict and crisis (i.e. migrants, immigrants, internally displaced persons, or refugees) or by community or private service providers. This information may be available from the respective Ministries’ Department of Human Resources and/or payroll sources, or from the Ministries of Finance or Planning.</p> <p>This comparison may suggest efficiency gains for certain model. <b>EXAMPLE</b> When service provision models operate using cheaper infrastructure, with different teacher profiles, or with larger classes, for instance, while getting similar learning results. For other indicators to compare various service models and providers and their results (summarized potentially in thematic studies’ reports) see <a href="#">Tool 2.1</a>.</p>
<p><b>ABSOLUTE PRIORITY</b></p> <p><b>Percentage of the recurrent ECE expenditure spent on teacher compensation</b></p>	<p>Percentage of the recurrent ECE expenditure other than teacher compensation</p>	<p><math display="block">\frac{\text{Total teacher compensation expenditure}}{\text{Recurrent ECE expenditure}}</math></p> <p><math display="block">100\% - \frac{\text{Total teacher compensation exp.}}{\text{Recurrent ECE expenditure}}</math></p>	<p>MoE Directorate/ Department of Finance,</p> <p>MoE Department of Human Resources,</p> <p>Ministry of Public Service (for payroll data),</p> <p>EMIS</p>	<p>This percentage of the recurrent ECE expenditure spent on teacher compensation gives an indication of the proportion of the recurrent ECE budget that can be used to improve conditions of learning, management, etc.</p> <p>It is used in projection models, when little detail is available on the breakdown of other recurrent expenditure. Projecting an increase in the percentage of recurrent expenditure other than teacher salaries is a simple method to make rough estimates of total recurrent expenditure while leaving room for resources to be allocated to improve learning conditions (see Model 2 in the Annex below).</p>

## Table 2: Strategic inputs

The following indicators are the main cost drivers of the ECE subsector. Setting appropriate targets for them will be imperative for sustainability.

Indicator	Variants	Definition	Possible source(s) of data	Comments
<p><b>Teachers.</b> Teacher compensation generally constitutes the vast majority of the ECE subsector (as well as in the other subsector). Understanding its determinant is key to ensure financial sustainability of the ECE policies.</p>				
<p><b>ABSOLUTE PRIORITY</b></p> <p><b>Average teacher salary</b></p>	(from salary scale)	Average teacher salary	<p>Direction of HR and/or Ministry of public service</p>	<p>This information can be obtained from Departments of Human Resources or the public service administration. It generally corresponds to the mid-career salary (it can be expressed as a monthly or yearly salary – the latter is generally more useful), but should ideally include other types of compensation (e.g., social security, allowances and retirement contributions).</p> <p>This indicator is only useful when all (or at least most) teachers are public servants, and if only one type of “educator” is present in the classroom (in ECE there might be a teacher and an assistant or paraprofessional, for instance; in that case, a breakdown by type of educator will be more useful – refer to other indicators below.)</p> <p>Do note that salary scales often deal with basic salaries only and do not include allowances that can form a big part of salaries.</p>
	(from expenditure)	$\frac{\text{Total teacher compensation expenditure}}{\text{Nb of teachers (in a teaching position)}}$	<p>MoE Department of Finance</p> <p>MoE Department of Human Resources</p> <p>Payroll</p> <p>EMIS</p>	<p>This indicator is a better description of reality, especially when there are several types of teachers (contract or volunteer teachers for instance), or when there might be many young or old teachers (thus not in their mid-career).</p> <p>This will need to be calculated and distinguished based on the type of teacher. Civil servants’ salaries may be computed using the payroll, Human Resources nominal roll (nominal roll is payroll data of active employees), and EMIS. Non-civil servants (i.e. volunteers, community-based teachers, etc.) may be computed by identifying their number from EMIS and/or HR data. The actual budget may capture subventions, or government grants or incentives, to non-civil servant teachers.</p> <p><b>IMPORTANT</b> It is important, as much as possible, to distinguish, both in the numerator and the denominator, the teachers actually teaching from those hired and paid as teachers but having administrative or other functions, for instance, such as grounds caretakers or school cooks.</p>

Indicator	Variants	Definition	Possible source(s) of data	Comments
	As a multiple of GDP/capita			The average (yearly) teacher salary as a multiple of the GDP per capita allows for informative international comparisons and provides information on the relative wealth of teachers in their respective countries.
	By teacher status/ category/ type of educator/ ECE service			<p>Describing the salary of teachers by type is crucial when there are for instance:</p> <ul style="list-style-type: none"> <li>• Civil Servant</li> <li>• Contract</li> <li>• Community-based teachers,</li> <li>• Volunteers</li> <li>• Teacher Trainees</li> <li>• Refugee Teachers or Volunteers</li> </ul> <p>These different teachers often have very different remuneration. Different types of educators (teachers and assistants for instance) also have different learner/educator ratios (see below).</p>
<b>ABSOLUTE PRIORITY</b> <b>Learner/Teacher ratio</b>	Overall	$\frac{\text{Number of learners in ECE}}{\text{Number of ECE teachers}}$	EMIS	The number of learners per teacher (or per educator such as teacher assistant, nanny term used locally for paraprofessional) is a direct determinant of the total teacher salary bill.
	By type of educator  By service delivery mode			When various types of educators (i.e. civil servant teacher and teacher assistant) may be present in a classroom, <b>IMPORTANT</b> this indicator is important to calculate and to project.
<b>Infrastructure.</b> In the case of expansion policies for ECE, infrastructure is often the second biggest challenge (after the training, recruitment and remuneration of teachers)				
<b>ABSOLUTE PRIORITY</b> <b>Number of classes per classroom</b>		$\frac{\text{Number of ECE pedagogic groups}}{\text{Number of classrooms for ECE}}$	EMIS	The number of classes per classroom is used to project the need for classroom construction. Ideally, there should be one classroom per class (or pedagogic group), but it is not always the case, <b>EXAMPLE</b> for instance when double shift systems are in place (some children go to school in the morning, other children attend in the afternoon), or when some classes need to be held outside, or in temporary classrooms.
	Permanent classrooms	$\frac{\text{Number of ECE pedagogic groups}}{\text{Nb of permanent classrooms for ECE}}$		

Indicator	Variants	Definition	Possible source(s) of data	Comments
<p><b>ABSOLUTE PRIORITY</b></p> <p>Unit cost of a classroom (equipped)</p>	<p>By type of classroom/by type of procurement</p>	<p>Cost of an equipped classroom</p>	<p>Infrastructure Unit in MoE/MoF or Ministries at other systems' levels (sub-national or local levels), or other units such as humanitarian or development partners</p> <p>and/or</p> <p>Procurement Unit in MoE/MoF or Units linked to Ministries at other systems' levels (sub-national or local levels), or humanitarian or development partner units</p>	<p>The unit cost of a fully-equipped, quality classroom will allow for the calculation of cost of the infrastructure needs. The cost of learning materials for the new classrooms is generally calculated separately, as these have shorter lifespans and may be required for existing classrooms as well.</p> <p><b>IMPORTANT</b> It is important to compare the cost of various types of construction (permanent, pre-fab, temporary with local materials, temporary learning shelters in crises, etc.) as well as different modes of procurement (central, decentralised, community-based, humanitarian sector, etc).</p> <p>Consideration should also be given to prospective life spans of the different types of construction, when considering policy options, although the lifespans of most are likely to go beyond that of the simulation model.</p>
<p><b>ABSOLUTE PRIORITY</b></p> <p>Number of latrines per learner</p>	<p>By type</p>	$\frac{\text{Number of latrines available for ECE learners}}{\text{Number of ECE learners}}$	<p>EMIS</p>	<p>The number of latrines per learner is used to project the need for future latrine construction. In some cases, it may not be possible to distinguish the number of latrines available for ECE learners from those available to other levels of education e.g. when ECE centers are attached to primary schools. In such cases, an estimate based on the relative proportions of learners can be used.</p>
<p><b>ABSOLUTE PRIORITY</b></p> <p>Unit cost of latrine</p>	<p>By type of latrine/by type of procurement</p>	<p>Cost of latrine construction</p>	<p>Infrastructure Unit in MoE/MoF</p> <p>and/or</p> <p>Procurement Unit in MoE/MoF</p>	<p>Attention should be paid to the types of latrines and the procurement processes as they may both significantly impact costs.</p> <p>Costs may also include related handwashing and drinking water facilities and ensuring latrines are gender-responsive and safe.</p>

Indicator	Variants	Definition	Possible source(s) of data	Comments
<p><b>HIGH PRIORITY</b></p> <p>Average cost of classroom rehabilitation</p>		$\frac{\text{Total ECE classroom rehabilitation exp.}}{\text{Nb of ECE classrooms rehabilitated}}$	<p>Infrastructure Unit in MoE/MoF</p> <p>and/or</p> <p>Procurement Unit in MoE/MoF</p>	<p>In situations when a significant number of classrooms may need to be rehabilitated (in particular in the absence of a secured maintenance budget or in crises), this indicator will help the costing.</p> <p>A rehabilitation budget can be considered as an initial investment to bring the classroom stock to established standards or policy objectives, or as a regular budget (with a certain % of classrooms needing rehabilitation every year), when a recurrent maintenance is absent or insufficient.</p>
<p><b>Learning materials.</b> This is often the third largest cost driver in strategies of expansion or improvement of the quality of the ECE sub-sector. Unlike other sub-sectors, where learning materials often refer to manuals, which are enumerated individually and compared to the number of students in the school or class, in ECE learning materials are often referred to as kits, suitable for one class.</p>				
<p><b>HIGH PRIORITY</b></p> <p>Number of (full) Learning Material (LM) kits per class</p>		$\frac{\text{Number of LM kits}}{\text{Number of pedagogic groups}}$	EMIS	<p>The number of LM kits per class is an indicator of shortage of learning materials. Ideally, there should be one kit per class, but this indicator is often lower than 1, indicating that a number of classes do not have adequate learning materials.</p> <p><b>IMPORTANT</b> Note that it is important to understand exactly what is collected in EMIS: are schools reporting the presence of some learning materials, or full sets of LMs newly procured centrally, or are sets of LMs deemed adequate even if they were produced locally (based on which criteria?). <b>IMPORTANT</b> Understanding exactly what is measured is important to interpret this indicator properly.</p>
<p><b>HIGH PRIORITY</b></p> <p>Unit cost of a LM kit</p>		Cost of one LM kit	<p>Procurement Unit</p> <p>and/or</p> <p>Market survey</p>	<p>The cost of one LM kit can be collected from earlier procurement efforts, or estimated from the procurement of similar items. If those are not available, market research can be conducted.</p> <p>Similar to construction, it may be interesting to consider and compare various types of procurement: central, decentralized, community driven, humanitarian, etc., which are likely to have different costs.</p>

Indicator	Variants	Definition	Possible source(s) of data	Comments
<p><b>Social spending.</b> In many contexts ECE provision includes other services beyond strictly education e.g. school-feeding, nutrition, basic health services. Depending on the scale and costs of such services they may constitute a significant proportion of public ECE expenditure</p>				
<p><b>HIGH PRIORITY</b></p> <p><b>Unit cost of social spending</b></p>	<p>By type of service provided</p>	$\frac{\text{Total ECE social exp.}}{\text{Nb of ECE learners benefitting}}$	<p>MoE Directorate of Finance EMIS</p>	<p>Attention should be paid to avoid double counting learners if multiple social services are being considered, if similar services are provided by multiple partners in the same target area, etc.</p> <p>Particular attention should also be paid when social services take place within ECE centres but are financed by other Ministries or actors. <b>EXAMPLE</b> Immunization by the Ministry of Health, psychosocial support by the Ministry of Social Welfare.</p>
<p><b>Process costs.</b> The following indicators refer to costs that are not directly associated with inputs, but are essential to subsector operations. They are used for financial projections to add different levels of detail when information is available.</p>				
<p><b>LOWER PRIORITY</b></p> <p><b>Unit cost of pre-service training an ECE teacher</b></p>	<p>By type of educator</p>	$\frac{\text{Expenditure associated with the pre-service training of ECE teachers}}{\text{Number of ECE pre-service teacher trainees}}$	<p>Institute of teacher training, or equivalent</p> <p>Ministry of Education, Department of Higher Education and Higher Education Management Information System</p>	<p>This is the cost associated of the pre-service training one teacher for one year. To obtain the total cost of teacher training, it needs to be multiplied by the number of years of the training as defined in contexts.</p> <p>Different teacher types and service delivery models may have different training types and costs ( <b>EXAMPLE</b> formal, contracted government teachers trained in a specialized ECE course in a government teacher training institution or a government-provided pre-service teacher training course versus a alternative school-readiness model's shorter, two week in-service or continued professional development/ CPD training).</p> <p>It is not always easy to separate the costs associated with ECE teacher training from those of other teachers ( <b>EXAMPLE</b> primary teachers, typically, who are often trained in the same institutes, or teachers trained in crisis contexts where one training may be provided to all teachers).</p> <p>If costs are bulked together, the total expenditure for teacher training of the teacher institute is divided by the total number of trainees, which amounts to assuming that costs are the same for all types of teachers. The number of years of training may differ.</p>

Indicator	Variants	Definition	Possible source(s) of data	Comments
<p><b>LOWER PRIORITY</b></p> <p><b>Unit cost of in-service training an ECE teacher</b></p>	By type of in-service training	$\frac{\text{Expenditure associated with the in-service training of ECE teachers}}{\text{Number of ECE teachers receiving in-service training}}$	In-service teacher training provider	<p>This is the cost associated with providing in-service training to one teacher.</p> <p>The nature and cost of what is deemed in-serve training can vary significantly from comprehensive, long-term training to obtain certification for unqualified teachers, to specific one-day trainings for already qualified teachers.</p> <p><b>IMPORTANT</b> It is important that what is costed corresponds closely to the planned policies and their activities.</p> <p>If the longer-term certification of unqualified teachers is the focus and it lasts more than one year, then it should be multiplied by the number of years required.</p>
<p><b>LOWER PRIORITY</b></p> <p><b>Inspection/ pedagogic support cost</b></p>	Average inspector/ pedagogic adviser salary	Average inspector/pedagogic adviser salary	Direction of HR <i>and/or</i> Ministry of public service	<p>This information can be obtained from the Department of Human Resources or the public service administration. As for teachers, it generally corresponds to the mid-career salary (it can be expressed as a monthly or yearly salary – the latter is generally more useful), but should ideally include other types of compensation (social security and retirement contributions), and could also include the recurrent budget put at their disposal (for transportation, for instance). This variant of the indicator is particularly useful when the policy explicitly plans for an increase in the number of inspectors.</p> <p>Another indicator which could be useful to calculate related to this indicator is the average number of ECE institutions supervised by one inspector.</p>
	As a % of recurrent ECE	$\frac{\text{ECE recurrent inspection/ pedagogic support expenditure}}{\text{Total ECE recurrent expenditure}}$	MoE Dir. of Finance	This variant is useful especially at the long -term financial simulation stage, when no clear strategy is set for the inspectorates, but an increase of their budget is planned.
<p><b>LOWER PRIORITY</b></p> <p><b>Infrastructure maintenance and operational costs</b></p>	Per classroom	$\frac{\text{Infrastructure maintenance and operational exp. for ECE}}{\text{Nb of ECE classrooms}}$	MoE Dir. of Finance EMIS	The infrastructure maintenance and operational (including electricity, heating etc.) costs can be expressed per classroom, in which case it will be multiplied by the number of ECE classrooms in the costing, or as a bulk percentage of the recurrent expenditures.
	As a % of recurrent ECE	$\frac{\text{Infrastructure maintenance and operational exp. for ECE}}{\text{Total recurrent ECE expenditure}}$	MoE Dir. of Finance	In both cases, it might be difficult to separate ECE classrooms and maintenance and operational costs from those of other sub-sectors, primary in particular. In that case, the calculation may be completed for all undistinguishable classrooms.

Indicator	Variants	Definition	Possible source(s) of data	Comments
<b>ABSOLUTE PRIORITY</b> Percentage of “other” recurrent ECE expenditure		$\frac{\text{Other recurrent expenditure}}{\text{Total recurrent ECE expenditure}}$	MoE Dir. of Finance	This indicator is useful for financial simulations, as there is always a level of approximation in the projections (see Models 3 and 4 in the Annex below, and the Sao Tome & Principe simulation model example in the <a href="#">Tool 3.3</a> ).  Whether the specific projections only include teacher salaries, or a number of other types of strategic and process expenditures (learning materials, maintenance, etc.), the “rest” needs to be estimated as a bulk share of the total recurrent expenditure for the subsector. It can be understood as the “overhead” cost of running key ECE services.
<p><b>Operational inputs.</b> The following indicators relate to the unit costs of inputs that will be necessary to the Education Sector Plan’s implementation, including related policies, standards, monitoring and quality assurance, etc. They are essentially used for the costing the operational plan (or Action Plan, term dependant on context). Below are only a few examples. The ESA may provide an opportunity to collect data for calculating these indicators, although they can be, and are often, calculated later for the operational plan (which is why they are marked at non-essential at this stage). More details are provided later in the Toolkit in <a href="#">Section 4 relating to Operational Plans</a>.</p>				
<b>LOWER PRIORITY</b> Printing costs	By type of printing (B&W or color), format, type of paper	Price of printing 1 page of a document from a communication material	Procurement Unit <i>and/or</i> Market study	
<b>LOWER PRIORITY</b> Workshop and external meeting costs	By location, duration and number of participants	Combination of costs covered by the MoE for transportation, accommodation, food, per diems, meeting room rental, printing, etc	Procurement Unit <i>and/or</i> Market study	Refer to unit cost matrix example from Ghana (in <a href="#">Additional Resources</a> ).
<b>LOWER PRIORITY</b> Field work cost			Procurement Unit Ministry units doing field work	

## ANNEX

### EXAMPLES OF PROJECTIONS OF ECE EXPENDITURES, BY INCREASING LEVELS OF COMPLEXITY AND INSIGHT

Model description including related indicators	Comments
<p><b>Model 0</b> ECE expenditure = ECE expenditure as a % of education expenditure x Education expenditure</p>	<p>This is not really a projection model, but a mere projection of the ECE budget as a percentage of the total education expenditure. No detail can be put into how ECE services will be managed or improved.</p>
<p><b>Model 1</b> ECE expenditure = Public ECE Unit Cost x Projected number of learners</p>	<p>This very basic model allows for the consideration of various targets of target population coverage (Gross or Net Intake Rates, translating into numbers of learners), and for an increase (for instance) of the unit cost to promote better learning conditions (although no detail can be provided as to why or how this unit cost would increase).</p>
<p><b>Model 2</b> ECE expenditure =</p> $\frac{\text{Teacher compensation}}{\text{Percentage of the recurrent ECE expenditure spent on teacher compensation}} \times \frac{\text{Teacher Salary} \times \text{Learner/Teacher\_Ratio} \times \text{Projected number of learners}}{\text{Percentage of the recurrent ECE expenditure spent on teacher compensation}}$	<p>This model gives some more details about the teacher policy relating to ECE keeping in mind that teacher salaries are likely to be the main component of the ECE recurrent budget. Targets can be set for teacher remuneration, learner/teacher ratios and target population coverage. The remaining recurrent expenditure is expressed as a percentage of the total, which can for instance increase to promote better learning conditions.</p>
<p><b>Model 3</b> ECE expenditure = Teacher compensation + Learning materials + Other recurrent costs</p>	<p>These models include various levels of details on the recurrent expenditure other than teacher remuneration. In each case, an “other recurrent cost” estimate is expressed as a percentage of the total recurrent expenditure, to include all the elements that cannot be detailed.</p>
<p><b>Model 4</b> ECE expenditure = Teacher compensation + Learning materials + Social + Inspections/pedagogic support + Infrastructure maintenance and operation + .... + Other recurrent costs</p>	